Usenet Newsgroup Archive: rec.radio.amateur.antenna

2009-06 - 2009-12

These Usenet messages were preserved as a plain-text archive. This PDF was generated by Digital Library of Amateur Radio & Communications from the source text file in 2026.

Date span: 2009-06-01 through 2009-12-31

Source text: rec.radio.amateur.antenna.txt

Source item: https://archive.org/details/usenet-rec

Messages included in this PDF: 3,688

Message records with no readable body available in the source text: 1

Messages are presented chronologically by archived date.

Binary or encoded payloads are not printed as blocks of encoded text; a placeholder appears where such material was detected. The original source text is unchanged.

1. Re: "Panel" style UHF DTV antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-01 00:24:29 UTC
From: Jeff Liebermann <jeffl@cruzio.com>
Message-ID: <pk6625dk2bi2l6c0e3bhf5lqctsq1n11lb@4ax.com>
Source record: 15113
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew,alt.tv.tech.hdtv

On Sun, 31 May 2009 14:04:50 -0700, Usual Suspect <reply@thegroup.net>
wrote:

>> Yes, but the original poster may not have such an ideal location.
>
>TV Fool azimuth plot:
><http://i44.tinypic.com/2a4wghx.jpg>

Nice plot. Kinda looks like you'll need a rotator. The -3dB
beamwidth varies from 54 to 95 degrees. At best, 3 antennas will
cover 3*95 = 285 degrees. At worst, 3*54 = 162 degrees.

>Was considering 3 antennae with wide reception angles pointed generally at
>45, 140, 310 deg. Only 3 are LOS (15, 18, 33)

What are the ranges and approximate signal strengths? Looks like 18
and 33 can be covered with one antenna pointed at about 250 degrees. A
second antenna at 45 degrees *MIGHT* catch the largest number of
channels. However, there's no optimum location for a 3rd antenna to
catch all the remaining stations. You'll probably have to pick and
choose among the relatively strong ones and take what you can get.
With a UHF only antenna, stations 2-13 are problematic (or
impossible). If you're going to run multiple antennas, you'll
probably need an antenna switch, 3 tower mounted amplifiers, and 3
coax cable runs. If you try to combine then with a power splitter,
you'll get interaction between antennas and an ugly and unpredictable
pattern.

With an indoor antenna of any sorts, which ones can you receive
(including the weak ones)? With only 4dBi of antenna gain, I don't
think you'll be able to dig the ones you can't receive out of the
noise.

>Pretty flat terrain, no tall structures nearby . Top of the mast: 14 ft. agl.

They let you have a 14 ft mast and you're worried about the antenna
police? Might as well go for broke. Install a real yagi antenna,
tower mounted amplifier, and rotator. For the tower amp, I recommend
a Channel Master 7777.
<http://www.channelmasterintl.com/amplifiers.html>
For an antenna, whatever you can find. The bigger and uglier the
anenna, the better it works. See specs at:
<http://www.hdtvprimer.com/ANTENNAS/comparing.html>

If you're not sure, buy just one antenna, hang it out the window on a
broom stick, and see what it does. If you're close, continue with

your proposed ideas. If it looks hopeless, give up before you burn
any more money.

--
Jeff Liebermann jeffl@cruzio.com
150 Felker St #D http://www.LearnByDestroying.com
Santa Cruz CA 95060 http://802.11junk.com
Skype: JeffLiebermann AE6KS 831-336-2558

2. Re: Sun Spots

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-01 00:48:55 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <2p86251v16ge8igpokrpgc6mt75hmu5f13@4ax.com>
Source record: 15114

On Sun, 31 May 2009 17:19:43 -0500, Bruce W. Ellis <ellis@means.net>
wrote:

>>You have yet to manage how long it took for ONE electron to travel
>>end-to-end on Hertz's first loop.
>
>Another way to put this:
>
>The actual mean drift velocity for electrons at any reasonable curent
>is quite low because there are so many of them in the conductor.
>However, the electric wave driving them propagates at he speed of
>light appropriate for the medium.

Hi Bruce,

Well put to the point above, but for my money Stephan probably
couldn't follow through to a numerical solution. Retirement appears
to have him drifting through newsgroups; gracing us all with the
enlightening questions of an acolyte pondering the eternal mysteries.
If he were a monk begging for rice, he would starve at this rate.

Art, on the other hand, is like a monk with a gallon of gas....

73's
Richard Clark, KB7QHC

3. Re: "Panel" style UHF DTV antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-01 03:13:57 UTC
From: sorry-spammers <"w9wi\\@(sorry-spammers)">
Message-ID: <I7CdnZxqDqTq2r7XnZ2dnUVZ_vWdnZ2d@earthlink.com>
Source record: 15115
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew,alt.tv.tech.hdtv

Rich Griffiths wrote:
> Check out: http://www.fcc.gov/mb/facts/otard.html
>
> ...
>
> In this ruling, the FCC pre-empted not only state and local government
> regulations but HOA CCR's and landlords' restrictions on renters.
>
> This came about because the broadcasters have a strong lobby, and they
> didn't want widespread limitations on receiving their over-the-air or
> satellite transmissions.

I would suggest it came about because cable operators have a strong lobby and wanted to be deregulated. The FCC was reluctant to do so as long as many apartment- and condo-dwellers had no choice but to subscribe to cable. By ensuring these people have access to OTA TV you ensure (at least in theory) that if deregulated cable rates get too high, one can switch to OTA or satellite.

==========

Either way, Elmo is indeed correct.

--

Doug Smith W9WI
Pleasant View, TN EM66

4. Re: "Panel" style UHF DTV antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-01 05:00:34 UTC
From: "Sal M. Onella" <salmonella@food.poisoning.org>
Message-ID: <TfJUl.67232$ho7.5840@newsfe10.iad>
Source record: 15116
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew,alt.tv.tech.hdtv

"Gordon" <gonzo@alltomyself.com> wrote in message
news:Xns9C1CABF8C29B9greederxprtnet@194.177.98.144...
> raypsi <RBorowiak@gmail.com> wrote in news:eedf031f-c023-4a15-abea-
> 8a3b22751339@r16g2000vbn.googlegroups.com:
>

>
> Then there is mine...
>
> http://mysite.verizon.net/g_reeder/Content/DTV_antenna.html

Hi, Gordon,

I recall when you introduced your neat handiwork to the group. I meant to ask a question:

Did you ever try connecting each of the antennas' twin lead to its own separate balun and combine the 75-ohm sides of the baluns into a single coax? A passive splitter, connected backwards, performs this function nicely.

I ask because, as you have your antenna wired (two antennas in parallel to a single balun) looks like an impedance mismatch; the balun wants a 300-ohm connection to the two screws and two 300-ohm antennas at the same time would be 150-ohms. I think you previously said you are not a techie, so forgive me if I'm using terms you don't know.

Not being one to argue with success, if you tried it and it wasn't any better, then more power to you. Rock on!

"Sal"

PS: For my fellow techies: Yes, I realize the 300-ohm figure for a bowtie is nominal and the actual impedance will differ from that figure. Paralleling the two antennas could be superior.

5. Re: Sun Spots

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-01 05:19:34 UTC
From: "Sal M. Onella" <salmonella@food.poisoning.org>
Message-ID: <HxJUl.143244$3k7.71854@newsfe17.iad>
Source record: 15117

"Jeff Liebermann" <jeffl@cruzio.com> wrote in message
news:9l9325hpafa61gjpali0ru9ni7lmudcbpg@4ax.com...

> Do you really want 50 year old coax?

Hm-m-m Maybe not.

> From sunspots to elephant cages. One small step for Art. One giant
> leap for most of the newsgroup participants.

Luckily going OT isn't a felony or we'd all be doing some hard time.
Thanks for the nice pics.

"Sal"
(KD6VKW)
CTMC/EWCS, USN (Ret.)

6. Re: "Panel" style UHF DTV antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-01 05:46:08 UTC
From: Gordon <gonzo@alltomyself.com>
Message-ID: <Xns9C1CE7992BD5Dgreederxprtnet@194.177.98.144>
Source record: 15118
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew,alt.tv.tech.hdtv

"Sal M. Onella" <salmonella@food.poisoning.org> wrote in
news:TfJUl.67232$ho7.5840@newsfe10.iad:

>
> "Gordon" <gonzo@alltomyself.com> wrote in message
> news:Xns9C1CABF8C29B9greederxprtnet@194.177.98.144...
>> raypsi <RBorowiak@gmail.com> wrote in news:eedf031f-c023-4a15-abea-
>> 8a3b22751339@r16g2000vbn.googlegroups.com:
>>
>
>>
>> Then there is mine...
>>
>> http://mysite.verizon.net/g_reeder/Content/DTV_antenna.html
>
> Hi, Gordon,
>
> I recall when you introduced your neat handiwork to the group. I
> meant
> to ask a question:
>
> Did you ever try connecting each of the antennas' twin lead to its
> own
> separate balun and combine the 75-ohm sides of the baluns into a
> single coax? A passive splitter, connected backwards, performs this
> function nicely.

No, I didn't think to try that. I could give it a shot, I have all
the necessary parts. I am concerned about loss, and thought that
the extra hardware would introduce too much extra loss.

>
> I ask because, as you have your antenna wired (two antennas in
> parallel
> to a single balun) looks like an impedance mismatch; the balun wants
> a 300-ohm connection to the two screws and two 300-ohm antennas at the
> same time would be 150-ohms. I think you previously said you are not
> a techie, so forgive me if I'm using terms you don't know.

I'm following you.

Hmmm... Yes. I can see how there could be a mismatch. But I
thought that only applied to simple things like resistance in DC
and AC circuits. RF is not one of my forte`s.

Anyway, I was trying to mimic the Channelmaster two and 4 bay
bowtie designs, that seem to have a 300 ohm feed.

Maybe someone could explain that.

>
> Not being one to argue with success, if you tried it and it wasn't
> any
> better, then more power to you. Rock on!

Well, I got an improvement, probably in spite of myself. The
setup gives better signal strength, and is less suseptable to
interfearence (people walking aroung the room) than just a
single bowtie.

>
> "Sal"
>
> PS: For my fellow techies: Yes, I realize the 300-ohm figure for a
> bowtie is nominal and the actual impedance will differ from that
> figure. Paralleling the two antennas could be superior.
>
>
>

7. Crossposting Permitted to rec.radio.amateur.moderated

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-01 06:00:03 UTC
From: rram@panix.com
Message-ID: <radio/ham-radio/moderated/crossposting-1-1243836001@panix.com>
Source record: 15119
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.dx,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.policy,rec.radio.amateur.space,rec.radio.info

```
Posted-By: auto-faq 3.3.2 beta (PGPMoose V2.0, Perl 5.005)
Archive-name: radio/ham-radio/moderated/crossposting
Revision: 1.1 2009/04/12 19:42:04
Posting-Frequency: posted monthly
URL: http://www.panix.com/~rram/usenet/rram/index.html

Changes followed by "|".

After a 30-day public discussion and feedback period to gauge reader
opinions in March of 2009:

http://groups.google.com/group/rec.radio.amateur.moderated/browse_thread/thread/d7d337db35
f23326

the rec.radio.amateur.moderated Moderation Team has decided to consider
amending its charter, and permit limited simultaneous crossposting to
rec.radio.amateur.moderated and one other unmoderated
amateur-radio-related discussion newsgroup. We are currently trying
this on a temporary basis (90 days, through early July 2009), and adopt
it permanently if successful.

Approved rec.radio.amateur.* newsgroups are those that are currently
listed in the latest version of the "List of Big Eight Newsgroups" which
is crossposted monthly to news.announce.newgroups, news.groups, and
news.lists.misc.

Approved alt.radio.amateur.* and alt.ham-radio.* newsgroups are those
that have been created consistent with the suggestions in "So You Want
to Create an Alt Newsgroup" at:

http://www.faqs.org/faqs/alt-creation-guide/

Approved regional hierarchy newsgroups are those that contain either
"radio.amateur" or "ham-radio" in their names, including
uk.radio.amateur and aus.radio.amateur.misc.

We will make every reasonable effort to keep our list of approved
newsgroups up-to-date. In case we have overlooked any, and a submission
is rejected in error as a result, the rejected submitter can E-mail us
at our administrative contact address (in the signature at the bottom of
this article, and the default Reply-To for the rejection message)
requesting that it be added, and that the article be approved. We may
still choose to reject articles crossposted to any alt.* newsgroup with
an inappropriate name, including obscene language, embedded
name-calling, or encouragement of unlawful conduct.
```

Please direct any comments, questions, or criticisms to
rec-radio-amateur-moderated-request@panix.com.

8. Re: Sun Spots

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-01 07:39:30 UTC
From: Szczepan Białek <sz.bialek@wp.pl>
Message-ID: <gvvncb$jo0$1@node1.news.atman.pl>
Source record: 15120
Body handling: Binary attachment payload not displayed: img82.gif, img91.gif, img92.gif, img93.gif

"Richard Clark" <kb7qhc@comcast.net> wrote
news:c3n52592kc1mio80jjt6opq4tl317d77ch@4ax.com...
> On Sun, 31 May 2009 21:08:22 +0200, Szczepan Bia?ek <sz.bialek@wp.pl>
> wrote:
>
>>But do you know what the electricity was like in the
>> Maxwell theory from 1865?
>
> It employed 20 equations with 20 unknowns. Can you name THREE?
>
> Let's skip that, because you can not, of course.
>
> It was recast as quaternions - I won't ask the impossible from you to
> state TWO.
>
> You have yet to manage how long it took for ONE electron to travel
> end-to-end on Hertz's first loop.
>
> So answering your questions is like sending Cuisinart to Darfur. Do
> you know what electricity is like there? Any year?

"1861 - Maxwell publishes a mechanical model of the electromagnetic field. Magnetic fields correspond to rotating vortices with idle wheels between them and electric fields correspond to elastic displacements, hence displacement currents. The equation for now becomes , where is the total current, conduction plus displacement, and is conserved: . This addition completes Maxwell's equations and it is now easy for him to derive the wave equation exactly as done in our textbooks on electromagnetism and to note that the speed of wave propagation was close to the measured speed of light. Maxwell writes, ``We can scarcely avoid the inference that light in the transverse undulations of the same medium which is the cause of electric and magnetic phenomena.'' Thomson, on the other hand, says of the displacement current, ``(it is a) curious and ingenious, but not wholly tenable hypothesis.''

"1864 - Maxwell reads a memoir before the Royal Society in which the mechanical model is stripped away and just the equations remain. He also discusses the vector and scalar potentials, using the Coulomb gauge. He attributes physical significance to both of these potentials. He wants to present the predictions of his theory on the subjects of reflection and refraction, but the requirements of his mechanical model keep him from finding the correct boundary conditions, so he never does this calculation."
From: http://maxwell.byu.edu/~spencerr/phys442/node4.html

Try understand: "the mechanical model is stripped away and just the equations remain."

Now engineers are using model with compressible, massive electrons. The equations are used by teacher to teach the math.

According to Maxwell model the radio waves are transversal. Are such in your radio reality?

S*
> 73's
> Richard Clark, KB7QHC

[One or more binary attachments are retained only in the source text.]

9. Re: Sun Spots

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-01 07:57:22 UTC
From: Szczepan Białek <sz.bialek@wp.pl>
Message-ID: <gvvodqjrv1@node1.news.atman.pl>
Source record: 15121

"Richard Clark" <kb7qhc@comcast.net> wrote
news:2p86251v16ge8igpokrpgc6mt75hmu5f13@4ax.com...
> On Sun, 31 May 2009 17:19:43 -0500, Bruce W. Ellis <ellis@means.net>
> wrote:
>
>>>You have yet to manage how long it took for ONE electron to travel
>>>end-to-end on Hertz's first loop.
>>
>>Another way to put this:
>>
>>The actual mean drift velocity for electrons at any reasonable curent
>>is quite low because there are so many of them in the conductor.
>>However, the electric wave driving them propagates at he speed of
>>light appropriate for the medium.
>
> Hi Bruce,
>
> Well put to the point above, but for my money Stephan probably
> couldn't follow through to a numerical solution. Retirement appears
> to have him drifting through newsgroups; gracing us all with the
> enlightening questions of an acolyte pondering the eternal mysteries.
> If he were a monk begging for rice, he would starve at this rate.
>
> Art, on the other hand, is like a monk with a gallon of gas....

You are right when you are writing about antennas and me. I hope that my
"enlightening questions" make that you (engineering people) start to press
on teachers to stop teaching about Maxwell model (transverse waves).
S*

10. Re: Sun Spots

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-01 08:11:45 UTC
From: Szczepan Białek <sz.bialek@wp.pl>
Message-ID: <gvvp8s$k0l$1@node1.news.atman.pl>
Source record: 15122

```
"Dave" <noone@nowhere.com> wrote
news:68CUl.1760$Cc1.1628@nwrddc01.gnilink.net...
>
> "Szczepan Bialek" <sz.bialek@wp.pl> wrote in message
> news:gvubca$dkc$1@node1.news.atman.pl...
>>
>> "Dave" <noone@nowhere.com> wrote
>> news:fgtUl.1886$9L2.1231@nwrddc02.gnilink.net...
>>>
>>> "Szczepan Bialek" <sz.bialek@wp.pl> wrote in message
>>> news:gvt83b$7r6$1@node1.news.atman.pl...
>>>> In the Hertz apparatus the charges (electrons) have at the centre the
>>>> max velocity and the acceleration equal zero.
>>>> At ends the situation is opposite. So your answer should be: "the ends
>>>> radiate of course".
>>>
>>> of course you are wrong. there is a smooth transition between the
>>> center and the ends, that whole length radiates. you can't just look at
>>> the boundry conditions, you have to consider the whole length.
>>
>> Yes. But the radiation is not uniform. What radiate stronger: the centre
>> or the ends?
>
> both. when the current is high in the center it is creating a stronger
> magnetic field, and when that current reaches the end it creates the
> highest voltage so makes more electric field... both are part of the
> electro-magnetic wave.

It is not Maxwell model. In it current create magnetic field and THIS field
create the electric field. AND SO ON.
>>
>>>>
>>>> It is very funny that engineers use electrons and do not know that in
>>>> the "Maxwell's equations" no electrons, There is incompressible
>>>> massless fluid.
>>>> You here do not use the "Maxwell's equations". The teachers use them to
>>>> teach math.
>>>> Engineers use the empirical equations following the rule "accelerating
>>>> charges create radiation".
>>>
>>> Gauss's law is about charged particles, the one art so much likes to
>>> distort.. and don't forget that the 'i' term is also about charged
>>> particles moving... if they can move they are not imcompressible, and
>>> since the force on them can be measured and accelerations are not
```

>>> infinite they are not massless.
>>
>> We all know now that the electrons are "not imcompressible, and since
>>> the force on them can be measured and accelerations are not infinite
>>> they are not massless."
>>But do you know what the electricity was like in the Maxwell theory from
>>1865?
>
> sure, its the same as today. since his equations still work the
> electricity hasn't changed.

"1864 - Maxwell reads a memoir before the Royal Society in which the mechanical model is stripped away and just the equations remain. He also discusses the vector and scalar potentials, using the Coulomb gauge. He attributes physical significance to both of these potentials. He wants to present the predictions of his theory on the subjects of reflection and refraction, but the requirements of his mechanical model keep him from finding the correct boundary conditions, so he never does this calculation"

Your (engineering people) model is O.K. but it is quite different from the Maxwell model. This is the reason that Art can wrote: " "For your information you have never built an antenna that conforms in its entirety to Maxwell';s laws thus you cannot possibly understand radiation as presented by Maxwell."
S*
>

11. Re: Sun Spots

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-01 11:44:06 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <8aPUI.27885$c45.22799@nlpi065.nbdc.sbc.com>
Source record: 15123

Art Unwin wrote:
> Does that mean that a radiator reduces mass with use
> because the electrons orbiting around the atom are losing mass?

Since mass and energy are equivalent, I suppose the mass
of the radiator increases with increasing power input.
The increase in mass can be calculated but the average
ham has no way of measuring the increase. No need to
worry about the tower falling down due to additional
mass from energized electrons. :-)

The antenna is charged up to a certain energy level
during the key-down transient state. Since the energy
content of the antenna cannot increase forever, it must lose
energy as photonic radiation and/or as heat during steady-state.

Free electrons in a conductor travel at much less than the
speed of light. Photons are emitted from the electrons at
the speed of light. A quote from:

http://c2.com/cgi/wiki?SpeedOfElectrons

"For example, for a copper wire of radius 1 mm carrying
a steady current of 10 Amps, the drift velocity is only
about 0.024 cm/sec!" i.e. about 0.01 inch/second. Ignoring
random movements, the electrons at our RF transmitter never
reach the antenna. At 10 MHz, the electrons move less than
0.000000001 inch during a 100 nS cycle involving a 100 watt
transmitter, i.e. they mostly oscillate in place.

However, other electrons, traveling at a large percentage
of the speed of light, are quite massive as observed in
particle accelerators and radioactive decay.
--
73, Cecil, IEEE, OOTC, http://www.w5dxp.com

12. Re: "Panel" style UHF DTV antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-01 11:49:20 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <1fPUl.27886$c45.4537@nlpi065.nbdc.sbc.com>
Source record: 15124
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew,alt.tv.tech.hdtv

Gordon wrote:
> Well, I got an improvement, probably in spite of myself. The
> setup gives better signal strength, and is less suseptable to
> interfearence (people walking aroung the room) than just a
> single bowtie.

A mismatch can cause ghosting in an analog TV.
What does ghosting do to a digital TV signal?
--
73, Cecil, IEEE, OOTC, http://www.w5dxp.com

13. Re: "Panel" style UHF DTV antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-01 12:31:50 UTC
From: Bill M <radioexray@geemail.com>
Message-ID: <h00hnn0304c@news3.newsguy.com>
Source record: 15125
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew,alt.tv.tech.hdtv

Cecil Moore wrote:
> Gordon wrote:
>> Well, I got an improvement, probably in spite of myself. The
>> setup gives better signal strength, and is less suseptable to
>> interfearence (people walking aroung the room) than just a single bowtie.
>
> A mismatch can cause ghosting in an analog TV.
> What does ghosting do to a digital TV signal?

If its bad enough it will wreck the reception. But the latest
processors can tolerate multipath that is only 1 db down.

They are getting better as they try to debug HDTV for mobile reception.

-Bill

14. Re: Sun Spots

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-01 14:35:32 UTC
From: Art Unwin <ArthurUnwin@gmail.com>
Message-ID: <ede827c3-f143-43b1-b7d9-a10d3ca5c8e2@o20g2000vbh.googlegroups.com>
Source record: 15126

On Jun 1, 2:39 am, Szczepan Białek <sz.bia...@wp.pl> wrote:
> "Richard Clark" <kb7...@comcast.net>
wrotenews:c3n52592kc1mio80jjt6opq4tl317d77ch@4ax.com...
>
>
>
> > On Sun, 31 May 2009 21:08:22 +0200, Szczepan Bia?ek <sz.bia...@wp.pl>
> > wrote:
>
> >>But do you know what the electricity was like in the
> >> Maxwell theory from 1865?
>
> > It employed 20 equations with 20 unknowns. Can you name THREE?
>
> > Let's skip that, because you can not, of course.
>
> > It was recast as quaternions - I won't ask the impossible from you to
> > state TWO.
>
> > You have yet to manage how long it took for ONE electron to travel
> > end-to-end on Hertz's first loop.
>
> > So answering your questions is like sending Cuisinart to Darfur. Do
> > you know what electricity is like there? Any year?
>
> "1861 - Maxwell publishes a mechanical model of the electromagnetic field.
> Magnetic fields correspond to rotating vortices with idle wheels between
> them and electric fields correspond to elastic displacements, hence
> displacement currents. The equation for now becomes , where is the total
> current, conduction plus displacement, and is conserved: . This addition
> completes Maxwell's equations and it is now easy for him to derive the wave
> equation exactly as done in our textbooks on electromagnetism and to note
> that the speed of wave propagation was close to the measured speed of light.
> Maxwell writes, ``We can scarcely avoid the inference that light in the
> transverse undulations of the same medium which is the cause of electric and
> magnetic phenomena.'' Thomson, on the other hand, says of the displacement
> current, ``(it is a) curious and ingenious, but not wholly tenable
> hypothesis.''
>
> "1864 - Maxwell reads a memoir before the Royal Society in which the
> mechanical model is stripped away and just the equations remain. He also
> discusses the vector and scalar potentials, using the Coulomb gauge. He
> attributes physical significance to both of these potentials. He wants to
> present the predictions of his theory on the subjects of reflection and

> refraction, but the requirements of his mechanical model keep him from
> finding the correct boundary conditions, so he never does this calculation."
> From:http://maxwell.byu.edu/~spencerr/phys442/node4.html
>
> Try understand: "the mechanical model is stripped away and just the
> equations remain."
>
> Now engineers are using model with compressible, massive electrons. The
> equations are used by teacher to teach the math.
>
> According to Maxwell model the radio waves are transversal. Are such in your
> radio reality?
>
> S*
>
> > 73's
> > Richard Clark, KB7QHC
>
>
>
> img82.gif
> < 1KViewDownload
>
> img91.gif
> < 1KViewDownload
>
> img92.gif
> < 1KViewDow
> img93.gif
> < 1KViewDownload

Hi S,
Interesting to read what you say as there are many similarities to my
antenna work.
A small addition with respect to light formation. Displacement current
is the action required of three dimensional equilibrium which is why I
often point to the helicopter as an example,
same thing goes for a gyroscope or the Sedgway scooter. It is this
circular motion that holds to the understanding of light since this
provides the spin of a particle such that it has straight line
trajectory. The frequency of circular motion is what changes when the
particle
enters a medium that is resistive where the spin increases to maintain
the straight line projection. The energy for this increase in spin is
the latent energy that is removed from
the particles potential energy similar to latent heat with liquids.
Thus energy is conserved
by the increase in spin which is analogous to change in frequency!
This change in frequency brings the particle into the area of color ,
light and X rays ie higher frequencies and the latent energy shows up

as light until there is no more energy left and the particle has vaporized such that light progresses to invisiblity. This being similar to the effects shown of a meteorite as it comes into contact with the resistive environment of Earth.
With respect to radiation from the ends of a radiator. This can only happen when the radiator is a fraction of a wavelength when the law of equilibrium is violated. The accellaration of charge at the end is without spin applied and tho there is radiation it becomes non directional and unable to overcome the gravitational force and falls within a short distance.
Regards
Art

15. Re: Sun Spots

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-01 14:41:13 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <etp725dd5mc357jc58jlts710sbjnu5qnr@4ax.com>
Source record: 15127

On Mon, 1 Jun 2009 09:57:22 +0200, Szczepan Bia?ek <sz.bialek@wp.pl>
wrote:

>I hope that my
>"enlightening questions" make that you (engineering people) start to press
>on teachers to stop teaching about Maxwell model (transverse waves).

The starving rice bowl monk at its best. Before your dreams come
true, little grasshoppa', you must first perform pennance at the gates
of the great Khan.

73's
Richard Clark, KB7QHC

16. Re: Sun Spots

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-01 14:43:48 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <86q725heisbc14itkqdm6bk0eemibht2jn@4ax.com>
Source record: 15128

On Mon, 1 Jun 2009 09:39:30 +0200, Szczepan Bia?ek <sz.bialek@wp.pl>
wrote:

>Are such in your radio reality?

Actually, grasshoppa', you have confused radio reality with the white
glare of the Xerox you stare into during meditation.

Please do not smear your forehead on the glass cover.

73's
Richard Clark, KB7QHC

17. Re: "Panel" style UHF DTV antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-01 15:26:30 UTC
From: stratus46@yahoo.com
Message-ID: <8a4f6c14-b5bf-40d3-a363-f511093a70ef@n19g2000vba.googlegroups.com>
Source record: 15129
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew,alt.tv.tech.hdtv

On Jun 1, 4:49 am, Cecil Moore <nos...@w5dxp.com> wrote:
> Gordon wrote:
> > Well, I got an improvement, probably in spite of myself. The
> > setup gives better signal strength, and is less suseptable to
> > interfearence (people walking aroung the room) than just a
> > single bowtie.
>
> A mismatch can cause ghosting in an analog TV.
> What does ghosting do to a digital TV signal?
> --
> 73, Cecil, IEEE, OOTC, http://www.w5dxp.com

It puts 'ripples' into the passband. The ripples happen because of
phase cancelations. The ATI HDTV Wonder cards can handle variations to
around 8-10 dB. After that it just freezes up.

Near the bottom of the page in the link there is an example of the
ATSC spectrum. Add random dips into it.

http://www.hdtvprimer.com/ISSUES/what_is_ATSC.html

G²

18. Re: Sun Spots

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-01 16:10:23 UTC
From: Art Unwin <ArthurUnwin@gmail.com>
Message-ID: <63cec9f4-0c07-4243-b161-d1c34eb8b06f@u10g2000vbd.googlegroups.com>
Source record: 15130

On Jun 1, 6:44 am, Cecil Moore <nos...@w5dxp.com> wrote:
> Art Unwin wrote:
> > Does that mean that a radiator reduces mass with use
> > because the electrons orbiting around the atom are losing mass?
>
> Since mass and energy are equivalent, I suppose the mass
> of the radiator increases with increasing power input.
> The increase in mass can be calculated but the average
> ham has no way of measuring the increase. No need to
> worry about the tower falling down due to additional
> mass from energized electrons. :-)
>
> The antenna is charged up to a certain energy level
> during the key-down transient state. Since the energy
> content of the antenna cannot increase forever, it must lose
> energy as photonic radiation and/or as heat during steady-state.
>
> Free electrons in a conductor travel at much less than the
> speed of light. Photons are emitted from the electrons at
> the speed of light. A quote from:
>
> http://c2.com/cgi/wiki?SpeedOfElectrons
>
> "For example, for a copper wire of radius 1 mm carrying
> a steady current of 10 Amps, the drift velocity is only
> about 0.024 cm/sec!" i.e. about 0.01 inch/second. Ignoring
> random movements, the electrons at our RF transmitter never
> reach the antenna. At 10 MHz, the electrons move less than
> 0.000000001 inch during a 100 nS cycle involving a 100 watt
> transmitter, i.e. they mostly oscillate in place.
>
> However, other electrons, traveling at a large percentage
> of the speed of light, are quite massive as observed in
> particle accelerators and radioactive decay.
> --
> 73, Cecil, IEEE, OOTC, http://www.w5dxp.com

Cecil
The above is confusing unbound particles with bound particles both of
which can be considered a particle but only one has motion ie both
kinetic and potential energies where as the static partical only has
potential energy where the potential energy of both is equal.
The bound particle is in circular motion around a point source ala the
atom,

this collection of particles are in a state of three dimensional equilibrium in relation to other similar clusters of particles which provides a mass that in total is in static equilibrium
within its own boundary. If you supply energy to this mass in equilibrium the frequency of rotation of particles increases and could increase to the point of the frequency of light where, if it continues, could become vaporised such that we now have a new medium consisting of partial pressures of gasses.
The other particle when in equilibrium is at rest i.e unbound as has lost a lot of potential energy in its voyage from the Sun ala the sun spots. Energy is and can be added via electric energy where a displacement current is formed such that the resting particle receives the same amount of energy that it lost in its travels thru the universe. The only difference between the two particles is the boundaries in which they are seen to be enclosed in equilibrium ie same potential energy but in different scalar form. (two dimensional compared to three dimensional equilibrium). I can only assume that what you refer as a photon is the separation of latent energy with respect to potential energy ie a separation of the energies associated with the particle with spin
Regards
Art

19. Re: "Panel" style UHF DTV antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-01 16:11:37 UTC
From: Jeff Liebermann <jeffl@cruzio.com>
Message-ID: <ntu725964u1tkh09t4elcujbg4plg38r6s@4ax.com>
Source record: 15131
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew,alt.tv.tech.hdtv

On Mon, 01 Jun 2009 06:49:20 -0500, Cecil Moore <nospam@w5dxp.com>
wrote:

>A mismatch can cause ghosting in an analog TV.
>What does ghosting do to a digital TV signal?

Your worst nightmare. From 10 years ago:
<http://www.businessweek.com/bwdaily/dnflash/aug1999/nf90826b.htm>
(Note the sales predictions, which were totally wrong).
All DTV chipsets now have ghost elimination circuitry, which does a
good job of reducing multipath problems. There's a spec for it but
I'm too lazy to look. Here's the patent:
<http://www.google.com/patents?id=XNp3AAAAEBAJ&dq=7038732>
with references to others in citations. I won't pretend to understand
how it works.

--
Jeff Liebermann jeffl@cruzio.com
150 Felker St #D http://www.LearnByDestroying.com
Santa Cruz CA 95060 http://802.11junk.com
Skype: JeffLiebermann AE6KS 831-336-2558

20. Re: Sun Spots

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-01 16:51:53 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <GGTUl.19687$hc1.8131@flpi150.ffdc.sbc.com>
Source record: 15132

Art Unwin wrote:
> The other particle when in equilibrium is at rest ...

Although it may be possible for an electron to be
"at rest", that concept violates the uncertainty
principle. Free electrons jump from atom to atom
but they are never in a fixed position until they
are measured in that fixed position in which case,
they give up their velocity/momentum as an unknown.

Whoever first said, "One cannot have one's cake
and eat it too." apparently understood the
uncertainty principle. :-)
--
73, Cecil, IEEE, OOTC, http://www.w5dxp.com

21. OTARD rules Re: "Panel" style UHF DTV antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-01 17:23:25 UTC
From: Jim Lux <james.p.lux@jpl.nasa.gov>
Message-ID: <h012qd$8le$1@news.jpl.nasa.gov>
Source record: 15134
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew,alt.tv.tech.hdtv

Jeff Liebermann wrote:

>> I must say at the outset that I am hesitant to buy an antenna based on its
>> form-factor, but I'm forced by the local code to not display bare-element
>> type antennae on the mast.
>
> As others have mentioned, this is mostly incorrect. The problem is in
> the interpretation of the word "unreasonable", which might be
> interpreted in a variety of ways. Without details on your situation,
> I can't comment on this.

The FCC website has quite a bit of info on interpretation (from various regulatory and legal actions) of what is and isn't unreasonable. Paint color: reasonable, restrictions on location: unreasonable, restrictions on form of antenna: unreasonable.

>
>> I do like the panel style for the reason that I can arrange 3 around a common
>> mast, aimed at remote cities, and join the outputs for increased coverage.
>
> Mast? Welcome to "unreasonable". The FCC 47.1.4000 clause that
> limits antenna installation has nothing to say about the supporting
> structure. While the HOA may not be able to prevent you from
> installing an antenna, they most certainly will have something to say
> about the design and construction of the supporting structure. They
> may also demand that it be installed by a licensed and insured
> installer to protect themselves against subsequent litigation. I know
> you don't want to hear about all this, but methinks you should at
> least be warned before blundering onward.
>

Hah.. go look at the case of Stanley and Vera Holliday.. 5 masts 30 ft high, multiple dishes and antenans...

http://www.fcc.gov/Bureaus/Cable/Orders/1999/da992132.txt

an analysis at
http://dirt.umkc.edu//dd99/DD991025.htm

22. Re: Sun Spots

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-01 17:44:38 UTC
From: Art Unwin <ArthurUnwin@gmail.com>
Message-ID: <bb33905d-f910-4d6f-bace-c725897e0e91@s16g2000vbp.googlegroups.com>
Source record: 15133

On Jun 1, 11:51 am, Cecil Moore <nos...@w5dxp.com> wrote:
> Art Unwin wrote:
> > The other particle when in equilibrium is at rest ...
>
> Although it may be possible for an electron to be
> "at rest", that concept violates the uncertainty
> principle. Free electrons jump from atom to atom
> but they are never in a fixed position until they
> are measured in that fixed position in which case,
> they give up their velocity/momentum as an unknown.
>
> Whoever first said, "One cannot have one's cake
> and eat it too." apparently understood the
> uncertainty principle. :-)
> --
> 73, Cecil, IEEE, OOTC, http://www.w5dxp.com

Then I am as uncertain about the uncertainty principle
as I am with the uncertainty Richard is projecting with his posts.
Nuff said
Art

23. Re: Sun Spots

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-01 18:25:06 UTC
From: Szczepan Białek <sz.bialek@wp.pl>
Message-ID: <h00t6ksbc1@node1.news.atman.pl>
Source record: 15135

"Cecil Moore" <nospam@w5dxp.com> wrote
news:8aPUl.27885$c45.22799@nlpi065.nbdc.sbc.com...
> Art Unwin wrote:
>> Does that mean that a radiator reduces mass with use
>> because the electrons orbiting around the atom are losing mass?
>
> Since mass and energy are equivalent, I suppose the mass
> of the radiator increases with increasing power input.
> The increase in mass can be calculated but the average
> ham has no way of measuring the increase. No need to
> worry about the tower falling down due to additional
> mass from energized electrons. :-)
>
> The antenna is charged up to a certain energy level
> during the key-down transient state. Since the energy
> content of the antenna cannot increase forever, it must lose
> energy as photonic radiation and/or as heat during steady-state.
>
> Free electrons in a conductor travel at much less than the
> speed of light. Photons are emitted from the electrons at
> the speed of light. A quote from:
>
> http://c2.com/cgi/wiki?SpeedOfElectrons
>
> "For example, for a copper wire of radius 1 mm carrying
> a steady current of 10 Amps, the drift velocity is only
> about 0.024 cm/sec!" i.e. about 0.01 inch/second. Ignoring
> random movements, the electrons at our RF transmitter never
> reach the antenna. At 10 MHz, the electrons move less than
> 0.000000001 inch during a 100 nS cycle involving a 100 watt
> transmitter, i.e. they mostly oscillate in place.

That are speculations only. Everybody know that at the end of an antenna the
high voltage appears. It means that density of electrons change. The
movements must be bigger.
>
> However, other electrons, traveling at a large percentage
> of the speed of light, are quite massive as observed in
> particle accelerators and radioactive decay.

They escape from metal with the high velocity. Nobody know how velocity is
inside metal.
S*

24. Re: Sun Spots

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-01 19:10:43 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <ok8825h2emaroto5m81ki5hddjpuelg9pt@4ax.com>
Source record: 15136

On Mon, 1 Jun 2009 20:25:06 +0200, Szczepan Bia?ek <sz.bialek@wp.pl>
wrote:

>Nobody know how velocity is inside metal.

If you cannot sustain beyond this stage, your suits will sojourn as
somnolent susurrations such as the statement situated above.

73's
Richard Clark, KB7QHC

25. Re: Sun Spots

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-01 19:17:37 UTC
From: Art Unwin <ArthurUnwin@gmail.com>
Message-ID: <dd505766-ef72-4ad2-badd-a25b77b17901@h23g2000vbc.googlegroups.com>
Source record: 15137

On Jun 1, 1:25 pm, Szczepan Białek <sz.bia...@wp.pl> wrote:
> "Cecil Moore" <nos...@w5dxp.com>
wrotenews:8aPUl.27885$c45.22799@nlpi065.nbdc.sbc.com...
>
>
>
> > Art Unwin wrote:
> >> Does that mean that a radiator reduces mass with use
> >> because the electrons orbiting around the atom are losing mass?
>
> > Since mass and energy are equivalent, I suppose the mass
> > of the radiator increases with increasing power input.
> > The increase in mass can be calculated but the average
> > ham has no way of measuring the increase. No need to
> > worry about the tower falling down due to additional
> > mass from energized electrons. :-)
>
> > The antenna is charged up to a certain energy level
> > during the key-down transient state. Since the energy
> > content of the antenna cannot increase forever, it must lose
> > energy as photonic radiation and/or as heat during steady-state.
>
> > Free electrons in a conductor travel at much less than the
> > speed of light. Photons are emitted from the electrons at
> > the speed of light. A quote from:
>
> >http://c2.com/cgi/wiki?SpeedOfElectrons
>
> > "For example, for a copper wire of radius 1 mm carrying
> > a steady current of 10 Amps, the drift velocity is only
> > about 0.024 cm/sec!" i.e. about 0.01 inch/second. Ignoring
> > random movements, the electrons at our RF transmitter never
> > reach the antenna. At 10 MHz, the electrons move less than
> > 0.000000001 inch during a 100 nS cycle involving a 100 watt
> > transmitter, i.e. they mostly oscillate in place.
>
> That are speculations only. Everybody know that at the end of an antenna the
> high voltage appears. It means that density of electrons change. The
> movements must be bigger.
>
>
>
> > However, other electrons, traveling at a large percentage
> > of the speed of light, are quite massive as observed in

> > particle accelerators and radioactive decay.
>
> They escape from metal with the high velocity. Nobody know how velocity is
> inside metal.
> S*

There is no "velocity " inside a radiator. There is a current flow on
the surface and when there is no skin effect at the ends of a radiator
that is not in equilibrium then the charge is free to flow off the
ends but without contra or levitating spin just like a helicopter when
one of its rotors comes to a stop. The rotor that is still turning
takes a spin increase like a motor start up with no load until a spark
is realised when the spin rotates at a particular frequency

26. Re: Sun Spots

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-01 19:18:45 UTC
From: Jim Kelley <jwkelley@uci.edu>
Message-ID: <h019jg$l9r$1@news.service.uci.edu>
Source record: 15138

Art Unwin wrote:

> When this experiment takes place it
> suggests that radiation will really peak for a short time before we
> all become incinerated.

I've arranged for the Neptune Society to handle all my incineration needs.

So how about those sun spot cycles?

ac6xg

27. "Large" volume antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-01 19:42:19 UTC
From: Art Unwin <ArthurUnwin@gmail.com>
Message-ID: <67063933-eca6-4fd7-9327-3f21689af89f@21g2000vbk.googlegroups.com>
Source record: 15139

I have just made a larger than usual antenna that radiates well below
the broadcast band so I may study generated radiation patterns. The
antenna
is on a structure that rotates as well as a tipping action, all about
4 feet above the ground. Initially I will just listen to signal
variences when aim and tilt is in the best position. I recognise that
I may have to put a digital meter across the S meter terminals
together with a holding capacitor but for the moment I will be guided
by the S meter. On the upper frequencies I will hook up to a TV for a
visual. SWR readings will be initially recorded
across all frequencies in the horizontal position to be used as a
datum
which certainly be required as shielding is added in the near future.
Comments?
Regards
Art

28. Re: "Panel" style UHF DTV antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-01 20:27:01 UTC
From: Paul Keinanen <keinanen@sci.fi>
Message-ID: <apd825dus5d4b11qnds099cop5270tkku8@4ax.com>
Source record: 15140
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew,alt.tv.tech.hdtv

On Mon, 01 Jun 2009 06:49:20 -0500, Cecil Moore <nospam@w5dxp.com>
wrote:

>Gordon wrote:
>> Well, I got an improvement, probably in spite of myself. The
>> setup gives better signal strength, and is less suseptable to
>> interfearence (people walking aroung the room) than just a
>> single bowtie.
>
>A mismatch can cause ghosting in an analog TV.
>What does ghosting do to a digital TV signal?

In countries using COFDM (DVB-T), the symbol time is about 1000 us
(8k) or 250 us (2k), so in the worst case with minimal guard
intervals, you can still use mismatched coaxial cables longer than 1
km without problems :-).

With ATSC 8VSB it depends how well the equalizer is capable of
detecting the characteristics of the radio and coaxial path with a
known signal pattern.

Paul OH3LWR

29. SWR variation with feedline length

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-01 20:50:52 UTC
From: Antonio Vernucci <vernucci@tin.it>
Message-ID: <4a243f2c$0$1117$4fafbaef@reader3.news.tin.it>
Source record: 15141

Along several decades of radio hamming on the HF bands, I noted that the measured SWR of all the antennas I have mounted (Yagis, dipoles) slightly varies when the feedline length is changed by several meters. For 100W of forward power, the reflected power could vary somewhat, e.g. from 2W to 5W or so, measured on a Bird wattmeter. This behavior would seeem to deny the theory, according to which SWR is independent of feedline length (as long as the cable attenuation remains constant).

Clearly the measured SWR change cannot be due to the change in the feedline attenuation as, at HF, adding or cutting a few meters of cable would yield a very small change in attenuation and hence a negligible impact on measured SWR.

Reading here and there, the most common theory explaining such phenomenon is that, in presence of RF on the coaxial cable braid, the SWR meter reading is influenced by the feedline length. I am not too convinced of that explanation, also because I have invariably experienced the measured SWR variation phenomenon with all antenna I have had, and I never had hot braid problems.

At that regard I got an idea that could explain the phenomenon, at least part of it.

Reading coaxial cable data sheet, I noted that manufacturers typically give a small tolerance on cable impedance (2 to 3 ohm). Let us then assume that the feedline cable has a 53-ohm impedance, whilst the Bird wattmeter is 50 ohm sharp.

If the 53-ohm cable is terminated on an e.g. 75-ohm (purely resistive) antenna, the real SWR on the line would be 75/53=1.41 independently of feedline length (if the attenuation variation with length is neglected). But the impedance seen by the wattmeter obviously varies with the feedline length, and it can be easily calculated that the seen impedance range results in an apparent SWR, on the 50-ohm wattneter, reading that varies from a maximum of 1.5 (when feedline length is an even multiple of half wavelenght) down to a minimum of 1.33 (when feedline length is an odd multiple of wavelenght quarters). For 100W of forward power, the reflected power varies from about 4W down to about 2W.

Repeating the exercise with an e.g. 85-ohm load, the apparent SWR measured on the 50-ohm wattmeter would vary from 1.7 down to 1.51 (reflected power varying from 7W down to 4W).

You can get easily convinced that such variation is only due to the assumed 3-ohm difference in cable impedance.

With older cables having a nominal 52-ohm impedance, instead of 50, the situation could get even more evident.

Any comment would be appreciated.

73

Tony I0JX

30. Re: Sun Spots

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-01 21:33:34 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <LOXUl.34416$ZP4.286@nlpi067.nbdc.sbc.com>
Source record: 15142

Szczepan Białż˝ek wrote:
> Everybody know that at the end of an antenna
> the high voltage appears. It means that density of electrons change. The
> movements must be bigger.

Actually, the fact that they try to bunch up at the ends
of a standing wave antenna during part of the cycle implies
that they slow to a stop thus repelling other electrons and
have nowhere else to go except to reverse direction during
the next 1/2 cycle.
--
73, Cecil, IEEE, OOTC, http://www.w5dxp.com

31. Re: SWR variation with feedline length

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-01 21:36:40 UTC
From: JB <nospam@goofball.net>
Message-ID: <IRXUl.127$u86.26@nwrddc01.gnilink.net>
Source record: 15143

"Antonio Vernucci" <vernucci@tin.it> wrote in message
news:4a243f2c$0$1117$4fafbaef@reader3.news.tin.it...
> Along several decades of radio hamming on the HF bands, I noted that the
> measured SWR of all the antennas I have mounted (Yagis, dipoles) slightly
varies
> when the feedline length is changed by several meters. For 100W of forward
> power, the reflected power could vary somewhat, e.g. from 2W to 5W or so,
> measured on a Bird wattmeter. This behavior would seeem to deny the
theory,
> according to which SWR is independent of feedline length (as long as the
cable
> attenuation remains constant).
>
> Clearly the measured SWR change cannot be due to the change in the
feedline
> attenuation as, at HF, adding or cutting a few meters of cable would yield
a
> very small change in attenuation and hence a negligible impact on measured
SWR.
>
> Reading here and there, the most common theory explaining such phenomenon
is
> that, in presence of RF on the coaxial cable braid, the SWR meter reading
is
> influenced by the feedline length. I am not too convinced of that
explanation,
> also because I have invariably experienced the measured SWR variation
phenomenon
> with all antenna I have had, and I never had hot braid problems.
>
> At that regard I got an idea that could explain the phenomenon, at least
part of
> it.
>
> Reading coaxial cable data sheet, I noted that manufacturers typically
give a
> small tolerance on cable impedance (2 to 3 ohm). Let us then assume that
the
> feedline cable has a 53-ohm impedance, whilst the Bird wattmeter is 50 ohm
> sharp.
>
> If the 53-ohm cable is terminated on an e.g. 75-ohm (purely resistive)
antenna,
> the real SWR on the line would be 75/53=1.41 independently of feedline

length
> (if the attenuation variation with length is neglected). But the impedance
seen
> by the wattmeter obviously varies with the feedline length, and it can be
easily
> calculated that the seen impedance range results in an apparent SWR, on
the
> 50-ohm wattneter, reading that varies from a maximum of 1.5 (when feedline
> length is an even multiple of half wavelenght) down to a minimum of 1.33
(when
> feedline length is an odd multiple of wavelenght quarters). For 100W of
forward
> power, the reflected power varies from about 4W down to about 2W.
>
> Repeating the exercise with an e.g. 85-ohm load, the apparent SWR measured
on
> the 50-ohm wattmeter would vary from 1.7 down to 1.51 (reflected power
varying
> from 7W down to 4W).
>
> You can get easily convinced that such variation is only due to the
assumed
> 3-ohm difference in cable impedance.
>
> With older cables having a nominal 52-ohm impedance, instead of 50, the
> situation could get even more evident.
>
> Any comment would be appreciated.
>
> 73
>
> Tony I0JX
>
The Bird actually measures a combination of capacitive coupled voltage and
inductively coupled current. There is a app note on the Bird website.
Find: "Straight Talk About Directivity".

32. Re: SWR variation with feedline length

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-01 21:42:56 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <bPXUl.5071$fD.2622@flpi145.ffdc.sbc.com>
Source record: 15144

Antonio Vernucci wrote:
> I noted that the
> measured SWR of all the antennas I have mounted (Yagis, dipoles)
> slightly varies when the feedline length is changed by several meters.

If the characteristic impedance of the feedline differs from
the characteristic impedance of the calibrated SWR meter,
the indicated SWR will vary with length of feedline.

If the feedline is lossy, the transmitted signal SWR will
decrease between the antenna and the transmitter. All
feedlines have a certain amount of loss.

If common-mode current is present on the SWR meter case,
the SWR reading will vary because the meter has no fixed
ground reference.
--
73, Cecil, IEEE, OOTC, http://www.w5dxp.com

33. Re: Sun Spots

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-01 21:57:13 UTC
From: Registered User <n4jvp@ix.netcom.com>
Message-ID: <35j82599m6jvu30kfh9njjlgicv1i54mg0@4ax.com>
Source record: 15145

On Mon, 1 Jun 2009 20:25:06 +0200, Szczepan Biaï¿½ek <sz.bialek@wp.pl>
wrote:

>
>That are speculations only. Everybody know that at the end of an antenna the
>high voltage appears.
>
Even for a controlled current distribution dipole?

34. Re: Sun Spots

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-01 22:12:14 UTC
From: Art Unwin <ArthurUnwin@gmail.com>
Message-ID: <51fba6e6-d971-4c3f-989f-c75f953105eb@n19g2000vba.googlegroups.com>
Source record: 15146

On Jun 1, 2:18 pm, Jim Kelley <jwkel...@uci.edu> wrote:
> Art Unwin wrote:
>
> > When this experiment takes place it
>
> > suggests that radiation will really peak for a short time before we
> > all become incinerated.
>
> I've arranged for the Neptune Society to handle all my incineration needs.
>
> So how about those sun spot cycles?
>
> ac6xg

Looking better. Obama should have his new grid in place before the
next sun cycle so the lack of large sun spots are doing Mother Earth a
favor.
Regards
Art

35. Re: Sun Spots

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-01 23:08:10 UTC
From: Dave <noone@nowhere.com>
Message-ID: <ubZUl.2219$9L2.522@nwrddc02.gnilink.net>
Source record: 15147

"Szczepan Bialek" <sz.bialek@wp.pl> wrote in message
news:gvvp8s$k0l$1@node1.news.atman.pl...

>> both. when the current is high in the center it is creating a stronger
>> magnetic field, and when that current reaches the end it creates the
>> highest voltage so makes more electric field... both are part of the
>> electro-magnetic wave.
>
> It is not Maxwell model. In it current create magnetic field and THIS
> field create the electric field. AND SO ON.

ah, you believe 'and so on'?? the 'so on' means the changing electric field
creates a magnetic field... both conditions are required for electromagnetic
propagation. without the time varying displacement current there would be
no propagation. so yes, you can create a magnetic field from the time
varying electric field.

> Your (engineering people) model is O.K. but it is quite different from the
> Maxwell model. This is the reason that Art can wrote: " "For your
> information you have never built an antenna that conforms in its
> entirety to Maxwell';s laws thus you cannot possibly understand
> radiation as presented by Maxwell."

the maxwell equations completely describe radiation from an antenna, so all
antennas, even arts, 'conform' to the maxwell equations.

36. Re: Sun Spots

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-01 23:09:11 UTC
From: Dave <noone@nowhere.com>
Message-ID: <rcZUl.2220$9L2.827@nwrddc02.gnilink.net>
Source record: 15148

```
"Dave" <noone@nowhere.com> wrote in message
news:baCUl.1762$Cc1.1466@nwrddc01.gnilink.net...
>
> "Dave" <noone@nowhere.com> wrote in message
> news:kitUl.1887$9L2.465@nwrddc02.gnilink.net...
>>
>> "Dave" <noone@nowhere.com> wrote in message
>> news:WtjUl.1573$Cc1.524@nwrddc01.gnilink.net...
>>>
>>> "Dave" <noone@nowhere.com> wrote in message
>>> news:ECaUl.1481$Cc1.1381@nwrddc01.gnilink.net...
>>>>
>>>> "Art Unwin" <ArthurUnwin@gmail.com> wrote in message
>>>> news:08a982b6-d65b-4f67-a9fd-1703d80f6f0a@t21g2000yqi.googlegroups.com...
>>>>
>>>>>Gauss's law of Statics is the subject law.
>>>>
>>>> Ok, you capitalize that as if it were a specific law... provide a
>>>> reference, other than your own posts, for "Gauss's law of Statics". If
>>>> you can't do that, provide the specific equation you are refering to.
>>>
>>> come on art, cite the specific reference for "Gauss's law of Statics".
>>
>> can't answer a specific simple question art?? you much prefer to
>> handwave and berate others, i ask a simple direct question that is at the
>> core of all your ranting and you can't even answer it. without that
>> answer the rest of your posts are just empty shells. give us this
>> magical "Gauss's law of Statics" that you base everything on!
>>
>
> come on art, one specific simple question...cite the specific reference
> for "Gauss's law of Statics". or are you going to pull another vanishing
> act and come back later just to start fresh with more bafflegab?
>

thats right art, keep ignoring me... you can't answer the central question
that all your theory is built on, so that makes the rest of it just so much
more nonsense.
```

37. Re: Sun Spots

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-01 23:38:08 UTC
From: Art Unwin <ArthurUnwin@gmail.com>
Message-ID: <b1a28f4a-b711-4028-b0a8-fd38da3ff7a3@c9g2000yqm.googlegroups.com>
Source record: 15149

On Jun 1, 6:09 pm, "Dave" <no...@nowhere.com> wrote:
> "Dave" <no...@nowhere.com> wrote in message
>
> news:baCUl.1762$Cc1.1466@nwrddc01.gnilink.net...
>
>
>
>
>
> > "Dave" <no...@nowhere.com> wrote in message
> >news:kitUl.1887$9L2.465@nwrddc02.gnilink.net...
>
> >> "Dave" <no...@nowhere.com> wrote in message
> >>news:WtjUl.1573$Cc1.524@nwrddc01.gnilink.net...
>
> >>> "Dave" <no...@nowhere.com> wrote in message
> >>>news:ECaUl.1481$Cc1.1381@nwrddc01.gnilink.net...
>
> >>>> "Art Unwin" <ArthurUn...@gmail.com> wrote in message
> >>>>news:08a982b6-d65b-4f67-a9fd-1703d80f6f0a@t21g2000yqi.googlegroups.com...
>
> >>>>>Gauss's law of Statics is the subject law.
>
> >>>> Ok, you capitalize that as if it were a specific law... provide a
> >>>> reference, other than your own posts, for "Gauss's law of Statics". If
> >>>> you can't do that, provide the specific equation you are refering to.
>
> >>> come on art, cite the specific reference for "Gauss's law of Statics".
>
> >> can't answer a specific simple question art?? you much prefer to
> >> handwave and berate others, i ask a simple direct question that is at the
> >> core of all your ranting and you can't even answer it. without that
> >> answer the rest of your posts are just empty shells. give us this
> >> magical "Gauss's law of Statics" that you base everything on!
>
> > come on art, one specific simple question...cite the specific reference
> > for "Gauss's law of Statics". or are you going to pull another vanishing
> > act and come back later just to start fresh with more bafflegab?
>
> thats right art, keep ignoring me... you can't answer the central question
> that all your theory is built on, so that makes the rest of it just so much
> more nonsense.

David
I am not ignoring you. I have responded to lots and lots of your questions but you do not respond in kind. It started years ago with a time varying current being applied to Gass's law of Statics and you have rebelled to everything said since then, and not once have you explained the definitive reasons as to why you reject all. As I have said many times, I do not work for you. I am not in your employ. As for Maxwell's equations, he accounted for all the forces involved in the generation of radiation within the boundary of equilibrium. A Yagi is not in equilibrium so the difference is chalk and cheese. Both radiate ofcourse tho the sizes do differ as does the bandwidth as well as the TOA but the point I am making is that if your radiation assembly is not in equilibrium you are not following the tenents of Maxwell. A very simple distinction as is the accelleration of the charge contained by a departing particle compared to a wave of some sort or energy content that is capable of a straight line projection without interference from gravitational forces or progressions to the existance of light, X rays, e.t.c.
Have a very happy day and sleep tight and don't get your knickers in a twist
Regards
Art

38. Re: SWR variation with feedline length

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-02 00:01:47 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <mqGdnbupFuDPNLnXnZ2dnUVZ_uidnZ2d@giganews.com>
Source record: 15062

It's important to know and keep in mind that the SWR meter doesn't
actually measure the SWR on the feedline. So its reading doesn't prove
or disprove anything about how the SWR on a feedline changes with length.

What the meter effectively measures is the impedance seen at that point.
It's calibrated in such a way that if it's connected to a transmission
line of exactly 50 ohms impedance, the indicated SWR will be the SWR on
the line. Otherwise, the indicated SWR won't be the actual line SWR.

There are at least three things which can cause an indicated SWR
variation with line length:

1. The feedline Z0 isn't exactly 50 ohms. The Z0 of coax easily varies
+/- 5 ohms from nominal, and sometimes closer to +/- 10 -- it's seldom
exactly 50. If you connect a perfect 50 ohm load to your transmitter via
a 45 ohm line, the impedance seen by the transmitter will change with
line length. Consequently, the SWR meter reading will also change. The
actual SWR on the line will not, except as dictated by loss, described next.

2. The feedline has loss. The SWR will improve as the line becomes
longer due to line loss. If the line is long enough to be very lossy,
the transmitter will see nearly the line's Z0 regardless of what load is
connected to the other end. The actual SWR on the line will be greatest
at the load, decreasing as you get farther away.

3. There is current on the outside of the coax shield (common mode
current). When this happens, the feedline becomes part of the antenna.
Consequently, changing the feedline length actually changes the
effective antenna length, which in turn changes the feedpoint impedance.

Roy Lewallen, W7EL

Antonio Vernucci wrote:
> Along several decades of radio hamming on the HF bands, I noted that the
> measured SWR of all the antennas I have mounted (Yagis, dipoles)
> slightly varies when the feedline length is changed by several meters.
> For 100W of forward power, the reflected power could vary somewhat, e.g.
> from 2W to 5W or so, measured on a Bird wattmeter. This behavior would
> seeem to deny the theory, according to which SWR is independent of
> feedline length (as long as the cable attenuation remains constant).
>
> Clearly the measured SWR change cannot be due to the change in the
> feedline attenuation as, at HF, adding or cutting a few meters of cable
> would yield a very small change in attenuation and hence a negligible
> impact on measured SWR.
>

> Reading here and there, the most common theory explaining such
> phenomenon is that, in presence of RF on the coaxial cable braid, the
> SWR meter reading is influenced by the feedline length. I am not too
> convinced of that explanation, also because I have invariably
> experienced the measured SWR variation phenomenon with all antenna I
> have had, and I never had hot braid problems.
>
> At that regard I got an idea that could explain the phenomenon, at least
> part of it.
>
> Reading coaxial cable data sheet, I noted that manufacturers typically
> give a small tolerance on cable impedance (2 to 3 ohm). Let us then
> assume that the feedline cable has a 53-ohm impedance, whilst the Bird
> wattmeter is 50 ohm sharp.
>
> If the 53-ohm cable is terminated on an e.g. 75-ohm (purely resistive)
> antenna, the real SWR on the line would be 75/53=1.41 independently of
> feedline length (if the attenuation variation with length is neglected).
> But the impedance seen by the wattmeter obviously varies with the
> feedline length, and it can be easily calculated that the seen impedance
> range results in an apparent SWR, on the 50-ohm wattneter, reading that
> varies from a maximum of 1.5 (when feedline length is an even multiple
> of half wavelenght) down to a minimum of 1.33 (when feedline length is
> an odd multiple of wavelenght quarters). For 100W of forward power, the
> reflected power varies from about 4W down to about 2W.
>
> Repeating the exercise with an e.g. 85-ohm load, the apparent SWR
> measured on the 50-ohm wattmeter would vary from 1.7 down to 1.51
> (reflected power varying from 7W down to 4W).
>
> You can get easily convinced that such variation is only due to the
> assumed 3-ohm difference in cable impedance.
>
> With older cables having a nominal 52-ohm impedance, instead of 50, the
> situation could get even more evident.
>
> Any comment would be appreciated.
>
> 73
>
> Tony I0JX

39. Re: SWR variation with feedline length

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-02 00:02:53 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <n8q825lsu5qi7co84asj3a1e39efmgmj24@4ax.com>
Source record: 15150

On Mon, 1 Jun 2009 22:50:52 +0200, "Antonio Vernucci"
<vernucci@tin.it> wrote:

>Along several decades of radio hamming on the HF bands, I noted that the
>measured SWR of all the antennas I have mounted (Yagis, dipoles) slightly varies
>when the feedline length is changed by several meters. For 100W of forward
>power, the reflected power could vary somewhat, e.g. from 2W to 5W or so,
>measured on a Bird wattmeter. This behavior would seeem to deny the theory,
>according to which SWR is independent of feedline length (as long as the cable
>attenuation remains constant).

Hi Antonio,

Yes, this is the accepted wisdom.

>Clearly the measured SWR change cannot be due to the change in the feedline
>attenuation as, at HF, adding or cutting a few meters of cable would yield a
>very small change in attenuation and hence a negligible impact on measured SWR.

A good point.

>Reading here and there, the most common theory explaining such phenomenon is
>that, in presence of RF on the coaxial cable braid, the SWR meter reading is
>influenced by the feedline length.

This, too, is accepted wisdom.

>I am not too convinced of that explanation,
>also because I have invariably experienced the measured SWR variation phenomenon
>with all antenna I have had, and I never had hot braid problems.

You ARE describing a hot braid problem. At the slight shift of 3W out
of 100W, it is a small problem by the same degree (nothing you would
notice by other indications).

>At that regard I got an idea that could explain the phenomenon, at least part of
>it.

Well, I am going to skip that quote to cut to the chase. What you
describe is called mismatch uncertainty. It exists in a cable that
has a nominal Z that matches neither the load nor the source.
Depending upon the amount of mismatch at each end, you have a zone of
confusion between those ends that will result in as many different
readings as you have insertion points to measure at. As most modern
transmitters have a source Z of 30 to 70 Ohms, you might note a very,
very small perturbation when the other end of ANY line is mismatched -
but I doubt it. To provoke this condition into revealing readings
that are significantly beyond the range of error requires mismatches

at both ends on the order of 3:1. You don't describe that.

More likely your problem is Common Mode currents - what you call hot braid. One test is to use a snap-on choke and slide it along the line and note if the SWR meter reading moves in concert with the hand motion (or the reading simply shifts by the addition of the choke).

73's
Richard Clark, KB7QHC

40. Re: SWR variation with feedline length

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-02 00:17:17 UTC
From: Wimpie <wimabctel@tetech.nl>
Message-ID: <7e2a14e6-ecd0-4510-9b3e-9bcf5e187926@37g2000yqp.googlegroups.com>
Source record: 15051

On 1 jun, 22:50, "Antonio Vernucci" <vernu...@tin.it> wrote:
> Along several decades of radio hamming on the HF bands, I noted that the
> measured SWR of all the antennas I have mounted (Yagis, dipoles) slightly varies
> when the feedline length is changed by several meters. For 100W of forward
> power, the reflected power could vary somewhat, e.g. from 2W to 5W or so,
> measured on a Bird wattmeter. This behavior would seeem to deny the theory,
> according to which SWR is independent of feedline length (as long as the cable
> attenuation remains constant).
>
> Clearly the measured SWR change cannot be due to the change in the feedline
> attenuation as, at HF, adding or cutting a few meters of cable would yield a
> very small change in attenuation and hence a negligible impact on measured SWR.
>
> Reading here and there, the most common theory explaining such phenomenon is
> that, in presence of RF on the coaxial cable braid, the SWR meter reading is
> influenced by the feedline length. I am not too convinced of that explanation,
> also because I have invariably experienced the measured SWR variation phenomenon
> with all antenna I have had, and I never had hot braid problems.
>
> At that regard I got an idea that could explain the phenomenon, at least part of
> it.
>
> Reading coaxial cable data sheet, I noted that manufacturers typically give a
> small tolerance on cable impedance (2 to 3 ohm). Let us then assume that the
> feedline cable has a 53-ohm impedance, whilst the Bird wattmeter is 50 ohm
> sharp.
>
> If the 53-ohm cable is terminated on an e.g. 75-ohm (purely resistive) antenna,
> the real SWR on the line would be 75/53=1.41 independently of feedline length
> (if the attenuation variation with length is neglected). But the impedance seen
> by the wattmeter obviously varies with the feedline length, and it can be easily
> calculated that the seen impedance range results in an apparent SWR, on the
> 50-ohm wattneter, reading that varies from a maximum of 1.5 (when feedline
> length is an even multiple of half wavelenght) down to a minimum of 1.33 (when
> feedline length is an odd multiple of wavelenght quarters). For 100W of forward
> power, the reflected power varies from about 4W down to about 2W.
>
> Repeating the exercise with an e.g. 85-ohm load, the apparent SWR measured on
> the 50-ohm wattmeter would vary from 1.7 down to 1.51 (reflected power varying
> from 7W down to 4W).
>
> You can get easily convinced that such variation is only due to the assumed
> 3-ohm difference in cable impedance.
>

> With older cables having a nominal 52-ohm impedance, instead of 50, the
> situation could get even more evident.
>
> Any comment would be appreciated.
>
> 73
>
> Tony I0JX

Hello Antonio,

In my opinion (when dealing with actual antennas) it can be:

1. your coaxial cable is part of the antenna (common mode current). Changing the length, changes the common mode impedance. You can rule this out by sliding some large ferrites along the cable close to the VSWR meter, or change the grounding a bit and watch the difference (if present).

2. your bridge inside the VSWR meter is not perfect. You can check this by connecting known impedances (for example 56 Ohms resistor and a 44.6 Ohms resistor and 100 ohms versus 25 Ohms).

3. The cables you are using are not exactly 50 Ohms. I think your analysis is right. When you have cable with slightly different Z0, readings depend on length. Of course when you extend with a good 50 ohms cable (directly connected to the meter), the reading should not change. I did the math also and found also VSWR=1.7 and VSWR=1.51 for 85 ohms load connected to cable with Z0=53 Ohms. I didn't expect such difference for just 3 ohms deviation from 50 Ohm.

4. Harmonics in the final amplifier (I hope that is not the reason).

Best regards,

Wim
PA3DJS
www.tetech.nl
remove abc in case of pm

41. Re: Sun Spots

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-02 02:14:04 UTC
From: tom <news4792@taring.org>
Message-ID: <4a248acc$0$18866$8046368a@newsreader.iphouse.net>
Source record: 15052

Art Unwin wrote:
> On Jun 1, 6:44 am, Cecil Moore <nos...@w5dxp.com> wrote:
>> Art Unwin wrote:
>>> Does that mean that a radiator reduces mass with use
>>> because the electrons orbiting around the atom are losing mass?
>> Since mass and energy are equivalent, I suppose the mass
>> of the radiator increases with increasing power input.
>> The increase in mass can be calculated but the average
>> ham has no way of measuring the increase. No need to
>> worry about the tower falling down due to additional
>> mass from energized electrons. :-)
>>
>> The antenna is charged up to a certain energy level
>> during the key-down transient state. Since the energy
>> content of the antenna cannot increase forever, it must lose
>> energy as photonic radiation and/or as heat during steady-state.
>>
>> Free electrons in a conductor travel at much less than the
>> speed of light. Photons are emitted from the electrons at
>> the speed of light. A quote from:
>>
>> http://c2.com/cgi/wiki?SpeedOfElectrons
>>
>> "For example, for a copper wire of radius 1 mm carrying
>> a steady current of 10 Amps, the drift velocity is only
>> about 0.024 cm/sec!" i.e. about 0.01 inch/second. Ignoring
>> random movements, the electrons at our RF transmitter never
>> reach the antenna. At 10 MHz, the electrons move less than
>> 0.000000001 inch during a 100 nS cycle involving a 100 watt
>> transmitter, i.e. they mostly oscillate in place.
>>
>> However, other electrons, traveling at a large percentage
>> of the speed of light, are quite massive as observed in
>> particle accelerators and radioactive decay.
>> --
>> 73, Cecil, IEEE, OOTC, http://www.w5dxp.com
>
> Cecil
> The above is confusing unbound particles with bound particles both of
<snip>
Good, but not one of your great Carrollesque.

> this collection of particles are in a state of three dimensional
> equilibrium in relation to other similar clusters of particles which

> provides a mass that in total is in static equilibrium
> within its own boundary. If you supply energy to this mass in
> equilibrium the frequency of rotation of particles increases and could
> increase to the point of the frequency of light where, if it
> continues, could become vaporised such that we now have a new medium
> consisting of partial pressures of gasses.

Just amazing in it's wrongness, but it could easily convince the
ignorant masses our schools now create. This is just incredible fiction!

How do you do it?

<snip>
> Art

tom
K0TAR

42. Re: "Large" volume antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-02 02:32:28 UTC
From: tom <news4792@taring.org>
Message-ID: <4a248f6e$0$92353$8046368a@newsreader.iphouse.net>
Source record: 15053

Art Unwin wrote:
<snip more nonsense>
> Comments?

Not up to your usual standards, but it sounds like you made an antenna
that is much much too small and won't see any directionality unluss it's
operating (too put it simple for you) as a magnetic antenna.

You'll notice if it works 90 degrees from what you'd expect.

> Regards
> Art

No regard for you
tom
K0TAR

43. Re: Sun Spots

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-02 02:34:53 UTC
From: tom <news4792@taring.org>
Message-ID: <4a248fff$0$92353$8046368a@newsreader.iphouse.net>
Source record: 15054

```
Art Unwin wrote:
> On Jun 1, 6:09 pm, "Dave" <no...@nowhere.com> wrote:
>> "Dave" <no...@nowhere.com> wrote in message
>>
>> news:baCUl.1762$Cc1.1466@nwrddc01.gnilink.net...
>>
>>
>>
>>
>>
>>> "Dave" <no...@nowhere.com> wrote in message
>>> news:kitUl.1887$9L2.465@nwrddc02.gnilink.net...
>>>> "Dave" <no...@nowhere.com> wrote in message
>>>> news:WtjUl.1573$Cc1.524@nwrddc01.gnilink.net...
>>>>> "Dave" <no...@nowhere.com> wrote in message
>>>>> news:ECaUl.1481$Cc1.1381@nwrddc01.gnilink.net...
>>>>>> "Art Unwin" <ArthurUn...@gmail.com> wrote in message
>>>>>> news:08a982b6-d65b-4f67-a9fd-1703d80f6f0a@t21g2000yqi.googlegroups.com...
>>>>>>> Gauss's law of Statics is the subject law.
>>>>>> Ok, you capitalize that as if it were a specific law... provide a
>>>>>> reference, other than your own posts, for "Gauss's law of Statics". If
>>>>>> you can't do that, provide the specific equation you are refering to.
>>>>> come on art, cite the specific reference for "Gauss's law of Statics".
>>>> can't answer a specific simple question art?? you much prefer to
>>>> handwave and berate others, i ask a simple direct question that is at the
>>>> core of all your ranting and you can't even answer it. without that
>>>> answer the rest of your posts are just empty shells. give us this
>>>> magical "Gauss's law of Statics" that you base everything on!
>>> come on art, one specific simple question...cite the specific reference
>>> for "Gauss's law of Statics". or are you going to pull another vanishing
>>> act and come back later just to start fresh with more bafflegab?
>> thats right art, keep ignoring me... you can't answer the central question
>> that all your theory is built on, so that makes the rest of it just so much
>> more nonsense.
>
> David
> I am not ignoring you. I have responded to lots and lots of your

Yes he is, and no he can't answer the question.

<snip more of the normal nonsense>

> Have a very happy day and sleep tight and don't get your knickers in a
> twist
> Regards
```

> Art

With total disregard
tom
K0TAR

44. Re: "Large" volume antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-02 02:36:28 UTC
From: tom <news4792@taring.org>
Message-ID: <4a24905e$0$92353$8046368a@newsreader.iphouse.net>
Source record: 15055

tom wrote:

> that is much much too small and won't see any directionality unluss it's
>
Apologies for my poor spelling.

tom
K0TAR

45. Re: Sun Spots

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-02 03:02:58 UTC
From: Art Unwin <ArthurUnwin@gmail.com>
Message-ID: <86ed0297-f873-42d4-9950-0514ffbd7033@a7g2000yqk.googlegroups.com>
Source record: 15056

On Jun 1, 9:14 pm, tom <news4...@taring.org> wrote:
> Art Unwin wrote:
> > On Jun 1, 6:44 am, Cecil Moore <nos...@w5dxp.com> wrote:
> >> Art Unwin wrote:
> >>> Does that mean that a radiator reduces mass with use
> >>> because the electrons orbiting around the atom are losing mass?
> >> Since mass and energy are equivalent, I suppose the mass
> >> of the radiator increases with increasing power input.
> >> The increase in mass can be calculated but the average
> >> ham has no way of measuring the increase. No need to
> >> worry about the tower falling down due to additional
> >> mass from energized electrons. :-)
>
> >> The antenna is charged up to a certain energy level
> >> during the key-down transient state. Since the energy
> >> content of the antenna cannot increase forever, it must lose
> >> energy as photonic radiation and/or as heat during steady-state.
>
> >> Free electrons in a conductor travel at much less than the
> >> speed of light. Photons are emitted from the electrons at
> >> the speed of light. A quote from:
>
> >>http://c2.com/cgi/wiki?SpeedOfElectrons
>
> >> "For example, for a copper wire of radius 1 mm carrying
> >> a steady current of 10 Amps, the drift velocity is only
> >> about 0.024 cm/sec!" i.e. about 0.01 inch/second. Ignoring
> >> random movements, the electrons at our RF transmitter never
> >> reach the antenna. At 10 MHz, the electrons move less than
> >> 0.000000001 inch during a 100 nS cycle involving a 100 watt
> >> transmitter, i.e. they mostly oscillate in place.
>
> >> However, other electrons, traveling at a large percentage
> >> of the speed of light, are quite massive as observed in
> >> particle accelerators and radioactive decay.
> >> --
> >> 73, Cecil, IEEE, OOTC, http://www.w5dxp.com
>
> > Cecil
> > The above is confusing unbound particles with bound particles both of
>
> <snip>
> Good, but not one of your great Carrollesque.
>

> > this collection of particles are in a state of three dimensional
> > equilibrium in relation to other similar clusters of particles which
> > provides a mass that in total is in static equilibrium
> > within its own boundary. If you supply energy to this mass in
> > equilibrium the frequency of rotation of particles increases and could
> > increase to the point of the frequency of light where, if it
> > continues, could become vaporised such that we now have a new medium
> > consisting of partial pressures of gasses.
>
> Just amazing in it's wrongness, but it could easily convince the
> ignorant masses our schools now create. This is just incredible fiction!
>
> How do you do it?
>
> <snip>
>
> > Art
>
> tom
> K0TAR

I think it is convincing too.
Science is wonderfull when you connect every thing together and a
picture becomes visible. Same goes for cross word puzzles. My UK born
son was educated in American schools starting with Montessori. He now
earns a good living at La Hoya so education in America is not the
culprit for your observations. Maybe you are over estimating your own
abilities when comparing. However, now is your chance to correct the
"wrongness" that I quote.
I am all ears. After all you have won competitions with your antenna
designed but garnished from the many text books. Note that David is
now comfortable in giving displacement current some credit for
propagation so he must be younger than I thought
according to your interpretations. Now how does a wave traverse the
Earth without
collapsing? What is the connection to light? Does the "belts" that
surround the World act as breakwaters which accounts for the rainy
seasons?I suspect that it is explained in the books somewhere except
that somebody removed a page! Actually, I dreamt most of it and also
made antennas following the small print, and they worked ! Well at
least in my dreams. It must be a miracle. What do you think?
Art
Art

46. Re: SWR variation with feedline length

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-02 03:38:59 UTC
From: Owen Duffy <none@no.where>
Message-ID: <Xns9C1E8ADAB3989nonenowhere@61.9.191.5>
Source record: 15057

"Antonio Vernucci" <vernucci@tin.it> wrote in
news:4a243f2c$0$1117$4fafbaef@reader3.news.tin.it:

> Along several decades of radio hamming on the HF bands, I noted that
> the measured SWR of all the antennas I have mounted (Yagis, dipoles)
> slightly varies when the feedline length is changed by several meters.
> For 100W of forward power, the reflected power could vary somewhat,
> e.g. from 2W to 5W or so, measured on a Bird wattmeter. This behavior
> would seeem to deny the theory, according to which SWR is independent
> of feedline length (as long as the cable attenuation remains
> constant).

Tony,

You may find my thoughts at
http://www.vk1od.net/transmissionline/VSWR/displacement.htm of interest.

Owen

47. Re: Sun Spots

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-02 03:54:09 UTC
From: tom <news4792@taring.org>
Message-ID: <4a24a293$0$92356$8046368a@newsreader.iphouse.net>
Source record: 15058

Art Unwin wrote:
>
> I think it is convincing too.
> Science is wonderfull when you connect every thing together and a
> picture becomes visible. Same goes for cross word puzzles. My UK born
> son was educated in American schools starting with Montessori. He now
> earns a good living at La Hoya so education in America is not the
> culprit for your observations. Maybe you are over estimating your own
> abilities when comparing. However, now is your chance to correct the
> "wrongness" that I quote.
<snip>
> Art
> Art

You really don't get how science works, do you?

WE DON'T HAVE TO PROVE YOU WRONG.

YOU HAVE TO PROVE YOU ARE RIGHT.

You haven't done that.

In fact, you haven't even started to do that.

tom
K0TAR Not G and proud of it if Art is an example

48. Re: "Large" volume antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-02 04:00:14 UTC
From: Art Unwin <ArthurUnwin@gmail.com>
Message-ID: <fc9b1bb7-166a-4a1c-861f-61ffa39840ae@s12g2000yqi.googlegroups.com>
Source record: 15059

On Jun 1, 9:32 pm, tom <news4...@taring.org> wrote:
> Art Unwin wrote:
>
> <snip more nonsense>
>
> > Comments?
>
> Not up to your usual standards, but it sounds like you made an antenna
> that is much much too small and won't see any directionality unluss it's
> operating (too put it simple for you) as a magnetic antenna.
>
> You'll notice if it works 90 degrees from what you'd expect.
>
> > Regards
> > Art
>
> No regard for you
> tom
> K0TAR

Gee. Only somebody as wise as you can see right thru me.
How much will you pay for the movie rights?
Art

49. Re: SWR variation with feedline length

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-02 04:17:45 UTC
From: K7ITM <k7itm@msn.com>
Message-ID: <fccb0bc8-cf82-4b38-9d67-fd5da8985998@r33g2000yqn.googlegroups.com>
Source record: 15060

On Jun 1, 1:50 pm, "Antonio Vernucci" <vernu...@tin.it> wrote:
> Along several decades of radio hamming on the HF bands, I noted that the
> measured SWR of all the antennas I have mounted (Yagis, dipoles) slightly varies
> when the feedline length is changed by several meters. For 100W of forward
> power, the reflected power could vary somewhat, e.g. from 2W to 5W or so,
> measured on a Bird wattmeter. This behavior would seeem to deny the theory,
> according to which SWR is independent of feedline length (as long as the cable
> attenuation remains constant).
>
> Clearly the measured SWR change cannot be due to the change in the feedline
> attenuation as, at HF, adding or cutting a few meters of cable would yield a
> very small change in attenuation and hence a negligible impact on measured SWR.
>
> Reading here and there, the most common theory explaining such phenomenon is
> that, in presence of RF on the coaxial cable braid, the SWR meter reading is
> influenced by the feedline length. I am not too convinced of that explanation,
> also because I have invariably experienced the measured SWR variation phenomenon
> with all antenna I have had, and I never had hot braid problems.
>
> At that regard I got an idea that could explain the phenomenon, at least part of
> it.
>
> Reading coaxial cable data sheet, I noted that manufacturers typically give a
> small tolerance on cable impedance (2 to 3 ohm). Let us then assume that the
> feedline cable has a 53-ohm impedance, whilst the Bird wattmeter is 50 ohm
> sharp.
>
> If the 53-ohm cable is terminated on an e.g. 75-ohm (purely resistive) antenna,
> the real SWR on the line would be 75/53=1.41 independently of feedline length
> (if the attenuation variation with length is neglected). But the impedance seen
> by the wattmeter obviously varies with the feedline length, and it can be easily
> calculated that the seen impedance range results in an apparent SWR, on the
> 50-ohm wattneter, reading that varies from a maximum of 1.5 (when feedline
> length is an even multiple of half wavelenght) down to a minimum of 1.33 (when
> feedline length is an odd multiple of wavelenght quarters). For 100W of forward
> power, the reflected power varies from about 4W down to about 2W.
>
> Repeating the exercise with an e.g. 85-ohm load, the apparent SWR measured on
> the 50-ohm wattmeter would vary from 1.7 down to 1.51 (reflected power varying
> from 7W down to 4W).
>
> You can get easily convinced that such variation is only due to the assumed
> 3-ohm difference in cable impedance.
>

> With older cables having a nominal 52-ohm impedance, instead of 50, the
> situation could get even more evident.
>
> Any comment would be appreciated.
>
> 73
>
> Tony I0JX

There is a very good possibility that your analysis is correct. I see the same effect, and in fact, it's of particular concern to me right now, because I'm putting what effectively is an SWR meter into production, and it's important that we have a test setup that accurately measures the performance. I've been specifically concerned that the test setup, as currently configured, may have trouble because the connecting cables may not be close enough to 50 ohms.

As others have said, IF there is a problem with RF on the outside of the line, any variation in observed SWR is most likely because the change in line length has changed the load the other end of the coax is seeing, NOT because the meter is directly responding to the "outside" RF. The meter measures transmission line current and transmission line voltage, and the line itself is all the reference it needs to do that. Direct response to RF on the outside of the line could result from poor construction of the meter, but I wouldn't expect that from a Bird.

One other possibility that I haven't seen mentioned, too, is that the impedance of the line is not constant along its length. With line of good construction that hasn't been abused, the variation should be small. You can detect it by running a network analyzer sweep of just the line, across a broad frequency range. But a line with polyethylene dielectric (and especially one with foam polyethylene) that's gotten too hot--perhaps because of high power at high SWR--can have the center conductor go "off-center" and change the impedance.

If the effect you are seeing is the result of a line that's not quite the same impedance that the meter is calibrated to (which itself may be noticably different from 50 ohms), you could plot the change in indicated SWR as a function of line length and see it vary in a smooth and predictable manner. Most likely, though, what you're seeing is the sum of several effects, and the variation in indicated SWR or reflected power may not be all that smooth. Very often when I expect to see a nice smooth spiral centered on one point on my network analyzer's Smith chart display, what I see is a spiral that follows along some arc, because of various imperfections. (Sometimes it's fun to try to figure out just what the imperfections are...)

Cheers,
Tom

50. Re: Sun Spots

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-02 04:20:54 UTC
From: Art Unwin <ArthurUnwin@gmail.com>
Message-ID: <afc05381-a90a-4d84-917a-83535b13263e@z14g2000yqa.googlegroups.com>
Source record: 15061

On Jun 1, 10:54 pm, tom <news4...@taring.org> wrote:
> Art Unwin wrote:
>
> > I think it is convincing too.
> > Science is wonderfull when you connect every thing together and a
> > picture becomes visible. Same goes for cross word puzzles. My UK born
> > son was educated in American schools starting with Montessori. He now
> > earns a good living at La Hoya so education in America is not the
> > culprit for your observations. Maybe you are over estimating your own
> > abilities when comparing. However, now is your chance to correct the
> > "wrongness" that I quote.
> <snip>
> > Art
> > Art
>
> You really don't get how science works, do you?
>
> WE DON'T HAVE TO PROVE YOU WRONG.
>
> YOU HAVE TO PROVE YOU ARE RIGHT.
>
> You haven't done that.
>
> In fact, you haven't even started to do that.
>
> tom
> K0TAR Not G and proud of it if Art is an example

Where does it say I have to prove it ?
Maxwell proved it 150 years ago, so why does it have to happen all
over again?
Either way, everybody says it can't work or it doesn't work so what
are you asking for, a drum roll? Why don't you write a book on
antennas like David so at last the truth is revealed with respect to
antennas. You could steal my thunder if I decided to become an author
If you are happy with what you have then be satisfied and live happily
ever after.
You have proved yourself a winner with the multiple antenna building
awards that you have
in the many shoot outs that you have entered. Isn't that enough for
you, the antenna king?
When you decided to pick a fight with me did you really believe I
would run away and hide?
Art

Art KB9MZ......xg (uk) just for you Tom

51. Re: SWR variation with feedline length

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-02 05:47:11 UTC
From: Antonio Vernucci <vernucci@tin.it>
Message-ID: <4a24bcde$0$47552$4fafbaef@reader1.news.tin.it>
Source record: 15063

> It's important to know and keep in mind that the SWR meter doesn't actually
> measure the SWR on the feedline. So its reading doesn't prove or disprove
> anything about how the SWR on a feedline changes with length.

Hi, Roy

yes, that is the reason why I was talking of "apparent" or "measured" SWR,
whilst the real SWR does not vary with line length.

> 1. The feedline Z0 isn't exactly 50 ohms. The Z0 of coax easily varies +/- 5
> ohms from nominal, and sometimes closer to +/- 10 -- it's seldom exactly 50.
> If you connect a perfect 50 ohm load to your transmitter via a 45 ohm line,
> the impedance seen by the transmitter will change with line length.
> Consequently, the SWR meter reading will also change. The actual SWR on the
> line will not, except as dictated by loss, described next.
>
> 2. The feedline has loss. The SWR will improve as the line becomes longer due
> to line loss. If the line is long enough to be very lossy, the transmitter
> will see nearly the line's Z0 regardless of what load is connected to the
> other end. The actual SWR on the line will be greatest at the load, decreasing
> as you get farther away.
>
> 3. There is current on the outside of the coax shield (common mode current).
> When this happens, the feedline becomes part of the antenna. Consequently,
> changing the feedline length actually changes the effective antenna length,
> which in turn changes the feedpoint impedance.

I would say that in case no. 1 the meter measures an apparent SWR, whilst in
case no. 2 it measures the real SWR existing at the measurement point. I am not
sure what it measures in case no. 3

Regards.

Tony I0JX

52. Re: SWR variation with feedline length

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-02 05:51:20 UTC
From: Antonio Vernucci <vernucci@tin.it>
Message-ID: <4a24bdd7$0$47547$4fafbaef@reader1.news.tin.it>
Source record: 15064

> If the characteristic impedance of the feedline differs from
> the characteristic impedance of the calibrated SWR meter,
> the indicated SWR will vary with length of feedline.
>
> If the feedline is lossy, the transmitted signal SWR will
> decrease between the antenna and the transmitter. All
> feedlines have a certain amount of loss.
>
> If common-mode current is present on the SWR meter case,
> the SWR reading will vary because the meter has no fixed
> ground reference.

Hi Cecil.

in the first case the meter measures an apparent SWR, whilst in the second case
it measures the real SWR (occuring at the measurement point).

For the third case, I am unable to figure out whether the meter reads an
apparent or the real SWR.

73

Tony I0JX

53. Re: SWR variation with feedline length

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-02 05:58:21 UTC
From: Antonio Vernucci <vernucci@tin.it>
Message-ID: <4a24bf7c$0$47539$4fafbaef@reader1.news.tin.it>
Source record: 15065

> The Bird actually measures a combination of capacitive coupled voltage and
> inductively coupled current. There is a app note on the Bird website.
> Find: "Straight Talk About Directivity".
>

Thanks for pinpointing that nice document.

However the document dwells on the directivity of the meter, and I could not find there any mention of the impedance tolerance issue I had raised.

73

Tony I0JX

54. Re: SWR variation with feedline length

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-02 07:23:05 UTC
From: Owen Duffy <none@no.where>
Message-ID: <Xns9C1EB0D93B551nonenowhere@61.9.191.5>
Source record: 15066

"Antonio Vernucci" <vernucci@tin.it> wrote in
news:4a24bf7c$0$47539$4fafbaef@reader1.news.tin.it:

>> The Bird actually measures a combination of capacitive coupled
>> voltage and inductively coupled current. There is a app note on the
>> Bird website. Find: "Straight Talk About Directivity".
>>
>
> Thanks for pinpointing that nice document.
>
> However the document dwells on the directivity of the meter, and I
> could not find there any mention of the impedance tolerance issue I
> had raised.

I wrote some notes on the operation of the Bruene type VSWR meter at
http://www.vk1od.net/transmissionline/VSWR/VSWRMeter.htm . The Bird 43 is
not a Bruene type meter, but a similar derivation could be done, and for
all practical purposes, the explanation applies.

Keep in mind that the usual practice of calibrating a VSWR meter is to
adjust it for nil reflected indication with a load of 50+j0. Without
arguing the tolerances implications, its indicated VSWR can only be
applied exactly to an adjacent low loss line with Zo=50+j0... which you
do not have, so you must expect some error in the measurements.

If you read the article I gave earlier, you will see the plots of VSWR
along a specification RG58C/U line with a 50+j0 +/-0% load. Those are the
indications you would expect of a *perfectly* calibrated Bird 43 on
RG58C/U exactly meeting the specification from which the RLGC parameters
were derived.

These are very small effects, but they exist.

Layer on top of that cable tolerance and you have more variation.

But, if you are making measurements using an antenna as a load, I
respectfully submit you probably are not in a sound position to assert
that there is zero common mode current effect.

As a brain teaser, think of the situation in which rho, the magnitude of
the voltage reflection coefficient Gamma could be greater than 1. Of
course many think they have proven that cannot happen my citing
measurements made with a Bird 43... but can it capture what is happening?

Owen

55. Re: Sun Spots

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-02 07:28:40 UTC
From: "Sal M. Onella" <salmonella@food.poisoning.org>
Message-ID: <RYgVl.1672$En5.1545@newsfe09.iad>
Source record: 15097

"tom" <news4792@taring.org> wrote in message
news:4a21ecf3$0$18871$8046368a@newsreader.iphouse.net...
> Sal M. Onella wrote:
> >
> > Just a guess, but maybe it deals with the Wullenweber [or Wullenwever]
> > antenna, described here http://en.wikipedia.org/wiki/Wullenweber and
> > elsewhere.
> >
>
> Actually, unlike Wullenweber, they have multiple concentric rings of
> verticals in the array with a complex phasing system. My guess is that
> this may have been a contributor to the methods eventually used in
> phased array radars. But also something that was an engineering study,
> and not necessarily practical.

Our Wullenweber at Hanza had two concentric rings of antennas, the high band and the low band. And it did have a phasing system to form a beam. The pattern was very sharp.

Oddly, most of what shows in a Wullenweber photograph isn't antennas, at all, but the passive screens that give the array its characteristic of seeing just off to one side. In some photos the ring of monopole antennas can be tough to spot.

Unfortunately for this discussion, I didn't work in any of the DF shops. I was in the Comm Shop -- crypto, TTY, telephone & mux maintenance. What I learned about DF was just picked up along the way.

"Sal"

56. Re: Tube and Twin lead Slim Jim

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-02 07:29:49 UTC
From: "Sal M. Onella" <salmonella@food.poisoning.org>
Message-ID: <SYgVl.1673$En5.169@newsfe09.iad>
Source record: 15096

"JIMMIE" <JIMMIEDEE123@YAHOO.COM> wrote in message
news:45c4e8a8-4618-4787-9df3-3d38e355d416@m19g2000yqk.googlegroups.com...

< snip >

> Dave,That was my thoughts on it also. Two wires
> very close togethether with in phase and more or
> less equal currents just adds up to a fatter
> wire.

Not a fatter wire with twice the current?

Recall the colinear J-pole, The two currents are stacked and fed in phase by means of the phasing section. Yes, I realize the currents in the Slim Jim would appear to cancel.

I'm going to have to build one of these and see what it does. I have a lot of twinlead and I have a precision RF generator. I always wanted my own antenna range; tomorrow's the day. Maybe Tuesday.

57. Re: Sun Spots

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-02 08:01:40 UTC
From: Szczepan Białek <sz.bialek@wp.pl>
Message-ID: <h02d1e$3jk$1@node1.news.atman.pl>
Source record: 15067

"Registered User" <n4jvp@ix.netcom.com> wrote
news:35j82599m6jvu30kfh9njjlgicv1i54mg0@4ax.com...
> On Mon, 1 Jun 2009 20:25:06 +0200, Szczepan Biaďż˝ek <sz.bialek@wp.pl>
> wrote:
>
>>
>>That are speculations only. Everybody know that at the end of an antenna
>>the
>>high voltage appears.
>>
> Even for a controlled current distribution dipole?

All time I am writing about the original Hertz apparatus. See:
(http://people.seas.harvard.edu/~jones/cscie129/nu_lectures/lecture6/hertz/Hertz_exp.html

There the ends of the dipole are named "capacitor plates". In the center of
the dipole the sparks jump. The question is which part of the Hertz
apparatus radiate? The capacitor plates (voltage pulses) or the sparks (AC
current).

AC current create the transverse waves. The capacitor plates (or balls)
longitudinal waves.
What are the radio waves: transversal or longitudinal?
S*

58. Re: SWR variation with feedline length

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-02 08:13:33 UTC
From: Jeff <jeff@local.host>
Message-ID: <4a24df86$0$1340$834e42db@reader.greatnowhere.com>
Source record: 15068

"Antonio Vernucci" <vernucci@tin.it> wrote in message
news:4a243f2c$0$1117$4fafbaef@reader3.news.tin.it...
> Along several decades of radio hamming on the HF bands, I noted that the
> measured SWR of all the antennas I have mounted (Yagis, dipoles) slightly
> varies when the feedline length is changed by several meters. For 100W of
> forward power, the reflected power could vary somewhat, e.g. from 2W to 5W
> or so, measured on a Bird wattmeter. This behavior would seeem to deny the
> theory, according to which SWR is independent of feedline length (as long
> as the cable attenuation remains constant).
>

Surely this sounds about right for a Bird 43. Assuming a directivity for the meter of 30dB and an swr of 1.4:1 this would give a possible indicated return loss of between about 13 to 16dB depending on the relative phases of the forward and reflected signals. So moving the meter would give an indicated reflected power anywhere in the 2 to 5W range.

73
Jeff

59. Re: Sun Spots

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-02 08:33:16 UTC
From: Szczepan Białek <sz.bialek@wp.pl>
Message-ID: <h02esm$3rc$1@node1.news.atman.pl>
Source record: 15069

"Art Unwin" <ArthurUnwin@gmail.com> wrote
news:ede827c3-f143-43b1-b7d9-a10d3ca5c8e2@o20g2000vbh.googlegroups.com...
On Jun 1, 2:39 am, Szczepan Biaďž˝ek <sz.bia...@wp.pl> wrote:
>
> "1861 - Maxwell publishes a mechanical model of the electromagnetic field.
> Magnetic fields correspond to rotating vortices with idle wheels between
> them and electric fields correspond to elastic displacements, hence
> displacement currents. The equation for now becomes , where is the total
> current, conduction plus displacement, and is conserved: . This addition
> completes Maxwell's equations and it is now easy for him to derive the
> wave
> equation exactly as done in our textbooks on electromagnetism and to note
> that the speed of wave propagation was close to the measured speed of
> light.
> Maxwell writes, ``We can scarcely avoid the inference that light in the
> transverse undulations of the same medium which is the cause of electric
> and
> magnetic phenomena.'' Thomson, on the other hand, says of the displacement
> current, ``(it is a) curious and ingenious, but not wholly tenable
> hypothesis.''
>
> "1864 - Maxwell reads a memoir before the Royal Society in which the
> mechanical model is stripped away and just the equations remain. He also
> discusses the vector and scalar potentials, using the Coulomb gauge. He
> attributes physical significance to both of these potentials. He wants to
> present the predictions of his theory on the subjects of reflection and
> refraction, but the requirements of his mechanical model keep him from
> finding the correct boundary conditions, so he never does this
> calculation."
> From:http://maxwell.byu.edu/~spencerr/phys442/node4.html
>
> Try understand: "the mechanical model is stripped away and just the
> equations remain."
>
> Now engineers are using model with compressible, massive electrons. The
> equations are used by teacher to teach the math.
>
> According to Maxwell model the radio waves are transversal. Are such in
> your
> radio reality?
>
> S*

>Hi S,
>Interesting to read what you say as there are many similarities to my antenna work.

Yes. But I do not try to work out a new theory. For me the 200 years old "acoustic analogy" is enough.

>A small addition with respect to light formation. Displacement current

Displacement current is necessary in the model with electricity in form of the incompressible fluid. Incompressible fluid is a history.

>is the action required of three dimensional equilibrium which is why I often point to the helicopter as an example,
same thing goes for a gyroscope or the Sedgway scooter. It is this circular motion that holds to the understanding of light since this provides the spin of a particle such that it has straight line trajectory.

Straight line trajectory is normal phnomenon at the high frequences. The ultrasonic waves are like radii (see sonar)

>The frequency of circular motion is what changes when the particle enters a medium that is resistive where the spin increases to maintain
the straight line projection. The energy for this increase in spin is the latent energy that is removed from
the particles potential energy similar to latent heat with liquids. Thus energy is conserved by the increase in spin which is analogous to change in frequency!
This change in frequency brings the particle into the area of color , light and X rays ie higher frequencies and the latent energy shows up as light until there is no more energy left and the particle has vaporized such that light progresses to invisiblity. This being similar to the effects shown of a meteorite as it comes into contact with the resistive environment of Earth.

Each new theory is very difficult for me. I prefer descriptions of experiments and observations.

>With respect to radiation from the ends of a radiator. This can only happen when the radiator is a fraction of a wavelength when the law of equilibrium is violated. The accellaration of charge at the end is without spin applied and tho there is radiation it becomes non directional and unable to overcome the gravitational force and falls within a short distance.

Try the acoustic analogy. Here the all is easy. Quite opposite as in the Maxwell model: "He wants to
present the predictions of his theory on the subjects of reflection and refraction, but the requirements of his mechanical model keep him from finding the correct boundary conditions, so he never does this calculation".

The only reason for Maxwell model is the light polarisation. In his era the polarisation was explained with transverse waves. Now we know (from Clark) that the apparatus is polarised not waves.
Regards,
S*

60. Re: Tube and Twin lead Slim Jim

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-02 08:51:50 UTC
From: Ian Jackson <ianREMOVETHISjackson@g3ohx.demon.co.uk>
Message-ID: <r+cq8pMmgOJKFw8I@g3ohx.demon.co.uk>
Source record: 15070

In message <dchUl.30858$yr3.24350@nlpi068.nbdc.sbc.com>, Cecil Moore
<nospam@w5dxp.com> writes
>JIMMIE wrote:
>> Whats the advantage of the Slim Jim over a plan old J antenna.
>
>Apparently, the take-off-angle:
>
>http://www.para.org.ph/membersarticles/DU1ANV/Slim%20Jim.htm

I'm sure that W4RNL did a comparison. It might be in here.
<http://www.scribd.com/doc/8511817/Some-JPoles-That-I-Have-Known-4>
<http://www.cebik.com/>
If it's not in there somewhere, a Google will be necessary.

Essentially, the answer was 'not a lot', except that the Slim Jim
version (the one with the folded-over top) had a slightly wider
bandwidth / flatter SWR plot.
--
Ian

61. Re: SWR variation with feedline length

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-02 08:54:23 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <lfidnas4Ht5XdbnXnZ2dnUVZ_uCdnZ2d@giganews.com>
Source record: 15071

Antonio Vernucci wrote:
>
>> 1. The feedline Z0 isn't exactly 50 ohms. The Z0 of coax easily varies
>> +/- 5 ohms from nominal, and sometimes closer to +/- 10 -- it's seldom
>> exactly 50. If you connect a perfect 50 ohm load to your transmitter
>> via a 45 ohm line, the impedance seen by the transmitter will change
>> with line length. Consequently, the SWR meter reading will also
>> change. The actual SWR on the line will not, except as dictated by
>> loss, described next.
>>
>> 2. The feedline has loss. The SWR will improve as the line becomes
>> longer due to line loss. If the line is long enough to be very lossy,
>> the transmitter will see nearly the line's Z0 regardless of what load
>> is connected to the other end. The actual SWR on the line will be
>> greatest at the load, decreasing as you get farther away.
>>
>> 3. There is current on the outside of the coax shield (common mode
>> current). When this happens, the feedline becomes part of the antenna.
>> Consequently, changing the feedline length actually changes the
>> effective antenna length, which in turn changes the feedpoint impedance.
>
> I would say that in case no. 1 the meter measures an apparent SWR,
> whilst in case no. 2 it measures the real SWR existing at the
> measurement point. I am not sure what it measures in case no. 3

No, the meter is measuring the exact same thing in all cases. it always
(indirectly) measures the SWR within itself, which is directly related
to the impedance connected to the output end of the meter. It never
measures the SWR on any transmission line outside itself. The three
cases only explain reasons the impedance connected to the output of the
meter -- hence the meter reading -- changes as the transmission line
length is changed.

Roy Lewallen, W7EL

62. Re: SWR variation with feedline length

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-02 08:59:43 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <ZZudnS0Ou-WXd7nXnZ2dnUVZ_sKdnZ2d@giganews.com>
Source record: 15072

Again, the typical SWR meters we use do *not* measure the SWR on any transmission line, except (indirectly) the SWR on the short line within the instrument -- if it even contains such a line, which some don't. I don't know of any way to directly measure the SWR on an intact coaxial line, only on a slotted line.

The SWR on a coax line can readily be calculated, however, from measurements it is possible to make.

Roy Lewallen, W7EL

63. Re: SWR variation with feedline length

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-02 09:27:49 UTC
From: Wimpie <wimabctel@tetech.nl>
Message-ID: <622fae36-1af2-4b60-9140-d03f2e9924cf@k2g2000yql.googlegroups.com>
Source record: 15073

On 2 jun, 07:58, "Antonio Vernucci" <vernu...@tin.it> wrote:
> > The Bird actually measures a combination of capacitive coupled voltage and
> > inductively coupled current. There is a app note on the Bird website.
> > Find: "Straight Talk About Directivity".
>
> Thanks for pinpointing that nice document.
>
> However the document dwells on the directivity of the meter, and I could not
> find there any mention of the impedance tolerance issue I had raised.
>
> 73
>
> Tony I0JX

Hello Tony,

If you think cable impedance deviation from 50 Ohms is the problem in
your situation, why not making a resistor bridge type of VSWR meter
(wheatstone bridge)?

By changing the resistor that goes from the source to the output
connector, you can change the reference impedance of the resistor
bridge. For HF and VHF, accuracy is very good when using surface
mount components.

One example is given here:
www.w1ghz.org/QEX/A_UHF+_VSWR_Bridge.pdf

Best regards,

Wim
PA3DJS
www.tetech.nl
don't forget to remove first three letters of alphabet in case of PM.

64. Re: Sun Spots

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-02 11:43:07 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <cf8Vl.18041$jZ1.5774@flpi144.ffdc.sbc.com>
Source record: 15074

Szczepan Białż˝ek wrote:
> AC current create the transverse waves. The capacitor plates (or balls)
> longitudinal waves.
> What are the radio waves: transversal or longitudinal?

The radial currents on the capacitor plates are 180
degrees out of phase. A lot of the radiation from the
plates simply cancels.

Ramo and Whinnery say that radiation is "primarily
TEM", i.e. TEM is the "principle mode".
--
73, Cecil, IEEE, OOTC, http://www.w5dxp.com

65. Re: Sun Spots

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-02 11:59:30 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <zu8Vl.18042$jZ1.17748@flpi144.ffdc.sbc.com>
Source record: 15075

Szczepan Białż˝ek wrote:
> Displacement current is necessary in the model with electricity in form
> of the incompressible fluid. Incompressible fluid is a history.

It may be that you are using a lumped-circuit model
when you should be using a distributed network model.
According to Drs. Corum, the lumped-circuit model
starts to fall apart at 15 degrees, i.e. 0/04WL.
These web pages may be of interest to you.

http://www.ttr.com/TELSIKS2001-MASTER-1.pdf

http://www.ttr.com/corum/index.htm
--
73, Cecil, IEEE, OOTC, http://www.w5dxp.com

66. Re: SWR variation with feedline length

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-02 12:08:38 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <8D8VI.18043$jZ1.13249@flpi144.ffdc.sbc.com>
Source record: 15076

Roy Lewallen wrote:
> It never
> measures the SWR on any transmission line outside itself.

Another way of saying it is that the Bird directional
wattmeter Thruline establishes a Z0=~50 ohm environment
within the instrument itself.
--
73, Cecil, IEEE, OOTC, http://www.w5dxp.com

67. Re: SWR variation with feedline length

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-02 14:13:46 UTC
From: JB <nospam@goofball.net>
Message-ID: <usaVl.2336$9L2.1195@nwrddc02.gnilink.net>
Source record: 15077

"Antonio Vernucci" <vernucci@tin.it> wrote in message
news:4a24bf7c$0$47539$4fafbaef@reader1.news.tin.it...
> > The Bird actually measures a combination of capacitive coupled voltage
and
> > inductively coupled current. There is a app note on the Bird website.
> > Find: "Straight Talk About Directivity".
> >
>
> Thanks for pinpointing that nice document.
>
> However the document dwells on the directivity of the meter, and I could
not
> find there any mention of the impedance tolerance issue I had raised.
>
>
> 73
>
> Tony I0JX
>
The Voltage indication is non directive while the current is directive.
Voltage varies because of impedance and the reactivity causes phase
differences resulting in complex voltages. You should see variations in
both forward and reflected indications.

Functionally, the Bird is best used to minimize whatever reverse indication
without worrying over the accuracy of the derived measurement.

68. Hexbeam Antenna Modeling

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-02 15:31:13 UTC
From: wood@itd.nrl.navy.mil
Message-ID: <wood-0206091131130001@jbw-mac.itd.nrl.navy.mil>
Source record: 15078

Hello, everyone. I'm enquiring as to whether anyone has done NEC2/NEC4 modeling on the subject antenna (including a tower mounting) and operating on the ham bands. Do you have tabulated driving point (antenna feedpoint) and gain data that you might share? Thanks for your time and comment. Sincerely, and 73s from N4GGO,

John Wood (Code 5550) e-mail: wood@itd.nrl.navy.mil
Naval Research Laboratory
4555 Overlook Avenue, SW
Washington, DC 20375-5337

69. Re: Tube and Twin lead Slim Jim

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-02 16:39:54 UTC
From: JIMMIE <JIMMIEDEE123@YAHOO.COM>
Message-ID: <1eedaf61-a114-4f0f-b8d0-955628a782d3@o14g2000vbo.googlegroups.com>
Source record: 15079

On Jun 2, 4:51 am, Ian Jackson
<ianREMOVETHISjack...@g3ohx.demon.co.uk> wrote:
> In message <dchUl.30858$yr3.24...@nlpi068.nbdc.sbc.com>, Cecil Moore
> <nos...@w5dxp.com> writes
>
> >JIMMIE wrote:
> >> Whats the advantage of the Slim Jim over a plan old J antenna.
>
> >Apparently, the take-off-angle:
>
> >http://www.para.org.ph/membersarticles/DU1ANV/Slim%20Jim.htm
>
> I'm sure that W4RNL did a comparison. It might be in here.
> <http://www.scribd.com/doc/8511817/Some-JPoles-That-I-Have-Known-4>
> <http://www.cebik.com/>
> If it's not in there somewhere, a Google will be necessary.
>
> Essentially, the answer was 'not a lot', except that the Slim Jim
> version (the one with the folded-over top) had a slightly wider
> bandwidth / flatter SWR plot.
> --
> Ian

70. SWR meter differant impediances

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-02 17:41:16 UTC
From: Ralph Mowery <rmowery28146@earthlink.net>
Message-ID: <Sd6dnZnle7ICyLjXnZ2dnUVZ_r-dnZ2d@earthlink.com>
Source record: 15080

I have a 50 ohm swr meter (Heathkit, Drake W4 and Bird) and I am using 70 ohm coax for a dipole antenna on 3.7 MHz.
If I trim the antenna for the lowest reflected power showing on the meters, will the antenna be cut to resonate (or near resonate) frequency or is it possiable the antenna will end up around 100 feet or 150 feet instead of near a calculated frequency length of around 125 to 130 feet.

Guess the real question is can I use a 50 ohm meter with 70 ohm coax and when the reflected power is the lowest, is the antenna system adjusted correctly ?

I don't really worry about it, just stick up some wire and operate. Adjust things so the rig will see a low enough swr the internal tuner will take care of it.

71. Re: Sun Spots

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-02 17:48:46 UTC
From: Szczepan Białek <sz.bialek@wp.pl>
Message-ID: <h03fdu$c5e$1@node1.news.atman.pl>
Source record: 15081

"Cecil Moore" <nospam@w5dxp.com> wrote
news:cf8Vl.18041$jZ1.5774@flpi144.ffdc.sbc.com...
> Szczepan Biaďż˝ek wrote:
>> AC current create the transverse waves. The capacitor plates (or balls)
>> longitudinal waves.
>> What are the radio waves: transversal or longitudinal?
>
> The radial currents on the capacitor plates are 180
> degrees out of phase. A lot of the radiation from the
> plates simply cancels.

Electrical dipole radiation is known from Gauss time.
For us the two plates (or balls - Hertz used them also) are the two sources
of electric longitudinal waves.
For this reason in 1933 the frequency doubling was observed.
>
> Ramo and Whinnery say that radiation is "primarily
> TEM", i.e. TEM is the "principle mode".

It is easy to say. Tell me if you have ever seen the emitting antenna which
has the "current zone" exposed and the ends covered?
According to Maxwell the tranversal waves MUST be created by AC current. DC
current create the magnetic whirl. AC current create oscillating whirl. Such
oscillating whirl starts the transverse wave. But this Maxwell proposition
is not verified to now.
S*

72. Re: Sun Spots

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-02 18:21:52 UTC
From: Szczepan Białek <sz.bialek@wp.pl>
Message-ID: <h03hc0ceq1@node1.news.atman.pl>
Source record: 15082

"Cecil Moore" <nospam@w5dxp.com> wrote
news:zu8Vl.18042$jZ1.17748@flpi144.ffdc.sbc.com...
> Szczepan Biaďż˝ek wrote:
>> Displacement current is necessary in the model with electricity in form
>> of the incompressible fluid. Incompressible fluid is a history.
>
> It may be that you are using a lumped-circuit model
> when you should be using a distributed network model.
> According to Drs. Corum, the lumped-circuit model
> starts to fall apart at 15 degrees, i.e. 0/04WL.
> These web pages may be of interest to you.
>
> http://www.ttr.com/TELSIKS2001-MASTER-1.pdf
>
> http://www.ttr.com/corum/index.htm

There are details. For me interesting are only fundamentals.
It starts from:
"Maxwell wrote:
The conception of the propagation of transverse magnetic disturbances to the exclusion of normal ones is distinctly set forth by Professor Faraday in his "Thoughts on Ray Vibrations." The electromagnetic theory of light, as proposed by him, is the same in substance as that which I have begun to develop in this paper, except that in 1846 there were no data to calculate the velocity of propagation." From:
http://en.wikipedia.org/wiki/Line_of_force

The TRANSVERSAL magnetic disturbances have beautifull math. The most beauty math element is the displacement current.

But the magnetic disturbances are creates by AC CURRENT (not voltage).

So if the radio waves are emitted from the current zone of antenna Maxwell is right. If from ends - not.

Maxwell admired Ampere. But each genius works out his own theories. We can choose between them.

S*

> --
> 73, Cecil, IEEE, OOTC, http://www.w5dxp.com

73. Re: Sun Spots

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-02 18:31:50 UTC
From: Szczepan Białek <sz.bialek@wp.pl>
Message-ID: <h03humcgu1@node1.news.atman.pl>
Source record: 15083

"Dave" <noone@nowhere.com>wrote
news:ubZUl.2219$9L2.522@nwrddc02.gnilink.net...
>
> "Szczepan Bialek" <sz.bialek@wp.pl> wrote in message
> news:gvvp8s$k0l$1@node1.news.atman.pl...
>
>>> both. when the current is high in the center it is creating a stronger
>>> magnetic field, and when that current reaches the end it creates the
>>> highest voltage so makes more electric field... both are part of the
>>> electro-magnetic wave.
>>
>> It is not Maxwell model. In it current create magnetic field and THIS
>> field create the electric field. AND SO ON.
>
> ah, you believe 'and so on'?? the 'so on' means the changing electric
> field creates a magnetic field... both conditions are required for
> electromagnetic propagation. without the time varying displacement
> current there would be no propagation. so yes, you can create a magnetic
> field from the time varying electric field.
>
>
>> Your (engineering people) model is O.K. but it is quite different from
>> the Maxwell model. This is the reason that Art can wrote: " "For your
>> information you have never built an antenna that conforms in its
>> entirety to Maxwell';s laws thus you cannot possibly understand
>> radiation as presented by Maxwell."
>
> the maxwell equations completely describe radiation from an antenna, so
> all antennas, even arts, 'conform' to the maxwell equations.

Maxwell equations were modified by Heaviside and the next.
Tell us if Maxwell model is O.K. (radio waves are the transverse waves).
S*

74. Re: "Panel" style UHF DTV antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-02 19:17:53 UTC
From: Radioguy <radioguy@tampabay.rr.com>
Message-ID: <4a257ae2$0$5068$9a6e19ea@unlimited.newshosting.com>
Source record: 15084
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew,alt.tv.tech.hdtv

Elmo P. Shagnasty wrote:
> In article <0001HW.C6471D3203CAB1EBB01AD9AF@news.sf.sbcglobal.net>,
> Usual Suspect <reply@thegroup.net> wrote:
>
>> I must say at the outset that I am hesitant to buy an antenna based on its
>> form-factor, but I'm forced by the local code to not display bare-element
>> type antennae on the mast.
>
> I don't believe the local code has any say in the matter.
>
> But if you want to give up your rights...

This is true to a point. Local codes no problem, BUT in HOA territory
these rules do not necessarily apply. In most cases the HOAs have
modified their rules. The small direct satellite lobby started the
trend. Allowing these dishes they really had to include other TV antennas.

75. Re: "Large" volume antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-02 19:20:56 UTC
From: nm5k@wt.net
Message-ID: <4b5330c3-54bd-46d6-96d3-d05f0a284497@z19g2000vbz.googlegroups.com>
Source record: 15085

On Jun 1, 2:42 pm, Art Unwin <ArthurUn...@gmail.com> wrote:
> I have just made a larger than usual antenna that radiates well below
> the broadcast band so I may study generated radiation patterns. The
> antenna
> is on a structure that rotates as well as a tipping action, all about
> 4 feet above the ground. Initially I will just listen to signal
> variences when aim and tilt is in the best position. I recognise that
> I may have to put a digital meter across the S meter terminals
> together with a holding capacitor but for the moment I will be guided
> by the S meter. On the upper frequencies I will hook up to a TV for a
> visual. SWR readings will be initially recorded
> across all frequencies in the horizontal position to be used as a
> datum
> which certainly be required as shielding is added in the near future.
> Comments?
> Regards
> Art

My cat has mittens. :/

76. Re: Hexbeam Antenna Modeling

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-02 19:32:23 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <jLGdnWKQt5_a47jXnZ2dnUVZ_qCdnZ2d@giganews.com>
Source record: 15086

J. B. Wood wrote:
> Hello, everyone. I'm enquiring as to whether anyone has done NEC2/NEC4
> modeling on the subject antenna (including a tower mounting) and operating
> on the ham bands. Do you have tabulated driving point (antenna feedpoint)
> and gain data that you might share? Thanks for your time and comment.
> Sincerely, and 73s from N4GGO,
>
> John Wood (Code 5550) e-mail: wood@itd.nrl.navy.mil
> Naval Research Laboratory
> 4555 Overlook Avenue, SW
> Washington, DC 20375-5337

I suggest you contact the manufacturer (http://www.hexbeam.com), if you haven't already. They might have some information they'd share.

Roy Lewallen, W7EL

77. Re: SWR meter differant impediances

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-02 19:39:35 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <zpCdnfqZb6Vl4rjXnZ2dnUVZ_v-dnZ2d@giganews.com>
Source record: 15087

Ralph Mowery wrote:
> I have a 50 ohm swr meter (Heathkit, Drake W4 and Bird) and I am
using 70
> ohm coax for a dipole antenna on 3.7 MHz.
> If I trim the antenna for the lowest reflected power showing on the
meters,
> will the antenna be cut to resonate (or near resonate) frequency or
is it
> possiable the antenna will end up around 100 feet or 150 feet instead of
> near a calculated frequency length of around 125 to 130 feet.
>
> Guess the real question is can I use a 50 ohm meter with 70 ohm coax and
> when the reflected power is the lowest, is the antenna system adjusted
> correctly ?
>
> I don't really worry about it, just stick up some wire and operate.
Adjust
> things so the rig will see a low enough swr the internal tuner will take
> care of it.
>

When your SWR meter reads 1:1, it means only that the impedance it sees is 50 + j0 (50 ohms purely resistive). If you're using 70 ohm line, the impedance at the antenna could be any of an infinite number of different impedances, depending on the length of the coax. It might or might not be resonant, but that won't make any difference to its performance. Your transmitter will be happy with the load, so the antenna will get the full rated output power less coax loss. It would be appropriate to call that the "correct" adjustment of the antenna.

If the tuner has to adjust for some other load impedance (indicated by a higher reading on the SWR meter), the tuner loss will be added. However, it's likely to be negligible if the SWR meter is reading 2 or 3:1 or lower.

Roy Lewallen, W7EL

78. Re: Sun Spots

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-02 20:07:08 UTC
From: dplatt@radagast.org
Message-ID: <ccdgf6-noo.ln1@radagast.org>
Source record: 15088

In article <h03hc0ceq1@node1.news.atman.pl>,
Szczepan Bia&#65533;ek <sz.bialek@wp.pl> wrote:

>The TRANSVERSAL magnetic disturbances have beautifull math. The most beauty
>math element is the displacement current.
>
>But the magnetic disturbances are creates by AC CURRENT (not voltage).
>
>So if the radio waves are emitted from the current zone of antenna Maxwell
>is right. If from ends - not.
>
>Maxwell admired Ampere. But each genius works out his own theories. We can
>choose between them.

So, the obvious thing for you to do (as the proponent of an
alternative, nontraditional theory) is to devise an experiment which
can distinguish between these two cases.

Remember, that when a responsible scientist proposes a theory, that
scientist tries as hard as possible to come up with ways to *dis*prove
the theory - that is, experiments which predict a testable result,
which differs from the predictions of other theories.

If the new theory can survive such testing, then it's got some meat on
its bones... and choosing it would make sense.

If it fails to survive the testing, it's wrong... and choosing it
would be mistaken.

If the scientist can't use the theory to make testable predictions,
it's useless... and choosing it would be futile.

If all of the predictions of the new theory are indistinguishable from
the predictions of prevailing theory, then perhaps it isn't really
new.. It may just be a restatement of the prevailing theory in
different words... and if so, choosing it would be entirely a matter
of taste or preference.

If the scientist won't even *try* to use the theory to make testable
predictions which might prove the theory wrong, then s/he isn't a
scientist.

So... how would *you* construct and measure an antenna (and perhaps
modify it and then measure again), in order to demonstrate that your
theory predicts the actual behavior of the antenna better than the
standard theory?

Here's a suggestion: start out with a model of a straight half-wave dipole. Predict its radiation pattern and feedpoint impedance, based on Maxwell's current-based theory and on your own voltage-at-the-end theory. Measure the pattern and impedance.

Now, "bend" the antenna into different shapes. For example - leave the center portion of the dipole in a straight line. Bend the ends in various directions, shaping the antenna into a U, or into a Z, or a C (with the tips close together but not touching). Shorten the center section and split the ends, forming an H (e.g. short radiator with capacity loads on each end).

In each case, predict the pattern and feedpoint impedance based on Maxwell's theory and on your own.

Can you find cases in which the predictions vary? If so, which matches the actual (measured) behavior of the antenna better?

Mathematical beauty is great... but if it doesn't predict the actual behavior of real-world phenomena, it's just beautiful math.

--
Dave Platt <dplatt@radagast.org> AE6EO
Friends of Jade Warrior home page: http://www.radagast.org/jade-warrior
I do _not_ wish to receive unsolicited commercial email, and I will boycott any company which has the gall to send me such ads!

79. Looking for a source for a support stake

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-02 20:10:26 UTC
From: "R.Scott" <w7psk@yahoo.com>
Message-ID: <381ccbcc-eda5-40bd-8ce0-47950b0bf134@n8g2000vbb.googlegroups.com>
Source record: 15089

that I could step on and mount a vertical temporarily (IE for the
weekend)

Been web searching and cant come up with an idea.

Many Thanks

80. Re: Looking for a source for a support stake

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-02 20:14:45 UTC
From: "R.Scott" <w7psk@yahoo.com>
Message-ID: <b46bbfdf-4bfb-4f69-831c-46feebe1911e@x6g2000vbg.googlegroups.com>
Source record: 15090

On Jun 2, 1:10 pm, "R.Scott" <w7...@yahoo.com> wrote:
> that I could step on and mount a vertical temporarily (IE for the
> weekend)
>
> Been web searching and cant come up with an idea.
>
> Many Thanks

Oh yea, no driving on the support, not practical in my plans. Just
something I can step on or hammer in to bolt the 4btv to .

81. Re: Looking for a source for a support stake

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-02 20:34:15 UTC
From: Bert Hyman <bert@iphouse.com>
Message-ID: <Xns9C1E9E29C9E5EVeebleFetzer@216.250.184.7>
Source record: 15091

In news:b46bbfdf-4bfb-4f69-831c-46feebe1911e@x6g2000vbg.googlegroups.com
"R.Scott" <w7psk@yahoo.com> wrote:

> On Jun 2, 1:10 pm, "R.Scott" <w7...@yahoo.com> wrote:
>> that I could step on and mount a vertical temporarily (IE for the
>> weekend)
>>
>> Been web searching and cant come up with an idea.
>>
>> Many Thanks
>
> Oh yea, no driving on the support, not practical in my plans. Just
> something I can step on or hammer in to bolt the 4btv to .

Have you considered a tripod of some sort?

The MFJ-1901 sounds like it might work for you. There's no picture on
their Web site, but there's a PDF of the catalog page at

http://www.mfjenterprises.com/catalog/Pages_51_through_75.pdf

It's on page 61.

It's a 2' square piece of stainless with spikes at each corner to stick
in the ground and some sort of mounting arrangement in the center for
masts. Unfortunately, they want $110 for it.

--
Bert Hyman St. Paul, MN bert@iphouse.com

82. Re: SWR meter differant impediances

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-02 20:34:21 UTC
From: Owen Duffy <none@no.where>
Message-ID: <Xns9C1F42DC4FB17nonenowhere@61.9.191.5>
Source record: 15092

"Ralph Mowery" <rmowery28146@earthlink.net> wrote in
news:Sd6dnZnle7lCyLjXnZ2dnUVZ_r-dnZ2d@earthlink.com:

> I have a 50 ohm swr meter (Heathkit, Drake W4 and Bird) and I am using
> 70 ohm coax for a dipole antenna on 3.7 MHz.
> If I trim the antenna for the lowest reflected power showing on the
> meters, will the antenna be cut to resonate (or near resonate)
> frequency or is it possiable the antenna will end up around 100 feet
> or 150 feet instead of near a calculated frequency length of around
> 125 to 130 feet.
>
> Guess the real question is can I use a 50 ohm meter with 70 ohm coax
> and when the reflected power is the lowest, is the antenna system
> adjusted correctly ?
>
> I don't really worry about it, just stick up some wire and operate.
> Adjust things so the rig will see a low enough swr the internal tuner
> will take care of it.

Ralph,

Your 50 ohm VSWR meter indicates the VSWR that you would expect on a low loss 50 ohm cable adjacent to the meter.

For indicated VSWR>1, there is an infinite set of impedance values that would satisfy the indicated VSWR, and a further infinite set of VSWR values that those impedances would imply on the adjacent 70 ohm line.

If the indicated VSWR was exactly 1, then the impedance at that point is 50+j0 and the VSWR on the 70 ohm line is 1.4.

Now there is a possibility!

My 40m dipole is fed with RG6 coax (75 ohm), and a bunch of ferrite sleeves in the style of a W2DU balun at the feed point. I have used a 75 ohm VSWR meter in that line to adjust (shorten) the dipole length until VSWR=1.5. Now, the impedance at any point along the line varies with displacement, but at some points, the impedance will be R=75/1.5, X=0, Z= 50+j0. Having approximately calculated a convenient length, I have cut the line 2m longer, inserted a 50 ohm VSWR meter at the tx end and trimmed (shortened) the coax until the VSWR(50)=1:1. There it is, a shortened half wave dipole, fed with inexpensive coax, very low line loss, and an excellent 50 ohm load for a modern transceiver. This is of course a single band solution, but it is an optimal single band solution.

The example above indicates that you could see a perfect VSWR on your 50 ohm meter. You are unlikely to find the solution by chance alone, but

taking a systematic approach, you can find the solution.

Owen

83. Re: Hexbeam Antenna Modeling

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-02 20:48:56 UTC
From: wood@itd.nrl.navy.mil
Message-ID: <wood-0206091648560001@jbw-mac.itd.nrl.navy.mil>
Source record: 15093

In article <jLGdnWKQt5_a47jXnZ2dnUVZ_qCdnZ2d@giganews.com>, w7el@eznec.com
wrote:

> J. B. Wood wrote:
> > Hello, everyone. I'm enquiring as to whether anyone has done NEC2/NEC4
> > modeling on the subject antenna (including a tower mounting) and operating
> > on the ham bands. Do you have tabulated driving point (antenna feedpoint)
> > and gain data that you might share? Thanks for your time and comment.
> > Sincerely, and 73s from N4GGO,
> >
> > John Wood (Code 5550) e-mail:
wood@itd.nrl.navy.mil
> > Naval Research Laboratory
> > 4555 Overlook Avenue, SW
> > Washington, DC 20375-5337
>
> I suggest you contact the manufacturer (http://www.hexbeam.com), if you
> haven't already. They might have some information they'd share.
>
> Roy Lewallen, W7EL

Thanks for responding, Roy. Some hams are apparently assembling the
antenna from their own materials rather than buying the antenna outright.
Of all the folks that I can think of that might have done a MoM analysis
of this antenna, you come to my mind first. 73s,

John Wood (Code 5550) e-mail: wood@itd.nrl.navy.mil
Naval Research Laboratory
4555 Overlook Avenue, SW
Washington, DC 20375-5337

84. Re: Hexbeam Antenna Modeling

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-02 21:05:24 UTC
From: google@karinya.net
Message-ID: <c31e6c14-b571-44e8-826b-1863b7969e8b@q2g2000vbr.googlegroups.com>
Source record: 15094

John,

Take a look at my web site if you haven't already found it. There are
2 pages devoted to modelling the hexbeam and there's an EZNEC file for
a five-band version you can download:

http://www.karinya.net/g3txq/hexbeam/eznec1/
http://www.karinya.net/g3txq/hexbeam/eznec2/

73,
Steve G3TXQ

85. Re: Looking for a source for a support stake

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-02 21:25:24 UTC
From: "R.Scott" <w7psk@yahoo.com>
Message-ID: <83821f1e-8a46-47bf-92ae-ea97b0edd6ec@s21g2000vbb.googlegroups.com>
Source record: 15095

> http://www.mfjenterprises.com/catalog/Pages_51_through_75.pdf
>
> It's on page 61.
>
> It's a 2' square piece of stainless with spikes at each corner to stick
> in the ground and some sort of mounting arrangement in the center for
> masts. Unfortunately, they want $110 for it.

That would be perfect ... BUT MAN $110 ... bit steep.

86. Re: "Panel" style UHF DTV antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-02 21:53:41 UTC
From: cjdaytonjrnospam@cox.net
Message-ID: <20090602175224.422$Gx@newsreader.com>
Source record: 15098
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew,alt.tv.tech.hdtv

"Elmo P. Shagnasty" <elmop@nastydesigns.com> wrote:
> In article <4a257ae2$0$5068$9a6e19ea@unlimited.newshosting.com>,
> Radioguy <radioguy@tampabay.rr.com> wrote:
>
> > > I don't believe the local code has any say in the matter.
> > >
> > > But if you want to give up your rights...
> >
> > This is true to a point. Local codes no problem, BUT in HOA territory
> > these rules do not necessarily apply. In most cases the HOAs have
> > modified their rules.
>
> The FCC is the entity here, not local communities.
>
> And neither HOA nor local communities can override FCC in this matter.

You SHOULD know better, Elmo. There are some restrictions an HOA can
place on a homeowner, but they are few. Here is a link to the FCC site:
http://www.fcc.gov/mb/facts/otard.html

--
---------- http://NewsReader.Com/ ----------
Usenet Newsgroup Service $9.95/Month 30GB

87. Re: "Panel" style UHF DTV antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-02 22:23:55 UTC
From: Jim Lux <james.p.lux@jpl.nasa.gov>
Message-ID: <h048pp$6hu$1@news.jpl.nasa.gov>
Source record: 15002
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew,alt.tv.tech.hdtv

Radioguy wrote:
> Elmo P. Shagnasty wrote:
>> In article <0001HW.C6471D3203CAB1EBB01AD9AF@news.sf.sbcglobal.net>,
>> Usual Suspect <reply@thegroup.net> wrote:
>>
>>> I must say at the outset that I am hesitant to buy an antenna based
>>> on its form-factor, but I'm forced by the local code to not display
>>> bare-element type antennae on the mast.
>>
>> I don't believe the local code has any say in the matter.
>>
>> But if you want to give up your rights...
>
> This is true to a point. Local codes no problem, BUT in HOA territory
> these rules do not necessarily apply. In most cases the HOAs have
> modified their rules. The small direct satellite lobby started the
> trend. Allowing these dishes they really had to include other TV antennas.
the FCC premption (aka OTARD rules) is the key thing here.. The HOA
can't really do anything if it fits in the FCC guidelines.. dishes <1
meter, OTA TV any size.

88. Re: Looking for a source for a support stake

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-02 22:36:10 UTC
From: Jim Lux <james.p.lux@jpl.nasa.gov>
Message-ID: <h049gp$fv6$1@news.jpl.nasa.gov>
Source record: 15003

R.Scott wrote:
>> http://www.mfjenterprises.com/catalog/Pages_51_through_75.pdf
>>
>> It's on page 61.
>>
>> It's a 2' square piece of stainless with spikes at each corner to stick
>> in the ground and some sort of mounting arrangement in the center for
>> masts. Unfortunately, they want $110 for it.
>
> That would be perfect ... BUT MAN $110 ... bit steep.

Surveyor's tripod... Much more rugged, adjustable. A CST brand one might set you back $130 at Home Depot, but that's not the cheapest source.

Crain brand aluminum tripods show up online at $60-70 on sale.
(e.g.
http://www.engineersupply.com/crain-aluminum-heavy-duty-tripod-flat-head-22210.aspx
from googling.. I've never used this vendor..)

You want something cheaper... what about a standard steel fence post (T-stake).. hammer it in, hook the antenna up, and you're done. Use a car jack to pull it out when you're ready to go.

Or, one of those bases for a patio umbrella. Either the cast iron or concrete ones, or the ones you fill with water or sand.

Or, some antiskid base (a little spike, like a tent stake) and some nylon rope guys to tent stakes, or weights.

89. Re: SWR meter differant impediances

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-02 22:37:44 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <5RhVl.31448$YU2.1357@nlpi066.nbdc.sbc.com>
Source record: 15099

Ralph Mowery wrote:
> I have a 50 ohm swr meter (Heathkit,

If it's the HM-15, you can simply swap out the
50 ohm resistors with 75 ohm resistors and have
a 75 ohm SWR meter.
--
73, Cecil, IEEE, OOTC, http://www.w5dxp.com

90. Ahoy Spi-Ro Dipole users

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-02 22:49:00 UTC
From: David Thompson <thompson@mindspring.com>
Message-ID: <U5KdnS2Tr8TKMbjXnZ2dnUVZ_j6dnZ2d@earthlink.com>
Source record: 15100

I want to put up a Spi-ro short 160 as a W9LT/K8UR vertical dipole. The coils have a brass screw at each end. How do you securely attach the wire to each end so that it will last through wind storms and the like.

I had one up as a dipole L I used good connectors but the wire just pulled loose.

I am looking for ideas!

Dave K4JRB

91. Re: Looking for a source for a support stake

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-02 22:49:54 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <k0iVl.31450$YU2.24576@nlpi066.nbdc.sbc.com>
Source record: 15001

R.Scott wrote:
> that I could step on and mount a vertical temporarily (IE for the
> weekend) Been web searching and cant come up with an idea.

What I used was a steel fence post driven into the
ground by a fence post driver device. When I finished
with it, I wrapped a cable around the base, hooked
it to my trailer hitch, and pulled it out of the
ground with my GMC pickup.
--
73, Cecil, IEEE, OOTC, http://www.w5dxp.com

92. Re: Sun Spots

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-02 23:06:40 UTC
From: Dave <noone@nowhere.com>
Message-ID: <4giVl.406$u86.356@nwrddc01.gnilink.net>
Source record: 15004

"Szczepan Bialek" <sz.bialek@wp.pl> wrote in message
news:h02esm$3rc$1@node1.news.atman.pl...
>
> "Art Unwin" <ArthurUnwin@gmail.com> wrote
> news:ede827c3-f143-43b1-b7d9-a10d3ca5c8e2@o20g2000vbh.googlegroups.com...
> On Jun 1, 2:39 am, Szczepan Biaï¿½ek <sz.bia...@wp.pl> wrote:
>>
>> "1861 - Maxwell publishes a mechanical model of the electromagnetic
>> field.
>> Magnetic fields correspond to rotating vortices with idle wheels between
>> them and electric fields correspond to elastic displacements, hence
>> displacement currents. The equation for now becomes , where is the total
>> current, conduction plus displacement, and is conserved: . This addition
>> completes Maxwell's equations and it is now easy for him to derive the
>> wave
>> equation exactly as done in our textbooks on electromagnetism and to note
>> that the speed of wave propagation was close to the measured speed of
>> light.
>> Maxwell writes, ``We can scarcely avoid the inference that light in the
>> transverse undulations of the same medium which is the cause of electric
>> and
>> magnetic phenomena.'' Thomson, on the other hand, says of the
>> displacement
>> current, ``(it is a) curious and ingenious, but not wholly tenable
>> hypothesis.''
>>
>> "1864 - Maxwell reads a memoir before the Royal Society in which the
>> mechanical model is stripped away and just the equations remain. He also
>> discusses the vector and scalar potentials, using the Coulomb gauge. He
>> attributes physical significance to both of these potentials. He wants to
>> present the predictions of his theory on the subjects of reflection and
>> refraction, but the requirements of his mechanical model keep him from
>> finding the correct boundary conditions, so he never does this
>> calculation."
>> From:http://maxwell.byu.edu/~spencerr/phys442/node4.html
>>
>> Try understand: "the mechanical model is stripped away and just the
>> equations remain."
>>
>> Now engineers are using model with compressible, massive electrons. The
>> equations are used by teacher to teach the math.
>>
>> According to Maxwell model the radio waves are transversal. Are such in
>> your

>> radio reality?
>>
>> S*
>
>>Hi S,
>>Interesting to read what you say as there are many similarities to my
> antenna work.
>
> Yes. But I do not try to work out a new theory. For me the 200 years old
> "acoustic analogy" is enough.
>
>>A small addition with respect to light formation. Displacement current
>
> Displacement current is necessary in the model with electricity in form of
> the incompressible fluid. Incompressible fluid is a history.
>
>>is the action required of three dimensional equilibrium which is why I
> often point to the helicopter as an example,
> same thing goes for a gyroscope or the Sedgway scooter. It is this
> circular motion that holds to the understanding of light since this
> provides the spin of a particle such that it has straight line
> trajectory.
>
> Straight line trajectory is normal phnomenon at the high frequences. The
> ultrasonic waves are like radii (see sonar)
>
>>The frequency of circular motion is what changes when the
> particle enters a medium that is resistive where the spin increases to
> maintain
> the straight line projection. The energy for this increase in spin is
> the latent energy that is removed from
> the particles potential energy similar to latent heat with liquids.
> Thus energy is conserved by the increase in spin which is analogous to
> change in frequency!
> This change in frequency brings the particle into the area of color ,
> light and X rays ie higher frequencies and the latent energy shows up
> as light until there is no more energy left and the particle has
> vaporized such that light progresses to invisiblity. This being
> similar to the effects shown of a meteorite as it comes into contact
> with the resistive environment of Earth.
>
> Each new theory is very difficult for me. I prefer descriptions of
> experiments and observations.
>
>
>>With respect to radiation from the ends of a radiator. This can only
> happen when the radiator is a fraction of a wavelength when the law of
> equilibrium is violated. The accellaration of charge at the end is
> without spin applied and tho there is radiation it becomes non
> directional and unable to overcome the gravitational force and falls

> within a short distance.
>
> Try the acoustic analogy. Here the all is easy. Quite opposite as in the
> Maxwell model: "He wants to
> present the predictions of his theory on the subjects of reflection and
> refraction, but the requirements of his mechanical model keep him from
> finding the correct boundary conditions, so he never does this
> calculation".
>
> The only reason for Maxwell model is the light polarisation. In his era
> the polarisation was explained with transverse waves. Now we know (from
> Clark) that the apparatus is polarised not waves.
> Regards,
> S*
>
>
>
i knew getting you and art together would be interesting... good for a whole
evening full of laughs! the waves must be polarized to interact as observed
with polarized antennas.

93. Re: Sun Spots

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-02 23:09:29 UTC
From: Dave <noone@nowhere.com>
Message-ID: <JiiVl.407$u86.221@nwrddc01.gnilink.net>
Source record: 15005

```
"tom" <news4792@taring.org> wrote in message
news:4a248fff$0$92353$8046368a@newsreader.iphouse.net...
> Art Unwin wrote:
>> On Jun 1, 6:09 pm, "Dave" <no...@nowhere.com> wrote:
>>> "Dave" <no...@nowhere.com> wrote in message
>>>
>>> news:baCUl.1762$Cc1.1466@nwrddc01.gnilink.net...
>>>
>>>
>>>
>>>
>>>
>>>> "Dave" <no...@nowhere.com> wrote in message
>>>> news:kitUl.1887$9L2.465@nwrddc02.gnilink.net...
>>>>> "Dave" <no...@nowhere.com> wrote in message
>>>>> news:WtjUl.1573$Cc1.524@nwrddc01.gnilink.net...
>>>>>> "Dave" <no...@nowhere.com> wrote in message
>>>>>> news:ECaUl.1481$Cc1.1381@nwrddc01.gnilink.net...
>>>>>>> "Art Unwin" <ArthurUn...@gmail.com> wrote in message
>>>>>>> news:08a982b6-d65b-4f67-a9fd-1703d80f6f0a@t21g2000yqi.googlegroups.com...
>>>>>>>> Gauss's law of Statics is the subject law.
>>>>>>> Ok, you capitalize that as if it were a specific law... provide a
>>>>>>> reference, other than your own posts, for "Gauss's law of Statics".
>>>>>>> If
>>>>>>> you can't do that, provide the specific equation you are refering
>>>>>>> to.
>>>>>> come on art, cite the specific reference for "Gauss's law of
>>>>>> Statics".
>>>>> can't answer a specific simple question art?? you much prefer to
>>>>> handwave and berate others, i ask a simple direct question that is at
>>>>> the
>>>>> core of all your ranting and you can't even answer it. without that
>>>>> answer the rest of your posts are just empty shells. give us this
>>>>> magical "Gauss's law of Statics" that you base everything on!
>>>> come on art, one specific simple question...cite the specific reference
>>>> for "Gauss's law of Statics". or are you going to pull another
>>>> vanishing
>>>> act and come back later just to start fresh with more bafflegab?
>>> thats right art, keep ignoring me... you can't answer the central
>>> question
>>> that all your theory is built on, so that makes the rest of it just so
>>> much
>>> more nonsense.
>>
```

>> David
>> I am not ignoring you. I have responded to lots and lots of your
>
> Yes he is, and no he can't answer the question.
>
> <snip more of the normal nonsense>
>
>> Have a very happy day and sleep tight and don't get your knickers in a
>> twist
>> Regards
>> Art
>
> With total disregard
> tom
> K0TAR

I know, but its fun asking the one pertinent question that he can't answer.
he keeps saying i reject his addition of the (t) term to Gauss' Law, and
won't accept the answer that it is redundant since the law is not dependent
on time, it is true for all time. So the (t) is not necessary at best and
misleading at worst... you can put it there, but it doesn't mean anything...
its kind of like saying f(t)=f(t), a simple truism.

94. Re: Hexbeam Antenna Modeling

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-03 02:53:32 UTC
From: tom <news4792@taring.org>
Message-ID: <4a25e5d9$0$92354$8046368a@newsreader.iphouse.net>
Source record: 15006

google@karinya.net wrote:
> John,
>
> Take a look at my web site if you haven't already found it. There are
> 2 pages devoted to modelling the hexbeam and there's an EZNEC file for
> a five-band version you can download:
>
> http://www.karinya.net/g3txq/hexbeam/eznec1/
> http://www.karinya.net/g3txq/hexbeam/eznec2/
>
> 73,
> Steve G3TXQ
>

Nicely done, Steve. Thanks.

tom
K0TAR

95. Re: Sun Spots

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-03 02:56:40 UTC
From: tom <news4792@taring.org>
Message-ID: <4a25e694$0$92354$8046368a@newsreader.iphouse.net>
Source record: 15007

Dave wrote:
>
> "tom" <news4792@taring.org> wrote in message
<snip>
>> With total disregard
>> tom
>> K0TAR
>
> I know, but its fun asking the one pertinent question that he can't
> answer. he keeps saying i reject his addition of the (t) term to Gauss'
> Law, and won't accept the answer that it is redundant since the law is
> not dependent on time, it is true for all time. So the (t) is not
> necessary at best and misleading at worst... you can put it there, but
> it doesn't mean anything... its kind of like saying f(t)=f(t), a simple
> truism.

I know, but I couldn't resist.

tom
K0TAR

96. Re: Sun Spots

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-03 03:06:42 UTC
From: tom <news4792@taring.org>
Message-ID: <4a25e89c$0$18865$8046368a@newsreader.iphouse.net>
Source record: 15008

Sal M. Onella wrote:

>
> Our Wullenweber at Hanza had two concentric rings of antennas, the high band
> and the low band. And it did have a phasing system to form a beam. The
> pattern was very sharp.

In this system all antennas were active, and all were quarter wave
verticals at the design frequency.

> Unfortunately for this discussion, I didn't work in any of the DF shops. I
> was in the Comm Shop -- crypto, TTY, telephone & mux maintenance. What I
> learned about DF was just picked up along the way.

Still, must have been interesting and fun with the variety you got to
deal with.

> "Sal"

tom
K0TAR

97. Re: "Panel" style UHF DTV antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-03 03:07:55 UTC
From: stratus46@yahoo.com
Message-ID: <8b61e1ee-4e78-4e81-a1e5-e73a18285f7e@a36g2000yqc.googlegroups.com>
Source record: 15009
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew,alt.tv.tech.hdtv

On Jun 2, 3:23 pm, Jim Lux <james.p....@jpl.nasa.gov> wrote:
> trend. Allowing these dishes they really had to include other TV
antennas.
>
>   the FCC premption (aka OTARD rules) is the key thing here.. The
HOA
> can't really do anything if it fits in the FCC guidelines.. dishes
<1
> meter, OTA TV any size.

Nice thing about the Winegard SquareShooter is it resembles a dish
though my neighbors might think I don't have a clue how to aim it.
It's opposite where all the little dishes are aimed. They would have
laughed if they had seen the spectrum analyzer on the driveway next to
the car. I was on the roof with binoculars to see the screen.

G²

98. Re: "Panel" style UHF DTV antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-03 03:27:49 UTC
From: RFI-EMI-GUY <Rhyolite@NETTALLY.COM>
Message-ID: <4a25edab$0$5074$9a6e19ea@unlimited.newshosting.com>
Source record: 15010
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew,alt.tv.tech.hdtv

Sal M. Onella wrote:
> "Usual Suspect" <reply@thegroup.net> wrote in message
> news:0001HW.C6471D3203CAB1EBB01AD9AF@news.sf.sbcglobal.net...
>
> < snip >
>
>> I do like the panel style for the reason that I can arrange 3 around a
> common
>> mast, aimed at remote cities, and join the outputs for increased coverage.
>
> You may encounter some undesired affects from joining antennas. If it
> works, fine, but if it doesn't, consider switching among the three at the TV
> set(s).
>
> The problem is that the prime signal will be "contaminated" by signal pickup
> from the other antenna(s). The degree of contamination may or not affect
> reception.
>
> Good luck.
>
>
It will suffer phase distortion. In the good old days we called that
"ghosting", now it will be signal drop outs!

--
Joe Leikhim K4SAT
"The RFI-EMI-GUY"ï¿½

"Use only Genuine Interocitor Parts" Tom Servo ;-P

99. Re: "Panel" style UHF DTV antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-03 03:32:31 UTC
From: RFI-EMI-GUY <Rhyolite@NETTALLY.COM>
Message-ID: <4a25eec4$0$5074$9a6e19ea@unlimited.newshosting.com>
Source record: 15011
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew,alt.tv.tech.hdtv

Elmo P. Shagnasty wrote:
> In article <0001HW.C6471D3203CAB1EBB01AD9AF@news.sf.sbcglobal.net>,
> Usual Suspect <reply@thegroup.net> wrote:
>
>> I must say at the outset that I am hesitant to buy an antenna based on its
>> form-factor, but I'm forced by the local code to not display bare-element
>> type antennae on the mast.
>
> I don't believe the local code has any say in the matter.
>
> But if you want to give up your rights...

When I lived in Miami; there was a subdivision in Miami Lakes that had
banned TV antennas (before the FCC ruling). A homeowner had constructed
some form of "artwork" with a TV antenna in front of his house. It was
positioned toward the sky, unusable, but unmistakably a TV antenna!

--
Joe Leikhim K4SAT
"The RFI-EMI-GUY"ï¿½

"Use only Genuine Interocitor Parts" Tom Servo ;-P

100. Re: Hexbeam Antenna Modeling

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-03 03:35:01 UTC
From: Clifford Heath <no@spam.please.net>
Message-ID: <4a25ef65$0$32004$afc38c87@news.optusnet.com.au>
Source record: 15012

J. B. Wood wrote:
> Hello, everyone. I'm enquiring as to whether anyone has done NEC2/NEC4
> modeling on the subject antenna (including a tower mounting) and operating
> on the ham bands.

Interesting designs, I hadn't seen them before.
For a hand-held DF sniffer on 2m, might there be
compactness advantages? What would the approximate
dimensions of be of a hexbeam on 2 metres?

Clifford Heath, VK3CLF

101. Question about EZNEC simulation of a radiating coax line

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-03 04:11:52 UTC
From: ve2pid <ve2pid@videotron.ca>
Message-ID: <e9ab61ab-7da1-4412-bfd2-4a396f105abf@h2g2000yqg.googlegroups.com>
Source record: 15013

We can use EZNEC to simulate the radiation of a coax with a wire as suggested in the help file "The radiation properties of a coaxial feedline can be modeled by connecting a wire of the coax shield's diameter to the point on the antenna where the shield connects."

We then see that the current has a maximum somewhere along that wire.

My question: Why do we have a maximum? Is is because some current is also going up from the source outside the coax?, In that case, some kind of constructive and destructive interference could happen on the outside of the coax due to phases differences between the two currents, creating maximum and also nodes.

Or is there another reason explaining that maximum?

102. Re: Question about EZNEC simulation of a radiating coax line

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-03 05:12:27 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <yKqdnf33W_6gm7vXnZ2dnUVZ_jmdnZ2d@giganews.com>
Source record: 15014

ve2pid wrote:
> We can use EZNEC to simulate the radiation of a coax with a wire as
> suggested in the help file "The radiation properties of a coaxial
> feedline can be modeled by connecting a wire of the coax shield's
> diameter to the point on the antenna where the shield connects."
>
> We then see that the current has a maximum somewhere along that wire.
>
> My question: Why do we have a maximum? Is is because some current is
> also going up from the source outside the coax?, In that case, some
> kind of constructive and destructive interference could happen on the
> outside of the coax due to phases differences between the two
> currents, creating maximum and also nodes.
>
> Or is there another reason explaining that maximum?

The current can be caused by either of two mechanisms, or both:
conduction or induction.

Conducted current occurs when, for example, a coaxial line is connected to a dipole. Current from the inside of the shield splits and part goes into the antenna and part goes down along the outside of the shield. This can be effectively stopped with a current balun (common mode choke).

Induced current will be zero if the transmission line is symmetrically placed with respect to a symmetrical antenna which has equal currents in the two halves. But in other cases, the fields from various parts of the antenna won't sum to zero at the location of the transmission line, so current will be induced on it. Current baluns can reduce this current also, but it generally takes at least two, spaced a quarter wavelength apart.

Now for the question. You have a maximum for the same reason you have maxima and minima along an antenna -- in fact, a transmission line with common mode current *is* an antenna, and radiates the same as any other one. The maxima and minima can be explained as the envelope of traveling current waves reflecting from an open end (or current balun or other discontinuity) and interfering with each other. These are known as standing waves, because the positions of the maxima and minima stay in the same places and don't move. A lookup of "standing waves" will bring you a lot more information, and I'm sure some good graphics, to further explain it.

Roy Lewallen, W7EL

103. Re: Sun Spots

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-03 06:17:07 UTC
From: "Sal M. Onella" <salmonella@food.poisoning.org>
Message-ID: <sppVl.160$IP7.63@newsfe23.iad>
Source record: 15015

"tom" <news4792@taring.org> wrote in message
news:4a25e89c$0$18865$8046368a@newsreader.iphouse.net...
> Sal M. Onella wrote:

< snip >

> > Unfortunately for this discussion, I didn't work in any of the DF shops.
I
> > was in the Comm Shop -- crypto, TTY, telephone & mux maintenance. What
I
> > learned about DF was just picked up along the way.
>
> Still, must have been interesting and fun with the variety you got to
> deal with.

Absolutely! My first duty station was an intercept site in the Philippines,
then Hanza, then sea duty on an admiral's staff (Second Fleet Commander).
There wasn't much I hadn't seen by the time I was 25. I made CPO the next
year and was dubbed "The Teenage Chief" for my youthful appearance.

I'm 66 now and smiling slightly, content at how well things have worked out,
thanks to that lucky beginning.

"Sal"
(KD6VKW)

104. Re: Hexbeam Antenna Modeling

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-03 07:49:26 UTC
From: google@karinya.net
Message-ID: <c2611f12-b251-415c-b75f-049690e1e1d8@h23g2000vbc.googlegroups.com>
Source record: 15016

Clifford,

Turn radius is about 12.5" for a 2m broadband hex.

It should be possible to get very deep and narrow F/B nulls by
adjusting the Driver/Reflector end spacing at some cost to the VSWR.

Steve G3TXQ

105. Re: Sun Spots

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-03 08:28:49 UTC
From: Szczepan Białek <sz.bialek@wp.pl>
Message-ID: <h052vrkha1@node1.news.atman.pl>
Source record: 15017

"Dave" <noone@nowhere.com> wrote
news:4giVl.406$u86.356@nwrddc01.gnilink.net...
>
> "Szczepan Bialek" <sz.bialek@wp.pl> wrote in message
> news:h02esm$3rc$1@node1.news.atman.pl...
>>
>> The only reason for Maxwell model is the light polarisation. In his era
>> the polarisation was explained with transverse waves. Now we know (from
>> Clark) that the apparatus is polarised not waves.
>> Regards,
>> S*
>>
> i knew getting you and art together would be interesting... good for a
> whole evening full of laughs! the waves must be polarized to interact as
> observed with polarized antennas.

But here are the two possibilities.
1. The dipole radiates the transverse wave from centre,
2. The dipole radiate the two COUPLED longitudinal waves from the two ends.

In the both cases the antennas (emitting and receiving) must be parallel.
Which place radiate the radio waves?
S*

106. Re: Sun Spots

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-03 09:06:11 UTC
From: Szczepan Białek <sz.bialek@wp.pl>
Message-ID: <h0555oktq1@node1.news.atman.pl>
Source record: 15018

"Dave Platt" <dplatt@radagast.org> wrote
news:ccdgf6-noo.ln1@radagast.org...
> In article <h03hc0ceq1@node1.news.atman.pl>,
> Szczepan Biaďż˝ek <sz.bialek@wp.pl> wrote:
>
>>The TRANSVERSAL magnetic disturbances have beautifull math. The most
>>beauty
>>math element is the displacement current.
>>
>>But the magnetic disturbances are creates by AC CURRENT (not voltage).
>>
>>So if the radio waves are emitted from the current zone of antenna Maxwell
>>is right. If from ends - not.
>>
>>Maxwell admired Ampere. But each genius works out his own theories. We can
>>choose between them.
>
> So, the obvious thing for you to do (as the proponent of an
> alternative, nontraditional theory) is to devise an experiment which
> can distinguish between these two cases.

The traditional theory is the acoustic theory. The nontraditional theory is
the Maxwell model. In his model the transverse waves propagate in a solid
body. Maxwell devised many experiments. One of them was the famous MM
experiment. But Maxwell dead before the result.
>
> Remember, that when a responsible scientist proposes a theory, that
> scientist tries as hard as possible to come up with ways to *dis*prove
> the theory - that is, experiments which predict a testable result,
> which differs from the predictions of other theories.

Maxwell ended his life at 47. He was responsible but he had not enough time.
>
> If the new theory can survive such testing, then it's got some meat on
> its bones... and choosing it would make sense.
>
> If it fails to survive the testing, it's wrong... and choosing it
> would be mistaken.

The teachers choose it. The engineering people choose electrons.
>
> If the scientist can't use the theory to make testable predictions,
> it's useless... and choosing it would be futile.

It is the excelent "piece to teach".
>
> If all of the predictions of the new theory are indistinguishable from
> the predictions of prevailing theory, then perhaps it isn't really
> new.. It may just be a restatement of the prevailing theory in
> different words... and if so, choosing it would be entirely a matter
> of taste or preference.

Maxwell theory was really new.

> If the scientist won't even *try* to use the theory to make testable
> predictions which might prove the theory wrong, then s/he isn't a
> scientist.

Maxwell had not enough time to do it.
>
> So... how would *you* construct and measure an antenna (and perhaps
> modify it and then measure again), in order to demonstrate that your
> theory predicts the actual behavior of the antenna better than the
> standard theory?

Standard theory is the acoustic theory. All YOUR antennas demonstrate that
the acoustic analogy is O.K.
>
> Here's a suggestion: start out with a model of a straight half-wave
> dipole. Predict its radiation pattern and feedpoint impedance, based
> on Maxwell's current-based theory and on your own voltage-at-the-end
> theory. Measure the pattern and impedance.

I am here to encourage you all to do it.
>
> Now, "bend" the antenna into different shapes. For example - leave
> the center portion of the dipole in a straight line. Bend the ends in
> various directions, shaping the antenna into a U, or into a Z, or a C
> (with the tips close together but not touching). Shorten the center
> section and split the ends, forming an H (e.g. short radiator with
> capacity loads on each end).
>
> In each case, predict the pattern and feedpoint impedance based on
> Maxwell's theory and on your own.
>
> Can you find cases in which the predictions vary? If so, which
> matches the actual (measured) behavior of the antenna better?

I am sure that somebody young do it. Maxwell would be happy.
>
> Mathematical beauty is great... but if it doesn't predict the actual
> behavior of real-world phenomena, it's just beautiful math.

Math is still necessary in schools. But in this case the math will be saved.
The Maxwell equations were the same like the Helmholtz for the fluid
mechanics. Now the same math is taught in the two subjects (fluids and EM).
Very often the same teacher do it.

S*

107. Re: Hexbeam Antenna Modeling

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-03 10:48:30 UTC
From: "J.B. Wood" <john.wood@nrl.navy.mil>
Message-ID: <h05kdu$ev6$1@ra.nrl.navy.mil>
Source record: 15019

google@karinya.net wrote:
> John,
>
> Take a look at my web site if you haven't already found it. There are
> 2 pages devoted to modelling the hexbeam and there's an EZNEC file for
> a five-band version you can download:
>
> http://www.karinya.net/g3txq/hexbeam/eznec1/
> http://www.karinya.net/g3txq/hexbeam/eznec2/
>
> 73,
> Steve G3TXQ
>
Now, that's what I'm talkin' about! Great job, Steve. 73's,

108. Re: Question about EZNEC simulation of a radiating coax line

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-03 11:21:15 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <J0tVl.18253$%54.9994@nlpi070.nbdc.sbc.com>
Source record: 15020

ve2pid wrote:
> My question: Why do we have a maximum?

The Z0 of the outside braid is somewhere in the
ballpark of a few hundred ohms. The impedance
at the transmitter ground is usually low. Of
course there are reflections that develop
standing waves.
--
73, Cecil, IEEE, OOTC, http://www.w5dxp.com

109. Re: Sun Spots

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-03 12:25:39 UTC
From: tom <news4792@taring.org>
Message-ID: <4a266bee$0$92355$8046368a@newsreader.iphouse.net>
Source record: 15021

Sal M. Onella wrote:
>
> I'm 66 now and smiling slightly, content at how well things have worked out,
> thanks to that lucky beginning.
>
> "Sal"
> (KD6VKW)
>
>

Thanks to you and everyone else for their service.

tom
K0TAR

110. Re: Question about EZNEC simulation of a radiating coax line

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-03 13:24:17 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <XPuVl.31041$Ws1.9678@nlpi064.nbdc.sbc.com>
Source record: 15022

Roy Lewallen wrote:
> The maxima and minima can be explained as the envelope of traveling
> current waves reflecting from an open end (or current balun or other
> discontinuity) and interfering with each other. These are known as
> standing waves, because the positions of the maxima and minima stay in
> the same places and don't move.

Roy, since you understand the above, you must also
understand that the mostly unchanging phase of that
standing wave current (relative to the source current)
cannot be used to predict the delay through a wire or
a loading coil.

How about correcting your previous postings on that
subject? Your reports of unmeasurable phase shift
through loading coils are supported by EZNEC and
are completely meaningless as far as predicting
the delay through a loading coil or even through
a wire.
--
73, Cecil, IEEE, OOTC, http://www.w5dxp.com

111. radio antenna designed to pick up a specific station

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-03 14:12:20 UTC
From: TefJlives <gmarkowsky@gmail.com>
Message-ID: <d6645f83-e011-4636-b6cc-535bd8dc0382@n21g2000vba.googlegroups.com>
Source record: 15023

Hello all,

There is a particular station in my area, 105.1, that I really like. Unfortunately, it barely comes in, and sometimes doesn't at all. I would like to build an antenna which is designed specifically for this station and which can somehow plug into my normal radio. I know nothing about this subject. Could someone please point me in the right direction?

Greg

112. Re: radio antenna designed to pick up a specific station

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-03 14:29:06 UTC
From: "Geoffrey S. Mendelson" <gsm@mendelson.com>
Message-ID: <slrnh2d20b.pqg.gsm@cable.mendelson.com>
Source record: 15024

TefJlives wrote:

> There is a particular station in my area, 105.1, that I really like.
> Unfortunately, it barely comes in, and sometimes doesn't at all. I
> would like to build an antenna which is designed specifically for this
> station and which can somehow plug into my normal radio. I know
> nothing about this subject. Could someone please point me in the right
> direction?

http://bfn.org/~bn589/antenna.html

Plug in the frequency and hit calculate for a 3 element Yagi.

You can make it out of a piece of wood and some stiff wire. Feed it with either
300 ohm twinlead or coax.

If you radio has a 300 ohm connection (two screws) use twinlead, if it has
a single round hole, use coax cable.

you might start with something simpler:

start with a dipole, two 1/4 wave wires one connected to the center of the
coax and the other to the shield (the outside copper braid), or if you
use twinlead, one to each side.

Play with the the location and position (up and down or right and left)
and the angle of the antenna. If you drew an arrow pointing to the station,
it should cross the dipole where the wires connect if it is horizontal.

If that almost works, go to a 1/4 wave vertical (one wire sticking
up with a 4 wires of the same length hanging down. Connect the vertical to
the center wire of the coax or one of the twinlead wires and the four downward
ones to the shield (other wire). The downward ones should be arranged in a
circle around the vertical, e.g.:

downward downward

vertical (up)

downward downward

If that does not work, build a 3 element beam.

If that does not work, see if they have an Internet feed. :-)

Geoff.

--
Geoffrey S. Mendelson, Jerusalem, Israel gsm@mendelson.com N3OWJ/4X1GM

113. Re: radio antenna designed to pick up a specific station

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-03 14:45:02 UTC
From: jimp@specsol.spam.sux.com
Message-ID: <bfeif6-cks.ln1@mail.specsol.com>
Source record: 15025

TefJlives <gmarkowsky@gmail.com> wrote:
> Hello all,
>
> There is a particular station in my area, 105.1, that I really like.
> Unfortunately, it barely comes in, and sometimes doesn't at all. I
> would like to build an antenna which is designed specifically for this
> station and which can somehow plug into my normal radio. I know
> nothing about this subject. Could someone please point me in the right
> direction?
>
> Greg

What do you have for an antenna now and what is your "normal radio".

--
Jim Pennino

Remove .spam.sux to reply.

114. Re: radio antenna designed to pick up a specific station

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-03 15:59:52 UTC
From: TefJlives <gmarkowsky@gmail.com>
Message-ID: <790ff8c7-ad03-4aac-957b-1eff9902f47a@o14g2000vbo.googlegroups.com>
Source record: 15026

```
On Jun 3, 10:29 am, "Geoffrey S. Mendelson" <g...@mendelson.com>
wrote:
> TefJlives wrote:
> > There is a particular station in my area, 105.1, that I really like.
> > Unfortunately, it barely comes in, and sometimes doesn't at all. I
> > would like to build an antenna which is designed specifically for this
> > station and which can somehow plug into my normal radio. I know
> > nothing about this subject. Could someone please point me in the right
> > direction?
>
> http://bfn.org/~bn589/antenna.html
>
> Plug in the frequency and hit calculate for a 3 element Yagi.
>
> You can make it out of a piece of wood and some stiff wire. Feed it with either
> 300 ohm twinlead or coax.
>
> If you radio has a 300 ohm connection (two screws) use twinlead, if it has
> a single round hole, use coax cable.
>
> you might start with something simpler:
>
> start with a dipole, two 1/4 wave wires one connected to the center of the
> coax and the other to the shield (the outside copper braid), or if you
> use twinlead, one to each side.
>
> Play with the the location and position (up and down or right and left)
> and the angle of the antenna. If you drew an arrow pointing to the station,
> it should cross the dipole where the wires connect if it is horizontal.
>
> If that almost works, go to a 1/4 wave vertical (one wire sticking
> up with a 4 wires of the same length hanging down. Connect the vertical to
> the center wire of the coax or one of the twinlead wires and the four downward
> ones to the shield (other wire). The downward ones should be arranged in a
> circle around the vertical, e.g.:
>
>              downward     downward
>
>                      vertical (up)
>
>              downward     downward
>
> If that does not work, build a 3 element beam.
>
```

> If that does not work, see if they have an Internet feed. :-)
>
> Geoff.
>
> --
> Geoffrey S. Mendelson, Jerusalem, Israel g...@mendelson.com N3OWJ/4X1GM

Many thanks! I will give a try to what you suggest.

115. Re: radio antenna designed to pick up a specific station

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-03 16:01:38 UTC
From: TefJlives <gmarkowsky@gmail.com>
Message-ID: <1bb6ce96-2fb7-48c5-95ec-4936f024037e@z5g2000vba.googlegroups.com>
Source record: 15027

On Jun 3, 10:45 am, j...@specsol.spam.sux.com wrote:
> TefJlives <gmarkow...@gmail.com> wrote:
> > Hello all,
>
> > There is a particular station in my area, 105.1, that I really like.
> > Unfortunately, it barely comes in, and sometimes doesn't at all. I
> > would like to build an antenna which is designed specifically for this
> > station and which can somehow plug into my normal radio. I know
> > nothing about this subject. Could someone please point me in the right
> > direction?
>
> > Greg
>
> What do you have for an antenna now and what is your "normal radio".
>
> --
> Jim Pennino
>
> Remove .spam.sux to reply.

A piece of junk boombox. Emerson Model PD6607. The antenna is the
antenna sticking out the top of it.

116. Re: radio antenna designed to pick up a specific station

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-03 16:30:01 UTC
From: jimp@specsol.spam.sux.com
Message-ID: <6ikif6-vr6.ln1@mail.specsol.com>
Source record: 15028

TefJlives <gmarkowsky@gmail.com> wrote:
> On Jun 3, 10:45 am, j...@specsol.spam.sux.com wrote:
>> TefJlives <gmarkow...@gmail.com> wrote:
>> > Hello all,
>>
>> > There is a particular station in my area, 105.1, that I really like.
>> > Unfortunately, it barely comes in, and sometimes doesn't at all. I
>> > would like to build an antenna which is designed specifically for this
>> > station and which can somehow plug into my normal radio. I know
>> > nothing about this subject. Could someone please point me in the right
>> > direction?
>>
>> > Greg
>>
>> What do you have for an antenna now and what is your "normal radio".
>>
>> --
>> Jim Pennino
>>
>> Remove .spam.sux to reply.
>
> A piece of junk boombox. Emerson Model PD6607. The antenna is the
> antenna sticking out the top of it.

Just about any antenna will be better than that if you mount up in the
air.

The trick will be connecting it to the radio if there isn't an existing
connector for an external antenna.

--
Jim Pennino

Remove .spam.sux to reply.

117. Re: Tube and Twin lead Slim Jim

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-03 16:31:26 UTC
From: Jerry <jerrymartes@verizon.net>
Message-ID: <yzxVl.25$tr5.0@nwrddc02.gnilink.net>
Source record: 15029

"Sal M. Onella" <salmonella@food.poisoning.org> wrote in message
news:SYgVl.1673$En5.169@newsfe09.iad...
>
> "JIMMIE" <JIMMIEDEE123@YAHOO.COM> wrote in message
> news:45c4e8a8-4618-4787-9df3-3d38e355d416@m19g2000yqk.googlegroups.com...
>
> < snip >
>
>> Dave,That was my thoughts on it also. Two wires
>> very close togethether with in phase and more or
>> less equal currents just adds up to a fatter
>> wire.
>
> Not a fatter wire with twice the current?
>
> Recall the colinear J-pole, The two currents are stacked and fed in phase
> by means of the phasing section. Yes, I realize the currents in the Slim
> Jim would appear to cancel.
>
> I'm going to have to build one of these and see what it does. I have a
> lot
> of twinlead and I have a precision RF generator. I always wanted my own
> antenna range; tomorrow's the day. Maybe Tuesday.

Hi "Sal"

I share your thoughts about a pattern range. I recently talked my buddy into writing a program that plots Elevation Plane patterns of an antenna when scaled to a frequency sent from any Polar Orbiting Satellite. I use it alot using the 137 MHz beacons sent from NOAA satellites. Some HAM satellites could be used. There are also L-band beacons sent from the NOAA satellites.

Jerry KD6JDJ

118. Re: Sun Spots

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-03 17:21:59 UTC
From: cuhulin@webtv.net
Message-ID: <17978-4A26B137-5513@storefull-3173.bay.webtv.net>
Source record: 15030

All that bright Mississippi Sun and heat and humidity around here,
sometimes when I am working in my yard, I see Sun Spots in my eyes.
I am 67, or maybe 68 years young, I don't know how old I am.
It's RUFF on me!
cuhulin

119. Re: get kelp

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-03 17:29:47 UTC
From: cuhulin@webtv.net
Message-ID: <17978-4A26B30B-5520@storefull-3173.bay.webtv.net>
Source record: 15031

I got back home from the Lowe's store about forty five minutes ago.I spent over $98.00 for some pressure treated boards.I have to build a damn fence to keep my trashy ass no damn good democrap neighbors from driving on my yard.

But looka here, Stripes movie is on the AMC channel right now.I am Pooped, I think I will watch the rest of the Stripes movie before I get to work on building my fence.
get kelp.
cuhulin

120. Re: WHAT IS ISLAM?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-03 17:34:56 UTC
From: cuhulin@webtv.net
Message-ID: <17978-4A26B440-5525@storefull-3173.bay.webtv.net>
Source record: 15032

Former radio talk show host in D.C.Michael Graham was fired because he
told it like it is,,,
Islam is a cult of Death!
cuhulin

121. Using Tuner to Determine Line Input Impedance

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-03 17:57:52 UTC
From: dykesc <cupstidd@bellsouth.net>
Message-ID: <665e9b84-77b5-4fae-86be-03ceba2dd35a@e24g2000vbe.googlegroups.com>
Source record: 15033

I am trying to validate impedance values I am measuring with my MFJ-259B. I want to do this by using my MFJ-993B auto tuner. The tuner uses a simple L network to create the conjugate match. I want to take the final inductance, capacitance and swr values from the auto tuner digital display after matching is completed and back calculate the impedance that the tuner is seeing. Is there an online calculator that will do this?

Many thanks for replys.

122. MFJ Enterprises.

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-03 18:05:44 UTC
From: cuhulin@webtv.net
Message-ID: <17978-4A26BB78-5553@storefull-3173.bay.webtv.net>
Source record: 15034

The MFJ WiFi Wide Area High Gain Antenna I ordered last February or some time in March of 2009, it finally showed up here last Friday afternoon.Sheesh, it took them long enough.
cuhulin

123. Re: Using Tuner to Determine Line Input Impedance

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-03 18:15:02 UTC
From: jimp@specsol.spam.sux.com
Message-ID: <psqif6-d9a.ln1@mail.specsol.com>
Source record: 15035

dykesc <cupstidd@bellsouth.net> wrote:
> I am trying to validate impedance values I am measuring with my
> MFJ-259B. I want to do this by using my MFJ-993B auto tuner. The tuner
> uses a simple L network to create the conjugate match. I want to take
> the final inductance, capacitance and swr values from the auto tuner
> digital display after matching is completed and back calculate the
> impedance that the tuner is seeing. Is there an online calculator that
> will do this?
>
> Many thanks for replys.

Wouldn't it be easier and much more accurate to make a known load out of components close to what the MFJ-259B reads?

It also will be a frequency indepedant "calibration" if you keep the component leads short.

--
Jim Pennino

Remove .spam.sux to reply.

124. Re: WHAT IS ISLAM?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-03 18:47:53 UTC
From: Tom Donaly <dtdonaly@sbcglobal.net>
Message-ID: <uzzVl.31485$YU2.2853@nlpi066.nbdc.sbc.com>
Source record: 15036

cuhulin@webtv.net wrote:
> Former radio talk show host in D.C.Michael Graham was fired because he
> told it like it is,,,
> Islam is a cult of Death!
> cuhulin
>

So are most religions. They exist because people are afraid of
dying.
73,
Tom Donaly, KA6RUH

125. Re: Dual-Z0 Stubs

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-03 18:59:24 UTC
From: Jim Kelley <jwkelley@uci.edu>
Message-ID: <h06h8n$lq4$1@news.service.uci.edu>
Source record: 15037

Cecil Moore wrote:
> Jim Kelley wrote:
>> Given that the speed of light is roughly 3 x10^8 meters per second,
>> and it would ordinarily take less than a nanosecond to traverse the
>> 10", it's not *THAT* unbelievable.

> It is unbelievable for a device with a VF of 0.04

VF = 0.04 is incredible. I thought you were going to send me the coil
so I could measure it.

ac6xg

126. Re: Using Tuner to Determine Line Input Impedance

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-03 19:17:02 UTC
From: dave <dave@dave.dave>
Message-ID: <4a26cc33$0$8690$bd467cd0@news.dslextreme.com>
Source record: 15038

dykesc wrote:
> I am trying to validate impedance values I am measuring with my
> MFJ-259B. I want to do this by using my MFJ-993B auto tuner. The tuner
> uses a simple L network to create the conjugate match. I want to take
> the final inductance, capacitance and swr values from the auto tuner
> digital display after matching is completed and back calculate the
> impedance that the tuner is seeing. Is there an online calculator that
> will do this?
>
> Many thanks for replys.

http://ytdp.ee.wits.ac.za/smithchart.pdf

http://www.dxzone.com/cgi-bin/dir/jump2.cgi?ID=8763

127. Re: WHAT IS ISLAM?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-03 19:18:43 UTC
From: dave <dave@dave.dave>
Message-ID: <4a26cc98$0$8690$bd467cd0@news.dslextreme.com>
Source record: 15039

Tom Donaly wrote:
> cuhulin@webtv.net wrote:
>> Former radio talk show host in D.C.Michael Graham was fired because he
>> told it like it is,,,
>> Islam is a cult of Death!
>> cuhulin
>>
>
> So are most religions. They exist because people are afraid of
> dying.
> 73,
> Tom Donaly, KA6RUH

They fear the one thing they definitely will not experience. That is
not logical, Captain.

128. Re: Using Tuner to Determine Line Input Impedance

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-03 19:19:11 UTC
From: dykesc <cupstidd@bellsouth.net>
Message-ID: <22d6efc6-76ca-487a-9fc1-76eb7030653c@o30g2000vbc.googlegroups.com>
Source record: 15040

On Jun 3, 1:15 pm, j...@specsol.spam.sux.com wrote:
> dykesc <cupst...@bellsouth.net> wrote:
> > I am trying to validate impedance values I am measuring with my
> > MFJ-259B. I want to do this by using my MFJ-993B auto tuner. The tuner
> > uses a simple L network to create the conjugate match. I want to take
> > the final inductance, capacitance and swr values from the auto tuner
> > digital display after matching is completed and back calculate the
> > impedance that the tuner is seeing. Is there an online calculator that
> > will do this?
>
> > Many thanks for replys.
>
> Wouldn't it be easier and much more accurate to make a known load out of
> components close to what the MFJ-259B reads?
>
> It also will be a frequency indepedant "calibration" if you keep the
> component leads short.
>
> --
> Jim Pennino
>
> Remove .spam.sux to reply.

Jim,

I am concerned about an RF field from a local broadcast that may be causing issues with using the low power MFJ 259B. When I use the auto tuner I am tuning at 10 watts so plenty to counteract any local rf on the antenna. I really need to back calculate an impedance from the inductor, capacitor, and final swr from the auto tuner.

129. Re: Dual-Z0 Stubs

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-03 19:26:06 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <85jd251gsufj2ghsq89l6e27fqiof4tpm8@4ax.com>
Source record: 15041

On Wed, 03 Jun 2009 11:59:24 -0700, Jim Kelley <jwkelley@uci.edu>
wrote:

>> It is unbelievable for a device with a VF of 0.04
>
>VF = 0.04 is incredible. I thought you were going to send me the coil

Talk about unbelievable. Given Cecileo's penchant for mystical
selfhood, that would be like asking to borrow the Shroud of Turin.

I eagerly look forward to this turn of events where religious
reliquary moves at a glacial pace through the protocols of interfaith
sanctions.

73's
Richard Clark, KB7QHC

130. Re: radio antenna designed to pick up a specific station

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-03 19:32:50 UTC
From: TefJlives <gmarkowsky@gmail.com>
Message-ID: <df56874a-8a2d-430f-90c1-f51aeb2f4f07@g1g2000yqh.googlegroups.com>
Source record: 15042

```
On Jun 3, 12:30 pm, j...@specsol.spam.sux.com wrote:
> TefJlives <gmarkow...@gmail.com> wrote:
> > On Jun 3, 10:45 am, j...@specsol.spam.sux.com wrote:
> >> TefJlives <gmarkow...@gmail.com> wrote:
> >> > Hello all,
>
> >> > There is a particular station in my area, 105.1, that I really like.
> >> > Unfortunately, it barely comes in, and sometimes doesn't at all. I
> >> > would like to build an antenna which is designed specifically for this
> >> > station and which can somehow plug into my normal radio. I know
> >> > nothing about this subject. Could someone please point me in the right
> >> > direction?
>
> >> > Greg
>
> >> What do you have for an antenna now and what is your "normal radio".
>
> >> --
> >> Jim Pennino
>
> >> Remove .spam.sux to reply.
>
> > A piece of junk boombox. Emerson Model PD6607. The antenna is the
> > antenna sticking out the top of it.
>
> Just about any antenna will be better than that if you mount up in the
> air.
>
> The trick will be connecting it to the radio if there isn't an existing
> connector for an external antenna.
>
> --
> Jim Pennino
>
> Remove .spam.sux to reply.
```

How can you connect a better antenna to a radio like this? I don't
mind taking it apart a bit.

131. Re: Dual-Z0 Stubs

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-03 19:58:45 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <SBAVI.18098$jZ1.10629@flpi144.ffdc.sbc.com>
Source record: 15043

Jim Kelley wrote:
> VF = 0.04 is incredible.

Ignorance makes a lot of things seem incredible.
Not at all incredible according to the Fig. 1
graph that you referenced a few days ago at:

http://www.ttr.com/TELSIKS2001-MASTER-1.pdf

Here's how to do it. Draw a horizontal line at
0.04. Where it intersects the lines on the graph
are the real-world coils exhibiting a VF of 0.04.
If you need help drawing that line, send me an
email.

Hint: Those large loading coils are slow-wave
devices described in my Ramo and Whinnery
college textbook from the 1950's. It's on page
410 of the 2nd edition of "Fields and Waves
in Modern Radio", (c)1944, 1953 (the year you
were born). Isn't it about time you read it?

The approximation they use for vp (phase velocity)
is c*sin(pitch-angle)

> I thought you were going to send me the coil
> so I could measure it.

The coil has been chopped up and used in numerous
projects including my Bugstick article. Don't you
or your students know how to wind a coil? Do you
need step by step winding instructions?
--
73, Cecil, IEEE, OOTC, http://www.w5dxp.com

132. Re: radio antenna designed to pick up a specific station

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-03 20:00:01 UTC
From: jimp@specsol.spam.sux.com
Message-ID: <d51jf6-2od.ln1@mail.specsol.com>
Source record: 15044

TefJlives <gmarkowsky@gmail.com> wrote:
> On Jun 3, 12:30 pm, j...@specsol.spam.sux.com wrote:
>> TefJlives <gmarkow...@gmail.com> wrote:
>> > On Jun 3, 10:45 am, j...@specsol.spam.sux.com wrote:
>> >> TefJlives <gmarkow...@gmail.com> wrote:
>> >> > Hello all,
>>
>> >> > There is a particular station in my area, 105.1, that I really like.
>> >> > Unfortunately, it barely comes in, and sometimes doesn't at all. I
>> >> > would like to build an antenna which is designed specifically for this
>> >> > station and which can somehow plug into my normal radio. I know
>> >> > nothing about this subject. Could someone please point me in the right
>> >> > direction?
>>
>> >> > Greg
>>
>> >> What do you have for an antenna now and what is your "normal radio".
>>
>> >> --
>> >> Jim Pennino
>>
>> >> Remove .spam.sux to reply.
>>
>> > A piece of junk boombox. Emerson Model PD6607. The antenna is the
>> > antenna sticking out the top of it.
>>
>> Just about any antenna will be better than that if you mount up in the
>> air.
>>
>> The trick will be connecting it to the radio if there isn't an existing
>> connector for an external antenna.
>>
>> --
>> Jim Pennino
>>
>> Remove .spam.sux to reply.
>
> How can you connect a better antenna to a radio like this? I don't
> mind taking it apart a bit.

Likely the simplest thing to do is open it up and find the connection
to the existing antenna, then add a connector wired to the same place.

--
Jim Pennino

Remove .spam.sux to reply.

133. FS Yaesu G-400RC Rotor and Controller

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-03 20:01:28 UTC
From: Charlie Hugg <k5mbx@sbcglobal.net>
Message-ID: <rLAVl.17591$pr6.13108@flpi149.ffdc.sbc.com>
Source record: 15045

FS: Yaesu G-400RC(like G-450A except no special plugs required for cable hookup). The rotator and controller work well and are in very good shape cosmetically. Cable hooks directly to rotor and controller/no plugs required. This rotor and controller have not been used much. I can send pictures upon request. Price is $140 plus shipping. Thanks, Charlie Hugg, K5MBX

134. Re: radio antenna designed to pick up a specific station

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-03 20:04:28 UTC
From: Jerry <jerrymartes@verizon.net>
Message-ID: <gHAVl.66$tr5.19@nwrddc02.gnilink.net>
Source record: 15046

"TefJlives" <gmarkowsky@gmail.com> wrote in message
news:df56874a-8a2d-430f-90c1-f51aeb2f4f07@g1g2000yqh.googlegroups.com...
On Jun 3, 12:30 pm, j...@specsol.spam.sux.com wrote:
> TefJlives <gmarkow...@gmail.com> wrote:
> > On Jun 3, 10:45 am, j...@specsol.spam.sux.com wrote:
> >> TefJlives <gmarkow...@gmail.com> wrote:
> >> > Hello all,
>
> >> > There is a particular station in my area, 105.1, that I really like.
> >> > Unfortunately, it barely comes in, and sometimes doesn't at all. I
> >> > would like to build an antenna which is designed specifically for
> >> > this
> >> > station and which can somehow plug into my normal radio. I know
> >> > nothing about this subject. Could someone please point me in the
> >> > right
> >> > direction?
>
> >> > Greg
>
> >> What do you have for an antenna now and what is your "normal radio".
>
> >> --
> >> Jim Pennino
>
> >> Remove .spam.sux to reply.
>
> > A piece of junk boombox. Emerson Model PD6607. The antenna is the
> > antenna sticking out the top of it.
>
> Just about any antenna will be better than that if you mount up in the
> air.
>
> The trick will be connecting it to the radio if there isn't an existing
> connector for an external antenna.
>
> --
> Jim Pennino
>
> Remove .spam.sux to reply.

How can you connect a better antenna to a radio like this? I don't
mind taking it apart a bit.

Hi Greg

If you are willing to construct the Yagii, it would be possible you can couple it to your BoomBox by looping the "twisted pair" from the yagii around the case of the radio. Maybe you could experiment with twisting the twisted pair around the antenna you now pull out for the VHF range. It is possible that you will see some improvement by making a circular loop with the wires in the twisted pair and position the loop near the present (pull out) antenna.

Jerry KD6JDJ

135. Re: Using Tuner to Determine Line Input Impedance

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-03 20:15:02 UTC
From: jimp@specsol.spam.sux.com
Message-ID: <tg1jf6-2od.ln1@mail.specsol.com>
Source record: 15047

dykesc <cupstidd@bellsouth.net> wrote:
> On Jun 3, 1:15 pm, j...@specsol.spam.sux.com wrote:
>> dykesc <cupst...@bellsouth.net> wrote:
>> > I am trying to validate impedance values I am measuring with my
>> > MFJ-259B. I want to do this by using my MFJ-993B auto tuner. The tuner
>> > uses a simple L network to create the conjugate match. I want to take
>> > the final inductance, capacitance and swr values from the auto tuner
>> > digital display after matching is completed and back calculate the
>> > impedance that the tuner is seeing. Is there an online calculator that
>> > will do this?
>>
>> > Many thanks for replys.
>>
>> Wouldn't it be easier and much more accurate to make a known load out of
>> components close to what the MFJ-259B reads?
>>
>> It also will be a frequency indepedant "calibration" if you keep the
>> component leads short.
>>
>> --
>> Jim Pennino
>>
>> Remove .spam.sux to reply.
>
> Jim,
>
> I am concerned about an RF field from a local broadcast that may be
> causing issues with using the low power MFJ 259B. When I use the auto
> tuner I am tuning at 10 watts so plenty to counteract any local rf on
> the antenna. I really need to back calculate an impedance from the
> inductor, capacitor, and final swr from the auto tuner.

OK, that's a different problem.

Have you concidered this if it is a general problem for you:

http://www.mfjenterprises.com/Product.php?productid=MFJ-731

--
Jim Pennino

Remove .spam.sux to reply.

136. Re: Dual-Z0 Stubs

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-03 20:43:08 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <sfBVl.19809$hc1.5097@flpi150.ffdc.sbc.com>
Source record: 15048

Jim Kelley wrote:
> VF = 0.04 is incredible.

A little knowledge and logic will make it clear.
My 75m Texas Bugcatcher coil is self resonant
at 8.2 MHz which by definition makes it 90 degrees
long. 90 degrees at 8.2 MHz in free space is 30 feet.

The coil is actually 6.5 inches long, i.e. 0.542 feet.

0.542/30 = 0.018 which is the VF of the Texas
Bugcatcher coil at its self-resonant frequency.

The Texas Bugcatcher coil is 4 tpi. The coil with
the VF = 0.04 is 10 tpi. It all makes sense.
--
73, Cecil, IEEE, OOTC, http://www.w5dxp.com

137. Re: Using Tuner to Determine Line Input Impedance

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-03 21:19:27 UTC
From: Owen Duffy <none@no.where>
Message-ID: <Xns9C204A81BD30nonenowhere@61.9.191.5>
Source record: 15049

dykesc <cupstidd@bellsouth.net> wrote in news:22d6efc6-76ca-487a-9fc1-76eb7030653c@o30g2000vbc.googlegroups.com:

...
> I am concerned about an RF field from a local broadcast that may be
> causing issues with using the low power MFJ 259B. When I use the auto
> tuner I am tuning at 10 watts so plenty to counteract any local rf on
> the antenna. I really need to back calculate an impedance from the
> inductor, capacitor, and final swr from the auto tuner.

Why didn't you say that the first time?

Tom Rauch (one of the designers of the '259B) posted this info re interference:

"BC interference causes the bridge in the analyzer to remian (sic) unbalanced even with very low SWR, so the analyzer will read a fixed minimum SWR when BC interference. It will read that way on any frequency from dc to daylight. For example if the unit falls asleep the SWR meter won't drop to zero. That's an indicator of BC interference or external voltages being applied to the measurement port."

Owen

138. Re: Dual-Z0 Stubs

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-03 22:11:06 UTC
From: Jim Kelley <jwkelley@uci.edu>
Message-ID: <h06sgc$q04$1@news.service.uci.edu>
Source record: 15050

Cecil Moore wrote:
> Jim Kelley wrote:
>> VF = 0.04 is incredible.
>
> A little knowledge and logic will make it clear.
> My 75m Texas Bugcatcher coil is self resonant
> at 8.2 MHz which by definition makes it 90 degrees
> long. 90 degrees at 8.2 MHz in free space is 30 feet.
>
> The coil is actually 6.5 inches long, i.e. 0.542 feet.
>
> 0.542/30 = 0.018 which is the VF of the Texas
> Bugcatcher coil at its self-resonant frequency.
>
> The Texas Bugcatcher coil is 4 tpi. The coil with
> the VF = 0.04 is 10 tpi. It all makes sense.

Epicycles made a lot of sense, too. So, about that coil. I'm good in
the call book.

ac6xg

139. Re: Dual-Z0 Stubs

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-03 22:34:02 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <qTCVl.18301$%54.13907@nlpi070.nbdc.sbc.com>
Source record: 14901

Jim Kelley wrote:
> So, about that coil. I'm good in the call book.

That coil is being used on a bugstick on top of my
pickup. Just wrap 40 turns on a 4 inch diameter piece
of PCV and start alleviating your ignorance.
--
73, Cecil, IEEE, OOTC, http://www.w5dxp.com

140. Re: Sun Spots

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-03 22:49:38 UTC
From: Dave <noone@nowhere.com>
Message-ID: <66DVI.522$u86.160@nwrddc01.gnilink.net>
Source record: 14902

"Szczepan Bialek" <sz.bialek@wp.pl> wrote in message
news:h0555oktq1@node1.news.atman.pl...
>
> "Dave Platt" <dplatt@radagast.org> wrote
> news:ccdgf6-noo.ln1@radagast.org...
>> In article <h03hc0ceq1@node1.news.atman.pl>,
>> Szczepan Biaï¿½ek <sz.bialek@wp.pl> wrote:
>>
>>>The TRANSVERSAL magnetic disturbances have beautifull math. The most
>>>beauty
>>>math element is the displacement current.
>>>
>>>But the magnetic disturbances are creates by AC CURRENT (not voltage).
>>>
>>>So if the radio waves are emitted from the current zone of antenna
>>>Maxwell
>>>is right. If from ends - not.
>>>
>>>Maxwell admired Ampere. But each genius works out his own theories. We
>>>can
>>>choose between them.
>>
>> So, the obvious thing for you to do (as the proponent of an
>> alternative, nontraditional theory) is to devise an experiment which
>> can distinguish between these two cases.
>
> The traditional theory is the acoustic theory. The nontraditional theory
> is the Maxwell model.

only if you are still living in the 1800's.

141. Re: Sun Spots

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-03 22:50:25 UTC
From: Dave <noone@nowhere.com>
Message-ID: <R6DVl.523$u86.497@nwrddc01.gnilink.net>
Source record: 14903

```
"Szczepan Bialek" <sz.bialek@wp.pl> wrote in message
news:h03hum$cgu$1@node1.news.atman.pl...
>
> "Dave" <noone@nowhere.com>wrote
> news:ubZUl.2219$9L2.522@nwrddc02.gnilink.net...
>>
>> "Szczepan Bialek" <sz.bialek@wp.pl> wrote in message
>> news:gvvp8s$k0l$1@node1.news.atman.pl...
>>
>>>> both. when the current is high in the center it is creating a stronger
>>>> magnetic field, and when that current reaches the end it creates the
>>>> highest voltage so makes more electric field... both are part of the
>>>> electro-magnetic wave.
>>>
>>> It is not Maxwell model. In it current create magnetic field and THIS
>>> field create the electric field. AND SO ON.
>>
>> ah, you believe 'and so on'?? the 'so on' means the changing electric
>> field creates a magnetic field... both conditions are required for
>> electromagnetic propagation. without the time varying displacement
>> current there would be no propagation. so yes, you can create a magnetic
>> field from the time varying electric field.
>>
>>
>>> Your (engineering people) model is O.K. but it is quite different from
>>> the Maxwell model. This is the reason that Art can wrote: " "For your
>>> information you have never built an antenna that conforms in its
>>> entirety to Maxwell';s laws thus you cannot possibly understand
>>> radiation as presented by Maxwell."
>>
>> the maxwell equations completely describe radiation from an antenna, so
>> all antennas, even arts, 'conform' to the maxwell equations.
>
> Maxwell equations were modified by Heaviside and the next.
> Tell us if Maxwell model is O.K. (radio waves are the transverse waves).
> S*
>

Maxwell is ok.
```

142. Re: Sun Spots

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-03 22:51:06 UTC
From: Dave <noone@nowhere.com>
Message-ID: <u7DVl.524$u86.66@nwrddc01.gnilink.net>
Source record: 14904

```
"Szczepan Bialek" <sz.bialek@wp.pl> wrote in message
news:h052vr$kha$1@node1.news.atman.pl...
>
> "Dave" <noone@nowhere.com> wrote
> news:4giVl.406$u86.356@nwrddc01.gnilink.net...
>>
>> "Szczepan Bialek" <sz.bialek@wp.pl> wrote in message
>> news:h02esm$3rc$1@node1.news.atman.pl...
>>>
>>> The only reason for Maxwell model is the light polarisation. In his era
>>> the polarisation was explained with transverse waves. Now we know (from
>>> Clark) that the apparatus is polarised not waves.
>>> Regards,
>>> S*
>>>
>> i knew getting you and art together would be interesting... good for a
>> whole evening full of laughs! the waves must be polarized to interact as
>> observed with polarized antennas.
>
> But here are the two possibilities.
> 1. The dipole radiates the transverse wave from centre,
> 2. The dipole radiate the two COUPLED longitudinal waves from the two
> ends.
>
> In the both cases the antennas (emitting and receiving) must be parallel.
> Which place radiate the radio waves?
> S*

the whole antenna radiates.
```

143. Re: Using Tuner to Determine Line Input Impedance

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-03 23:09:13 UTC
From: dykesc <cupstidd@bellsouth.net>
Message-ID: <6f84227d-8095-48ff-a35d-3af3a3ae7064@r3g2000vbp.googlegroups.com>
Source record: 14905

On Jun 3, 4:19 pm, Owen Duffy <n...@no.where> wrote:
> dykesc <cupst...@bellsouth.net> wrote in news:22d6efc6-76ca-487a-9fc1-
> 76eb70306...@o30g2000vbc.googlegroups.com:
>
> ...
>
> > I am concerned about an RF field from a local broadcast that may be
> > causing issues with using the low power MFJ 259B. When I use the auto
> > tuner I am tuning at 10 watts so plenty to counteract any local rf on
> > the antenna. I really need to back calculate an impedance from the
> > inductor, capacitor, and final swr from the auto tuner.
>
> Why didn't you say that the first time?

Guess I was in a hurry and just wanted to know if I could back
calculate the impedance (R +- jX) my auto tuner is seeing based on the
inductor, capacitor and final swr values it displays after a "match is
achieved. I would still like to do this. Dave gave me a link and of
course I can do it manually with a Smith Chart (I think lol).

> Tom Rauch (one of the designers of the '259B) posted this info re
> interference:
>
> "BC interference causes the bridge in the analyzer to remian (sic)
> unbalanced even with very low SWR, so the analyzer will read a fixed
> minimum SWR when BC interference. It will read that way on any frequency
> from dc to daylight. For example if the unit falls asleep the SWR meter
> won't drop to zero. That's an indicator of BC interference or external
> voltages being applied to the measurement port."
>
> Owen

Thanks. Now there's a bit of info I didn't have. So if the 259B is
behaving normally, when it enters "battery save" mode the swr value
should drop to zero. If not, there are external voltages on the
antenna port. I think I will check this out with a 100 ohm resistor
across the antenna port. 2.0 should drop to 1.0 or zero when "battery
save" kicks in.

By the way, the broadcast station is FM at 105.5 MC.

144. Re: Dual-Z0 Stubs

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-03 23:28:06 UTC
From: Jim Kelley <jwkelley@uci.edu>
Message-ID: <h0710prfc1@news.service.uci.edu>
Source record: 14906

Cecil Moore wrote:
> Jim Kelley wrote:
>> So, about that coil. I'm good in the call book.
>
> That coil is being used on a bugstick on top of my
> pickup. Just wrap 40 turns on a 4 inch diameter piece
> of PCV and start alleviating your ignorance.

If you are right then I would no longer be ignorant, and you would still be boorish and asinine.

You seem reluctant to have your coil tested. I promise to return it to you immediately after I make the measurements.

If I make the coil and the results turn out not to support your contention, you would contend that the coil was made incorrectly. It's better that you supply the coil - along with your claims about it. I'm ready to be amazed, Cecil.

ac6xg

145. Re: Sun Spots

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-03 23:44:03 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <pl2e25hadsseal239ckus9kdpg20p51dtb@4ax.com>
Source record: 14907

On Wed, 03 Jun 2009 22:50:25 GMT, "Dave" <noone@nowhere.com> wrote:

>Maxwell is ok.

Heaviside rocks!

73's
Richard Clark, KB7QHC

146. Re: Dual-Z0 Stubs

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-03 23:48:39 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <so2e25ttjuv8r1826jvu8q8mfq0kmgn8aj@4ax.com>
Source record: 14908

On Wed, 03 Jun 2009 16:28:06 -0700, Jim Kelley <jwkelley@uci.edu>
wrote:

> I'm ready to be amazed, Cecil.

Hi Jim,

Then you are due a picture of his stigmata of the microphone wound:
"Hertz, forgive them for they know not what mode they operate."

73's
Richard Clark, KB7QHC

147. Re: Dual-Z0 Stubs

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-03 23:57:18 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <v5EVl.25107$as4.19016@nlpi069.nbdc.sbc.com>
Source record: 14909

Jim Kelley wrote:
> If I make the coil and the results turn out not to support your
> contention, you would contend that the coil was made incorrectly.

Nope, I won't do that. Any large air-core loading coil will
do. All it has to satisfy is the Corum test on page 4:

5ND^2/WL < 1

I'll send you an EXCEL file that makes that test.
--
73, Cecil, IEEE, OOTC, http://www.w5dxp.com

148. Re: Using Tuner to Determine Line Input Impedance

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-04 00:12:30 UTC
From: dykesc <cupstidd@bellsouth.net>
Message-ID: <362a923a-f718-4cd5-a1bd-2fd3c4cb15c7@k2g2000yql.googlegroups.com>
Source record: 14910

On Jun 3, 4:19 pm, Owen Duffy <n...@no.where> wrote:

> Tom Rauch (one of the designers of the '259B) posted this info re
> interference:
>
> "BC interference causes the bridge in the analyzer to remian (sic)
> unbalanced even with very low SWR, so the analyzer will read a fixed
> minimum SWR when BC interference. It will read that way on any frequency
> from dc to daylight. For example if the unit falls asleep the SWR meter
> won't drop to zero. That's an indicator of BC interference or external
> voltages being applied to the measurement port."
>
> Owen

Many thanks Owen. I just confirmed I have a BC interference issue.
When I placed a 100 ohm resistor across the 259B antenna terminal, the
unit correctly read 2.0 (well actually 1.9) swr, 100 ohms R and 0 X.
When it entered "battery save" the analog swr and impedance meters
both dropped to zero. The digital display stayed the same.

When I hooked my antenna up the analog swr meter only fell to 1.4 when
the unit entered "battery save" mode. The impedance meter did drop to
zero. When I installed a 4:1 balun at the antenna feedpoint the swr
fell to 1.2, but still not zero when the analyzer entered sleep mode.
Apparently the BC signal is at least to some degree differential in
nature on my feedline.

Anticipating all this, I wrote MFJ about the usefullness of their
their tunable analyzer filter to combat a strong FM broadcast signal.
They replyed that it would work. I wonder how well. The tunable filter
costs around $100.00.

149. Re: Using Tuner to Determine Line Input Impedance

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-04 00:50:11 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <4h6e25prpm13chmu4jkvp78hq41g122ef0@4ax.com>
Source record: 14911

On Wed, 3 Jun 2009 17:12:30 -0700 (PDT), dykesc
<cupstidd@bellsouth.net> wrote:

>costs around $100.00.

Drop a dime on a call to the station engineer and ask when they go off
the air for testing.

73's
Richard Clark, KB7QHC

150. Re: Using Tuner to Determine Line Input Impedance

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-04 01:34:18 UTC
From: dykesc <cupstidd@bellsouth.net>
Message-ID: <acfb62ec-bf40-497c-ad49-fb92f0f4661a@z19g2000vbz.googlegroups.com>
Source record: 14912

On Jun 3, 7:50 pm, Richard Clark <kb7...@comcast.net> wrote:

> Drop a dime on a call to the station engineer and ask when they go off
> the air for testing.
>
> 73's
> Richard Clark, KB7QHC

Good idea Richard. I just sent them an e-mail. If I don't get a
response I'll call.

Thanks

Dykes AD5VS

151. Re: Using Tuner to Determine Line Input Impedance

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-04 01:37:54 UTC
From: dykesc <cupstidd@bellsouth.net>
Message-ID: <711f874b-008d-4ddc-b3fb-e3ca976bc41d@r3g2000vbp.googlegroups.com>
Source record: 14913

On Jun 3, 2:17 pm, dave <d...@dave.dave> wrote:

> http://ytdp.ee.wits.ac.za/smithchart.pdf
>
> http://www.dxzone.com/cgi-bin/dir/jump2.cgi?ID=8763

I don't run Linux Dave. Is there a Windows version? Meanwhile I am going at it manually with a Smith Chart. At multiple frequencies this will take some time.

Dykes AD5VS

152. Re: radio antenna designed to pick up a specific station

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-04 03:13:03 UTC
From: JB <nospam@goofball.net>
Message-ID: <3ZGVl.151$tr5.92@nwrddc02.gnilink.net>
Source record: 14914

> > How can you connect a better antenna to a radio like this? I don't
> > mind taking it apart a bit.
>
> Likely the simplest thing to do is open it up and find the connection
> to the existing antenna, then add a connector wired to the same place.
>
Use the TV antenna.
It won't matter too much if you use twinlead or coax. You can just put a "
F" connector or screw terminals into the radio as above. I prefer to use a
300 ohm balun from the 75 ohm coax for isolation though because of the
possibility of AC leakage to the TV chassis.

153. Re: Hexbeam Antenna Modeling

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-04 04:47:40 UTC
From: Clifford Heath <no@spam.please.net>
Message-ID: <4a2751ec$0$32007$afc38c87@news.optusnet.com.au>
Source record: 14915

google@karinya.net wrote:
> Turn radius is about 12.5" for a 2m broadband hex.

Sorry Steve, I see a pair of W shapes, or a W driver and
4-of-6 hexagon reflector. Which measurement is 12.5" - is
this the radius (length) of the hexagon arms (and hence
also of all the peripheral segments)?

> It should be possible to get very deep and narrow F/B nulls by
> adjusting the Driver/Reflector end spacing at some cost to the VSWR.

If I'm reading you right, the gap between the ends is the
salient factor here. Suggestions on how big a gap to try
first? Something like 3cm?

Sorry for the newbie-ness. Been doing electronics for 30
years, but only now getting into radio and have never tuned
an antenna. Sorta understand EM fields, but don't have any
RF test gear yet, except for my very nice VK3YNG sniffer
(google it). Maybe I should borrow/buy one of the little
fox-or transmitters to tune up an antenna, but it'll be too
late for this weekend's national foxhunt champs in Mt Gambier.

Clifford Heath VK3CLF.

154. Re: Sun Spots

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-04 05:03:57 UTC
From: "Sal M. Onella" <salmonella@food.poisoning.org>
Message-ID: <2BIVl.200$f36.2@newsfe19.iad>
Source record: 14916

"tom" <news4792@taring.org> wrote in message
news:4a266bee$0$92355$8046368a@newsreader.iphouse.net...
> Sal M. Onella wrote:
> >
> > I'm 66 now and smiling slightly, content at how well things have worked
out,
> > thanks to that lucky beginning.
> >
> > "Sal"
> > (KD6VKW)
> >
> >
>
> Thanks to you and everyone else for their service.

You're certainly welcome but I have to say I got as much out of it as I put
in. The training, experience, maturity and travel were incomparable.
(Living conditions far from cruise ship standards, but it was usually
comfy.)

"Sal"

155. Re: Tube and Twin lead Slim Jim

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-04 05:06:21 UTC
From: "Sal M. Onella" <salmonella@food.poisoning.org>
Message-ID: <iDIVI.201$f36.47@newsfe19.iad>
Source record: 14917

"Jerry" <jerrymartes@verizon.net> wrote in message
news:yzxVl.25$tr5.0@nwrddc02.gnilink.net...
>

< snip >

> I share your thoughts about a pattern range. I recently talked my
buddy
> into writing a program that plots Elevation Plane patterns of an antenna
> when scaled to a frequency sent from any Polar Orbiting Satellite. I use
> it alot using the 137 MHz beacons sent from NOAA satellites. Some HAM
> satellites could be used. There are also L-band beacons sent from the
NOAA
> satellites.

That's an interesting approach. Thanks.

156. Re: Using Tuner to Determine Line Input Impedance

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-04 07:10:53 UTC
From: Ian Wade G3NRW <g3nrw@yahoo.co.uk>
Message-ID: <kYFW01E9N3JKFwPL@ntlworld.com>
Source record: 14918

From: dykesc <cupstidd@bellsouth.net>
Date: Wed, 3 Jun 2009 Time: 10:57:52

>I am trying to validate impedance values I am measuring with my
>MFJ-259B. I want to do this by using my MFJ-993B auto tuner. The tuner
>uses a simple L network to create the conjugate match. I want to take
>the final inductance, capacitance and swr values from the auto tuner
>digital display after matching is completed and back calculate the
>impedance that the tuner is seeing. Is there an online calculator that
>will do this?
>
>Many thanks for replys.

Is this any help?

http://www.wy2u.com/

Scroll down to "Electrical / Electronic Engineering Links" and click on
"L/C Impedance Matching Design Tool"

--
73
Ian, G3NRW

157. Re: Sun Spots

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-04 08:14:42 UTC
From: Szczepan Białek <sz.bialek@wp.pl>
Message-ID: <h07mgn$18v$1@node1.news.atman.pl>
Source record: 14919

"Dave" <noone@nowhere.com> wrote
news:66DVl.522$u86.160@nwrddc01.gnilink.net...
>
> "Szczepan Bialek" <sz.bialek@wp.pl> wrote in message
> news:h0555oktq1@node1.news.atman.pl...
>>
>> "Dave Platt" <dplatt@radagast.org> wrote
>> news:ccdgf6-noo.ln1@radagast.org...
>>> In article <h03hc0ceq1@node1.news.atman.pl>,
>>> Szczepan Biaďż˝ek <sz.bialek@wp.pl> wrote:
>>>
>>>>The TRANSVERSAL magnetic disturbances have beautifull math. The most
>>>>beauty
>>>>math element is the displacement current.
>>>>
>>>>But the magnetic disturbances are creates by AC CURRENT (not voltage).
>>>>
>>>>So if the radio waves are emitted from the current zone of antenna
>>>>Maxwell
>>>>is right. If from ends - not.
>>>>
>>>>Maxwell admired Ampere. But each genius works out his own theories. We
>>>>can
>>>>choose between them.
>>>
>>> So, the obvious thing for you to do (as the proponent of an
>>> alternative, nontraditional theory) is to devise an experiment which
>>> can distinguish between these two cases.
>>
>> The traditional theory is the acoustic theory. The nontraditional theory
>> is the Maxwell model.
>
> only if you are still living in the 1800's.

Exactly in 1638:

"1638 - Rene Descartes theorizes that light is a pressure wave through the
second of his three types of matter of which the universe is made. He
invents properties of this fluid that make it possible to calculate the
reflection and refraction of light. The ``modern'' notion of the aether is
born. " From: http://maxwell.byu.edu/~spencerr/phys442/node4.html

The next:

"1717 - Newton shows that the ``two-ness'' of double refraction clearly rules out light being aether waves. (All aether wave theories were sound-like, so Newton was right; longitudinal waves can't be polarized.) "

In the History you find how many people analysed the issue: longitudinal vs. transversal. In 1905 all stop.
But after 1905 peole build antennas. And they do not worry what the radiation is like.
Sunner or later the issue appears again.
S*

>

158. Re: Sun Spots

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-04 08:26:21 UTC
From: Szczepan Białek <sz.bialek@wp.pl>
Message-ID: <h07n6h$1br$1@node1.news.atman.pl>
Source record: 14920

```
"Dave" <noone@nowhere.com> wrote
news:u7DVl.524$u86.66@nwrddc01.gnilink.net...
>
> "Szczepan Bialek" <sz.bialek@wp.pl> wrote in message
> news:h052vr$kha$1@node1.news.atman.pl...
>>
>> "Dave" <noone@nowhere.com> wrote
>> news:4giVl.406$u86.356@nwrddc01.gnilink.net...
>>>
>>> "Szczepan Bialek" <sz.bialek@wp.pl> wrote in message
>>> news:h02esm$3rc$1@node1.news.atman.pl...
>>>>
>>>> The only reason for Maxwell model is the light polarisation. In his era
>>>> the polarisation was explained with transverse waves. Now we know (from
>>>> Clark) that the apparatus is polarised not waves.
>>>> Regards,
>>>> S*
>>>>
>>> i knew getting you and art together would be interesting... good for a
>>> whole evening full of laughs! the waves must be polarized to interact
>>> as observed with polarized antennas.
>>
>> But here are the two possibilities.
>> 1. The dipole radiates the transverse wave from centre,
>> 2. The dipole radiate the two COUPLED longitudinal waves from the two
>> ends.
>>
>> In the both cases the antennas (emitting and receiving) must be parallel.
>> Which place radiate the radio waves?
>> S*
>
> the whole antenna radiates.

But what radiate? Magnetic whirls or pressure-like electric wave?
S*
```

159. Re: Hexbeam Antenna Modeling

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-04 08:45:05 UTC
From: google@karinya.net
Message-ID: <d615bea4-b282-4533-9ceb-c2ba9032e79d@v4g2000vba.googlegroups.com>
Source record: 14921

Clifford,

There are two styles of hexbeam: the older design which has a W-shape Driver and a W-shape Reflector, and which I call the "classic" on my web site; and my newer broadband design which has a W-shape Driver and a U-shape Reflector.

I found in my lab notebook a 2m version of the broadband style; its dimensions are: half-Driver 21"; Reflector 40"; end gap 2.5". I think I assumed wire construction using #14 bare copper. That would give a hexagon radius of 12.5".

When I model this with EZNEC I see about 3.8dBd Forward Gain and 19dB F/B with VSWR=1.4. The problem is that the rearward response is very smooth and "well behaved" so probably not much use for DF.

If I increase the end gap to 5" the Forward Gain and F/B remain about the same, but the azimuth pattern devlops deep side nulls (38dB) at plus and minus 130 degrees which may be useful. The VSWR deteriorates to 1.8:1.

Hopefully that may give you a starting point for experimentation. If I get a chance I'll try some modelling experiments on the classic design also.

73,
Steve G3TXQ

160. Re: Sun Spots

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-04 11:29:00 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <ZdOVl.28064$c45.26217@nlpi065.nbdc.sbc.com>
Source record: 14922

Szczepan Białˇżˇek wrote:
> But what radiate?

Particles called photons radiate. Photons are
emitted by decelerating electrons.
--
73, Cecil, IEEE, OOTC, http://www.w5dxp.com

161. Re: Hexbeam Antenna Modeling

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-04 12:01:21 UTC
From: Clifford Heath <no@spam.please.net>
Message-ID: <4a27b791$0$7111$afc38c87@news.optusnet.com.au>
Source record: 14923

google@karinya.net wrote:
> Hopefully that may give you a starting point for experimentation.

Steve, thanks. Hopefully I'll discuss it over the weekend
with some of our foxhunt folk and perhaps try some experiments
after that. But you're right, the lobe pattern might be simply
inferior.

Clifford Heath, VK3CLF.

162. Re: Hexbeam Antenna Modeling

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-04 12:09:06 UTC
From: "J.B. Wood" <john.wood@nrl.navy.mil>
Message-ID: <h08dh2$5rp$1@ra.nrl.navy.mil>
Source record: 14924

google@karinya.net wrote:
> Clifford,
>
> There are two styles of hexbeam: the older design which has a W-shape
> Driver and a W-shape Reflector, and which I call the "classic" on my
> web site; and my newer broadband design which has a W-shape Driver and
> a U-shape Reflector.
>
> I found in my lab notebook a 2m version of the broadband style; its
> dimensions are: half-Driver 21"; Reflector 40"; end gap 2.5". I think
> I assumed wire construction using #14 bare copper. That would give a
> hexagon radius of 12.5".
>
> When I model this with EZNEC I see about 3.8dBd Forward Gain and 19dB
> F/B with VSWR=1.4. The problem is that the rearward response is very
> smooth and "well behaved" so probably not much use for DF.
>
> If I increase the end gap to 5" the Forward Gain and F/B remain about
> the same, but the azimuth pattern devlops deep side nulls (38dB) at
> plus and minus 130 degrees which may be useful. The VSWR deteriorates
> to 1.8:1.
>
> Hopefully that may give you a starting point for experimentation. If I
> get a chance I'll try some modelling experiments on the classic design
> also.
>
> 73,
> Steve G3TXQ
>
Hello, Steve, and all. Steve, I see you also have an informative
article that is posted online at
www.antennex.com/preview/Dec507/hexbeam.pdf 73s,

163. Re: Hexbeam Antenna Modeling

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-04 12:39:22 UTC
From: google@karinya.net
Message-ID: <3924f19c-1783-4d87-b378-2b6484e88d3b@o14g2000vbo.googlegroups.com>
Source record: 14925

On Jun 4, 1:09 pm, "J.B. Wood" <john.w...@nrl.navy.mil> wrote:
>
> Hello, Steve, and all. Steve, I see you also have an informative
> article that is posted online atwww.antennex.com/preview/Dec507/hexbeam.pdf
>

Yes, that article described the process by which I arrived at the
broadband version.

Since then there have been a couple of write-ups in the monthly
Antenna column of RadioCommunication magazine, and RSGB published the
design in their recent book "Building successful HF antennas". You may
also have seen Leo's (K4KIO) constructional article in the March
edition of QST. All that has generated quite a lot of interest in the
antenna.

I try to avoid exagerated claims for the design - at the end of the
day it's a "compressed" Yagi and performs as such. But it does provide
useful directivity over the five bands 20m thru 10m, with a single
feedline, in a size which suits those of us that don't have a lot of
space. It's also pretty easy to construct from readily-available
materials, although a number of folk now supply complete kits,
including K4KIO and more recently DX Engineering.

73,
Steve G3TXQ

164. Re: Hexbeam Antenna Modeling

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-04 13:09:15 UTC
From: "J.B. Wood" <john.wood@nrl.navy.mil>
Message-ID: <h08h1s$6l9$1@ra.nrl.navy.mil>
Source record: 14926

google@karinya.net wrote:

> I try to avoid exagerated claims for the design - at the end of the
> day it's a "compressed" Yagi and performs as such. But it does provide
> useful directivity over the five bands 20m thru 10m, with a single
> feedline, in a size which suits those of us that don't have a lot of
> space. It's also pretty easy to construct from readily-available
> materials, although a number of folk now supply complete kits,
> including K4KIO and more recently DX Engineering.
>
> 73,
> Steve G3TXQ

Thanks for the reply, Steve. As for exaggerated claims, I'd have to give the award to the designers of (and explainers of the "theory" behind) the Crossed-Field Antenna (CFA). (Of course the CFA has been the subject of numerous antenneX articles but I'm not placing yours in that group!) 73s,

165. Grinding Sound

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-04 13:58:56 UTC
From: Tommy Grand <howardj911@yahoo.com>
Message-ID: <07e198fe-73a1-493a-a2e1-681ca8cb9a2f@o20g2000vbh.googlegroups.com>
Source record: 14927

Friends,

I recently purchased a Sangean DT-400W to replace my trusty DT200VX.
Unfortunately, my new one has an annoying grinding sound that plays in
the background of whatever I'm listening to. This is particularly
frustrating when I'm listening to quiet classical music on the local
FM station. Any idea what this could be, and how I can fix it with
home tools?

Thanks,
TG

166. Re: Using Tuner to Determine Line Input Impedance

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-04 16:09:28 UTC
From: Jim Lux <james.p.lux@jpl.nasa.gov>
Message-ID: <h08rjo$77d$2@news.jpl.nasa.gov>
Source record: 14931

dykesc wrote:
> On Jun 3, 2:17 pm, dave <d...@dave.dave> wrote:
>
>> http://ytdp.ee.wits.ac.za/smithchart.pdf
>>
>> http://www.dxzone.com/cgi-bin/dir/jump2.cgi?ID=8763
>
> I don't run Linux Dave. Is there a Windows version? Meanwhile I am
> going at it manually with a Smith Chart. At multiple frequencies this
> will take some time.
>
> Dykes AD5VS
>

you can do it with an Excel Spreadsheet..

You know that at "match" the impedance looking into the tuner from the antenna is the conjugate of the impedance looking into the antenna from the tuner.

If you assume your transmitter is 50+j0 ohms (not a good assumption.. but you could make it closer to being so by putting a 10dB pad between Tx and tuner, for instance)

Then, you calculate what the impedance the tuner is using the L and C values (I assume it's a series L and a shunt C) ... you'll either have:

TxR plus L, shunted by C
or TxRshunted by C, then series L

A spreadsheet like XLZIZL does it in a flash.

167. Re: Tube and Twin lead Slim Jim

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-04 16:17:45 UTC
From: Jerry <jerrymartes@verizon.net>
Message-ID: <JsSVl.256$tr5.139@nwrddc02.gnilink.net>
Source record: 14928

"Sal M. Onella" <salmonella@food.poisoning.org> wrote in message
news:iDIVl.201$f36.47@newsfe19.iad...
>
> "Jerry" <jerrymartes@verizon.net> wrote in message
> news:yzxVl.25$tr5.0@nwrddc02.gnilink.net...
>>
>
>
> < snip >
>
>
>> I share your thoughts about a pattern range. I recently talked my
> buddy
>> into writing a program that plots Elevation Plane patterns of an antenna
>> when scaled to a frequency sent from any Polar Orbiting Satellite. I
>> use
>> it alot using the 137 MHz beacons sent from NOAA satellites. Some HAM
>> satellites could be used. There are also L-band beacons sent from the
> NOAA
>> satellites.
>
> That's an interesting approach. Thanks.

Hi "Sal"
If you ever get involved with that Pattern Range, Patrik Tast publishes information on his program on the web. Everything Patrik does is *hobby related* and available free. Nothing I do is sophisticated or difficult to reproduce or to improve upon.
I was using Excel to plot the RSSI level before I asked Patrik to make a program to display the signal strength in polar form. I can get actual patterns that Very closely resemble EZNEC plots.

Jerry KD6JDJ

168. Re: Using Tuner to Determine Line Input Impedance

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-04 16:19:42 UTC
From: dykesc <cupstidd@bellsouth.net>
Message-ID: <0dec42e0-48ab-44f0-8c1a-1c9ff52472ea@z7g2000vbh.googlegroups.com>
Source record: 14929

On Jun 4, 2:10 am, Ian Wade G3NRW <g3...@yahoo.co.uk> wrote:

> Is this any help?
>
> http://www.wy2u.com/
>
> Scroll down to "Electrical / Electronic Engineering Links" and click on
> "L/C Impedance Matching Design Tool"
>
> --
> 73
> Ian, G3NRW

Thanks Ian. That is the type of calculator I am looking for. However,
this one requires both source and load impedance as input. I am
looking for one that will allow you to specify the source impedance
(50+j0), fill in the capacitor and inductor values, and then tell you
what the matched load side impedance is.

169. Re: Using Tuner to Determine Line Input Impedance

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-04 16:30:42 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <KLSVl.17626$pr6.10371@flpi149.ffdc.sbc.com>
Source record: 14930

dykesc wrote:
> I am
> looking for one that will allow you to specify the source impedance
> (50+j0), fill in the capacitor and inductor values, and then tell you
> what the matched load side impedance is.

That is a trivial problem. What configuration?
What does the schematic look like?
--
73, Cecil, IEEE, OOTC, http://www.w5dxp.com

170. Re: Using Tuner to Determine Line Input Impedance

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-04 17:06:17 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <7mvf251ce9uop74jh6q61nj7f8evhpmcrg@4ax.com>
Source record: 14932

On Thu, 4 Jun 2009 09:19:42 -0700 (PDT), dykesc
<cupstidd@bellsouth.net> wrote:

>That is the type of calculator I am looking for. However,
>this one requires both source and load impedance as input. I am
>looking for one that will allow you to specify the source impedance
>(50+j0), fill in the capacitor and inductor values, and then tell you
>what the matched load side impedance is.

The source code is at:
http://www.hoflink.com/~mkozma/match19cb.html
which, if you can follow the design and make your own changes, should
be ammenable to your needs.

73's
Richard Clark, KB7QHC

171. hi sos

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-04 17:14:52 UTC
From: discretman16@gmail.com
Message-ID: <98b36dfa-7723-423d-b66f-37bda064c54b@m19g2000yqk.googlegroups.com>
Source record: 14933

hi every body

i want modelize a qudrafilar helix antenna utilizing ANSOFT Designer SV or with matlab but i dont know how create the geometry of the antenna

if someone can help me to do it i'll be thankful

thank you at advance

172. Re: Using Tuner to Determine Line Input Impedance

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-04 17:29:36 UTC
From: Jerry <jerrymartes@verizon.net>
Message-ID: <4wTVl.663$u86.129@nwrddc01.gnilink.net>
Source record: 14934

"dykesc" <cupstidd@bellsouth.net> wrote in message
news:0dec42e0-48ab-44f0-8c1a-1c9ff52472ea@z7g2000vbh.googlegroups.com...
On Jun 4, 2:10 am, Ian Wade G3NRW <g3...@yahoo.co.uk> wrote:

> Is this any help?
>
> http://www.wy2u.com/
>
> Scroll down to "Electrical / Electronic Engineering Links" and click on
> "L/C Impedance Matching Design Tool"
>
> --
> 73
> Ian, G3NRW

Thanks Ian. That is the type of calculator I am looking for. However,
this one requires both source and load impedance as input. I am
looking for one that will allow you to specify the source impedance
(50+j0), fill in the capacitor and inductor values, and then tell you
what the matched load side impedance is.

Hi dykesc

I may be missing something. But, if the objective it to learn if the
local 105 MHz signal is actually introducing error into your impedance
measurement, only a few Smith Chart Polts are needed. You know the path (on
the Chart) the shunt reactance will have taken while being adjusted to make
a "match". You also know the path the series reactance took. Start from
the Chart center and move the impedance along the circles of constant
resistance for the series reactor. Move along the circles of constant
admittance for the shunt reactance. When the Xc and Xl are both known, and
you know which is closest to the "transmitter", it seems that a "program" is
unnecessary. What am I mising?

Jerry KD6JDJ

173. Re: hi sos

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-04 17:57:36 UTC
From: Jerry <jerrymartes@verizon.net>
Message-ID: <kWTVl.265$tr5.121@nwrddc02.gnilink.net>
Source record: 14935

<discretman16@gmail.com> wrote in message
news:98b36dfa-7723-423d-b66f-37bda064c54b@m19g2000yqk.googlegroups.com...
> hi every body
>
> i want modelize a qudrafilar helix antenna utilizing ANSOFT Designer
> SV or with matlab but i dont know how create the geometry of the
> antenna
>
> if someone can help me to do it i'll be thankful
>
> thank you at advance

Hi "disc"

I can model a Quadrafilar helix antenna with EZNEC. Roy has made it easy
to model helix antennas.
I can also offer you an antenna design concept that performs better than a
Quad Helix for an antenna located on Earth and expected to have a
hemispheric coverage with Circular Polarization. Google DCA APT antenna
for satellite reception.

Jerry KD6JDJ

174. Re: Grinding Sound

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-04 17:58:21 UTC
From: "Helmut Wabnig"
Message-ID: <9p2g25h90s1409ipkpb5drlq02j758e6c1@4ax.com>
Source record: 14936

On Thu, 4 Jun 2009 06:58:56 -0700 (PDT), Tommy Grand
<howardj911@yahoo.com> wrote:

>Friends,
>
>I recently purchased a Sangean DT-400W to replace my trusty DT200VX.
>Unfortunately, my new one has an annoying grinding sound that plays in
>the background of whatever I'm listening to. This is particularly
>frustrating when I'm listening to quiet classical music on the local
>FM station. Any idea what this could be, and how I can fix it with
>home tools?
>
>Thanks,
>TG

If I had a hammer.....

w.

175. Re: Using Tuner to Determine Line Input Impedance

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-04 18:47:31 UTC
From: Jim Lux <james.p.lux@jpl.nasa.gov>
Message-ID: <h094s3$6ur$1@news.jpl.nasa.gov>
Source record: 14937

Jerry wrote:
> "dykesc" <cupstidd@bellsouth.net> wrote in message
> news:0dec42e0-48ab-44f0-8c1a-1c9ff52472ea@z7g2000vbh.googlegroups.com...
> On Jun 4, 2:10 am, Ian Wade G3NRW <g3...@yahoo.co.uk> wrote:
>
>> Is this any help?
>>
>> http://www.wy2u.com/
>>
>> Scroll down to "Electrical / Electronic Engineering Links" and click on
>> "L/C Impedance Matching Design Tool"
>>
>> --
>> 73
>> Ian, G3NRW
>
> Thanks Ian. That is the type of calculator I am looking for. However,
> this one requires both source and load impedance as input. I am
> looking for one that will allow you to specify the source impedance
> (50+j0), fill in the capacitor and inductor values, and then tell you
> what the matched load side impedance is.
>
> Hi dykesc
>
> I may be missing something. But, if the objective it to learn if the
> local 105 MHz signal is actually introducing error into your impedance
> measurement, only a few Smith Chart Polts are needed. You know the path (on
> the Chart) the shunt reactance will have taken while being adjusted to make
> a "match". You also know the path the series reactance took. Start from
> the Chart center and move the impedance along the circles of constant
> resistance for the series reactor. Move along the circles of constant
> admittance for the shunt reactance. When the Xc and Xl are both known, and
> you know which is closest to the "transmitter", it seems that a "program" is
> unnecessary. What am I mising?
>

Fine, for doing a couple or three. Now do it for a dozen measurements
at different frequencies, especially if you have to convert L and C into
Z for each measurement. A program or spreadsheet is nice to have,
because it automates the tedious calculation.

Heck, if you have a RS-232 interface to the antenna tuner, you can
automate the whole process. Quod fecit.

By the way, the assumption that the run of the mill ham rig has a 50 ohm resistive output impedance is not necessarily valid. In practice, nobody cares.. they just adjust until the reflected power is minimized. But if you're trying to use the tuner as a measuring instrument (essentially, the variable part of an impedance bridge), it's important.

176. Re: Using Tuner to Determine Line Input Impedance

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-04 19:13:40 UTC
From: dave <dave@dave.dave>
Message-ID: <4a281ce9$0$8676$bd467cd0@news.dslextreme.com>
Source record: 14938

dykesc wrote:
> On Jun 3, 2:17 pm, dave <d...@dave.dave> wrote:
>
>> http://ytdp.ee.wits.ac.za/smithchart.pdf
>>
>> http://www.dxzone.com/cgi-bin/dir/jump2.cgi?ID=8763
>
> I don't run Linux Dave. Is there a Windows version? Meanwhile I am
> going at it manually with a Smith Chart. At multiple frequencies this
> will take some time.
>
> Dykes AD5VS
>

RF Cafe has one that uses Excel. www.rfcafe.com

177. Re: Grinding Sound

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-04 19:17:37 UTC
From: dave <dave@dave.dave>
Message-ID: <4a281dd7$0$8676$bd467cd0@news.dslextreme.com>
Source record: 14939

Helmut Wabnig wrote:
> On Thu, 4 Jun 2009 06:58:56 -0700 (PDT), Tommy Grand
> <howardj911@yahoo.com> wrote:
>
>> Friends,
>>
>> I recently purchased a Sangean DT-400W to replace my trusty DT200VX.
>> Unfortunately, my new one has an annoying grinding sound that plays in
>> the background of whatever I'm listening to. This is particularly
>> frustrating when I'm listening to quiet classical music on the local
>> FM station. Any idea what this could be, and how I can fix it with
>> home tools?
>>
>> Thanks,
>> TG
>
> If I had a hammer.....
>
> w.

It's often the LCD display.

178. Re: Using Tuner to Determine Line Input Impedance

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-04 19:18:37 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <sh6g251193k26coe70tc6pfhlqsc931iig@4ax.com>
Source record: 14941

On Thu, 04 Jun 2009 11:47:31 -0700, Jim Lux <james.p.lux@jpl.nasa.gov>
wrote:

>By the way, the assumption that the run of the mill ham rig has a 50 ohm
>resistive output impedance is not necessarily valid.

By the way, this comment above is another assumption in that it lacks
a quantifiable. I find it offered quite often as a negative assertion
to which the several many posters who offer them never provide an
actual value to prove what the run of the mill ham rig is, much less
is "not." Rarer, indeed, is any effort put forward by those posters
to show they have attempted to quantify their own equipment.

As there are posters here who have performed this work, shown their
data, and such data follows conventional design considerations (which
is easily revealed within the page cited at http://www.wy2u.com/);
then these assumptions dressed in denial are rather unprofound proofs.
As this topic has been visited many times, and as it quickly descends
into equally unsupported claims (although often annotated with vague
references and citations that are quickly demolished); I doubt
anything said here is going to sway those assumptions.

As an amusing exercise (I anticipate none will tread down this path),
the page at http://www.wy2u.com/ offers a means to test your own rig's
Source Z - if, in fact, you can cope with translating your tuner's
settings into picofarads and nanohenries, and if you can obtain a
known mismatch. These impediments are Herculean to most,
unfortunately.

73's
Richard Clark, KB7QHC

179. Cheap Gucci Jordan Sneakers (www.hiphopurbanclothes.com), Chloe Purses

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-04 19:20:50 UTC
From: hiphop102@126.com
Message-ID: <0facc06e-de47-47b2-b342-10d7b5b27ba6@y9g2000yqg.googlegroups.com>
Source record: 14940

(www.hiphopurbanclothes.com) Cheap Prada Sneakers, Shoes
(www.hiphopurbanclothes.com) Cheap Gucci Shoes, Sneakers
(www.hiphopurbanclothes.com) Cheap Christian Louboutin Women Shoes, Sneakers
(www.hiphopurbanclothes.com) Cheap Nike Max 5K Women Shoes
(www.hiphopurbanclothes.com) Discount Jordan True Flight Shoes, Jordan Sneakers
(www.hiphopurbanclothes.com) Discount ED Hardy Men Shoes
(www.hiphopurbanclothes.com) Discount Lacoste Shoes, Trainers
(www.hiphopurbanclothes.com) Discount Hogan Shoes, Sneakers

(www.hiphopurbanclothes.com) Cheap ED hardy Lady Purse, Bags
(www.hiphopurbanclothes.com) Cheap Chloe Handbags, Women Purse
(www.hiphopurbanclothes.com) Cheap Versace Purse, Bags
(www.hiphopurbanclothes.com) Cheap Dior Wallets, Handbags
(www.hiphopurbanclothes.com) Wholesale Gucci Women Handbags, Bags
(www.hiphopurbanclothes.com) Wholesale Chanel Lady Purse, Handbags
(www.hiphopurbanclothes.com) Wholesale Louis Vuitton Handbags For Men
(www.hiphopurbanclothes.com) Wholesale Burberry Handbags, Purse

180. Re: Using Tuner to Determine Line Input Impedance

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-04 19:53:41 UTC
From: Jerry <jerrymartes@verizon.net>
Message-ID: <9DVVl.274$tr5.251@nwrddc02.gnilink.net>
Source record: 14942

"Jim Lux" <james.p.lux@jpl.nasa.gov> wrote in message
news:h094s3$6ur$1@news.jpl.nasa.gov...
> Jerry wrote:
>> "dykesc" <cupstidd@bellsouth.net> wrote in message
>> news:0dec42e0-48ab-44f0-8c1a-1c9ff52472ea@z7g2000vbh.googlegroups.com...
>> On Jun 4, 2:10 am, Ian Wade G3NRW <g3...@yahoo.co.uk> wrote:
>>
>>> Is this any help?
>>>
>>> http://www.wy2u.com/
>>>
>>> Scroll down to "Electrical / Electronic Engineering Links" and click on
>>> "L/C Impedance Matching Design Tool"
>>>
>>> --
>>> 73
>>> Ian, G3NRW
>>
>> Thanks Ian. That is the type of calculator I am looking for. However,
>> this one requires both source and load impedance as input. I am
>> looking for one that will allow you to specify the source impedance
>> (50+j0), fill in the capacitor and inductor values, and then tell you
>> what the matched load side impedance is.
>>
>> Hi dykesc
>>
>> I may be missing something. But, if the objective it to learn if the
>> local 105 MHz signal is actually introducing error into your impedance
>> measurement, only a few Smith Chart Polts are needed. You know the path
>> (on the Chart) the shunt reactance will have taken while being adjusted
>> to make a "match". You also know the path the series reactance took.
>> Start from the Chart center and move the impedance along the circles of
>> constant resistance for the series reactor. Move along the circles of
>> constant admittance for the shunt reactance. When the Xc and Xl are
>> both known, and you know which is closest to the "transmitter", it seems
>> that a "program" is unnecessary. What am I mising?
>>
>
> Fine, for doing a couple or three. Now do it for a dozen measurements at
> different frequencies, especially if you have to convert L and C into Z
> for each measurement. A program or spreadsheet is nice to have, because it
> automates the tedious calculation.
>
> Heck, if you have a RS-232 interface to the antenna tuner, you can

> automate the whole process. Quod fecit.
>
> By the way, the assumption that the run of the mill ham rig has a 50 ohm
> resistive output impedance is not necessarily valid. In practice, nobody
> cares.. they just adjust until the reflected power is minimized. But if
> you're trying to use the tuner as a measuring instrument (essentially, the
> variable part of an impedance bridge), it's important.

Hi Jim

As you can see, this plan to 'double check" antenna impedance by relating the impedance to that which the tuner produces, is very limited in its accuracy. One might say *why bother*. My thought was/is, the original poster asked for an online calculator. When that calculator was given, and he still asked for more, I thought it would be helpful to point out how easy it is to use the Smith Chart to get some insight into evaluating his impedance meter. It is my opinion that extensive calculations with a computer program are not able to provide any exact answer to the question about actual antenna impedance when only the tuner Xl and Xc are known. The Smith Chart is a great tool for estimating how impedance matching can be realized. I assummed that the OP could possibly benefit from knowing how easy it is to estimate antenna impedance using the Smith Chart if it can be assummed that the LC circuit is known and that the resultant impedance is 50 ohms. Shunt reactances move the impedance along the circles of constant 1/R and series reactances along the circles of constant R.

Jerry KD6JDJ

181. Re: Using Tuner to Determine Line Input Impedance

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-04 21:33:41 UTC
From: Owen Duffy <none@no.where>
Message-ID: <Xns9C214CEB81E28nonenowhere@61.9.191.5>
Source record: 14943

dykesc <cupstidd@bellsouth.net> wrote in news:0dec42e0-48ab-44f0-8c1a-1c9ff52472ea@z7g2000vbh.googlegroups.com:

...
> this one requires both source and load impedance as input. I am
> looking for one that will allow you to specify the source impedance
> (50+j0), fill in the capacitor and inductor values, and then tell you
> what the matched load side impedance is.

You want to specify the ATU input impedance which is independent of the source, not the source impedance (which you don't know or care about). Hams often confuse the source impedance of a transmitter and its required load impedance.

Do you intend treating the ATU as a simple two or three component network using ideal components (no loss, no stray capacitance)? Will that approach give accuracy either adequate or comparable with the many other techniques used?

I have thought about this in the past, mainly the prospect of a relay switched autotuner that reported a calculated load Z based on the found matching solution, but I concluded that it was not likely to be of reasonable accuracy over the tuner range.

If you want to measure Z using an instrument based on a broadband detector, you need to use sufficient power that the broadband detector is dominated by the test signal. There is at least one instrument for the ham market that purports to make such measurements at normal transmitter power. IIRC, R&S used make a commercial product, but it wouldn't have come cheap.

There is at least one other low level antenna analyser that represents that it is less affected by interference than the '259B.

If I were looking for an instrument, I would desire one that could refer the measurements to a point closer to the antenna (eg the feedpoint) given the characteristics of the transmission line between the measurement point and the desired reference plane.

VNAs will peform this calculation, but most low cost VNAs use a broadband detector and low power, so they are susceptible to interference when used on antenna systems.

Owen

182. Re: Hexbeam Antenna Modeling

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-04 21:45:49 UTC
From: Mike Lucas <w5chr@bellsouth.net>
Message-ID: <1dXVl.50716$b9.20778@bignews6.bellsouth.net>
Source record: 14944

"J.B. Wood" <john.wood@nrl.navy.mil> wrote :
> Thanks for the reply, Steve. As for exaggerated claims, I'd have to give
> the award to the designers of (and explainers of the "theory" behind) the
> Crossed-Field Antenna (CFA). (Of course the CFA has been the subject of
> numerous antenneX articles but I'm not placing yours in that group!) 73s,

I guess that you haven't seen info provided by Art on his shoe-box
sized 160M thru whatever antenna that has +9 db gain, and a pencil-thin beam
of radiated particles. Art's technical expertise beats the crap out of the
CFA
guys, as HE (Art) improves on Maxwell's and Gauss' equations, too. And all
of this from a retired mechanical engineer, working in his backyard!

Mike W5CHR
Memphis

183. Re: Using Tuner to Determine Line Input Impedance

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-04 21:56:13 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <5ufg2591vvl1s47km67daa1liuvtc63rrb@4ax.com>
Source record: 14945

On Thu, 04 Jun 2009 21:33:41 GMT, Owen Duffy <none@no.where> wrote:

>Hams often confuse the source impedance of a transmitter and its required
>load impedance.

sigh....

184. Re: Sun Spots

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-04 22:54:18 UTC
From: Dave <noone@nowhere.com>
Message-ID: <ugYVl.294$tr5.121@nwrddc02.gnilink.net>
Source record: 14946

```
"Szczepan Bialek" <sz.bialek@wp.pl> wrote in message
news:h07n6h$1br$1@node1.news.atman.pl...
>
> "Dave" <noone@nowhere.com> wrote
> news:u7DVl.524$u86.66@nwrddc01.gnilink.net...
>>
>> "Szczepan Bialek" <sz.bialek@wp.pl> wrote in message
>> news:h052vr$kha$1@node1.news.atman.pl...
>>>
>>> "Dave" <noone@nowhere.com> wrote
>>> news:4giVl.406$u86.356@nwrddc01.gnilink.net...
>>>>
>>>> "Szczepan Bialek" <sz.bialek@wp.pl> wrote in message
>>>> news:h02esm$3rc$1@node1.news.atman.pl...
>>>>>
>>>>> The only reason for Maxwell model is the light polarisation. In his
>>>>> era the polarisation was explained with transverse waves. Now we know
>>>>> (from Clark) that the apparatus is polarised not waves.
>>>>> Regards,
>>>>> S*
>>>>>
>>>> i knew getting you and art together would be interesting... good for a
>>>> whole evening full of laughs! the waves must be polarized to interact
>>>> as observed with polarized antennas.
>>>
>>> But here are the two possibilities.
>>> 1. The dipole radiates the transverse wave from centre,
>>> 2. The dipole radiate the two COUPLED longitudinal waves from the two
>>> ends.
>>>
>>> In the both cases the antennas (emitting and receiving) must be
>>> parallel.
>>> Which place radiate the radio waves?
>>> S*
>>
>> the whole antenna radiates.
>
> But what radiate? Magnetic whirls or pressure-like electric wave?
> S*
magnets don't whirl and 'electric waves' are not like pressure... they
magnetic and electric field vectors are at right angles to each other and
the direction of propagation... both the electric and magnetic components
are needed for propagation... you can't have one without the other.
```

185. Re: Sun Spots

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-04 22:55:38 UTC
From: Dave <noone@nowhere.com>
Message-ID: <KhYVl.296$tr5.117@nwrddc02.gnilink.net>
Source record: 14947

```
"Szczepan Bialek" <sz.bialek@wp.pl> wrote in message
news:h07mgn$18v$1@node1.news.atman.pl...
>
> "Dave" <noone@nowhere.com> wrote
> news:66DVl.522$u86.160@nwrddc01.gnilink.net...
>>
>> "Szczepan Bialek" <sz.bialek@wp.pl> wrote in message
>> news:h0555o$ktq$1@node1.news.atman.pl...
>>>
>>> "Dave Platt" <dplatt@radagast.org> wrote
>>> news:ccdgf6-noo.ln1@radagast.org...
>>>> In article <h03hc0$ceq$1@node1.news.atman.pl>,
>>>> Szczepan Biaï¿½ek <sz.bialek@wp.pl> wrote:
>>>>
>>>>>The TRANSVERSAL magnetic disturbances have beautifull math. The most
>>>>>beauty
>>>>>math element is the displacement current.
>>>>>
>>>>>But the magnetic disturbances are creates by AC CURRENT (not voltage).
>>>>>
>>>>>So if the radio waves are emitted from the current zone of antenna
>>>>>Maxwell
>>>>>is right. If from ends - not.
>>>>>
>>>>>Maxwell admired Ampere. But each genius works out his own theories. We
>>>>>can
>>>>>choose between them.
>>>>
>>>> So, the obvious thing for you to do (as the proponent of an
>>>> alternative, nontraditional theory) is to devise an experiment which
>>>> can distinguish between these two cases.
>>>
>>> The traditional theory is the acoustic theory. The nontraditional theory
>>> is the Maxwell model.
>>
>> only if you are still living in the 1800's.
>
> Exactly in 1638:
>
> "1638 - Rene Descartes theorizes that light is a pressure wave through the
> second of his three types of matter of which the universe is made. He
> invents properties of this fluid that make it possible to calculate the
> reflection and refraction of light. The ``modern'' notion of the aether is
> born. " From: http://maxwell.byu.edu/~spencerr/phys442/node4.html
```

>
> The next:
>
> "1717 - Newton shows that the ``two-ness'' of double refraction clearly
> rules out light being aether waves. (All aether wave theories were
> sound-like, so Newton was right; longitudinal waves can't be polarized.) "
>
> In the History you find how many people analysed the issue: longitudinal
> vs. transversal. In 1905 all stop.
> But after 1905 peole build antennas. And they do not worry what the
> radiation is like.
> Sunner or later the issue appears again.
> S*

only when time travelers bring back scientists from the 1800's... or people
like you try to reinvent the discarded theories of old.

186. Re: Sun Spots

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-04 23:35:54 UTC
From: Tom Donaly <dtdonaly@sbcglobal.net>
Message-ID: <HTYVl.18174$jZ1.7038@flpi144.ffdc.sbc.com>
Source record: 14948

```
Dave wrote:
>
> "Szczepan Bialek" <sz.bialek@wp.pl> wrote in message
> news:h07n6h$1br$1@node1.news.atman.pl...
>>
>> "Dave" <noone@nowhere.com> wrote
>> news:u7DVl.524$u86.66@nwrddc01.gnilink.net...
>>>
>>> "Szczepan Bialek" <sz.bialek@wp.pl> wrote in message
>>> news:h052vr$kha$1@node1.news.atman.pl...
>>>>
>>>> "Dave" <noone@nowhere.com> wrote
>>>> news:4giVl.406$u86.356@nwrddc01.gnilink.net...
>>>>>
>>>>> "Szczepan Bialek" <sz.bialek@wp.pl> wrote in message
>>>>> news:h02esm$3rc$1@node1.news.atman.pl...
>>>>>>
>>>>>> The only reason for Maxwell model is the light polarisation. In
>>>>>> his era the polarisation was explained with transverse waves. Now
>>>>>> we know (from Clark) that the apparatus is polarised not waves.
>>>>>> Regards,
>>>>>> S*
>>>>>>
>>>>> i knew getting you and art together would be interesting... good
>>>>> for a whole evening full of laughs! the waves must be polarized to
>>>>> interact as observed with polarized antennas.
>>>>
>>>> But here are the two possibilities.
>>>> 1. The dipole radiates the transverse wave from centre,
>>>> 2. The dipole radiate the two COUPLED longitudinal waves from the
>>>> two ends.
>>>>
>>>> In the both cases the antennas (emitting and receiving) must be
>>>> parallel.
>>>> Which place radiate the radio waves?
>>>> S*
>>>
>>> the whole antenna radiates.
>>
>> But what radiate? Magnetic whirls or pressure-like electric wave?
>> S*
> magnets don't whirl and 'electric waves' are not like pressure... they
> magnetic and electric field vectors are at right angles to each other
> and the direction of propagation... both the electric and magnetic
```

> components are needed for propagation... you can't have one without the
> other.

It's hard to tell, but he's probably referring to the curl of a
magnetic field which he obviously doesn't understand. The idea of
a "pressure-like electric wave" is pure fantasy.
73,
Tom Donaly, KA6RUH

187. Re: Using Tuner to Determine Line Input Impedance

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-05 00:24:33 UTC
From: K7ITM <k7itm@msn.com>
Message-ID: <f2698389-644b-437c-8a2d-5bfbb66b8631@h28g2000yqd.googlegroups.com>
Source record: 14949

On Jun 3, 10:57 am, dykesc <cupst...@bellsouth.net> wrote:
> I am trying to validate impedance values I am measuring with my
> MFJ-259B. I want to do this by using my MFJ-993B auto tuner. The tuner
> uses a simple L network to create the conjugate match. I want to take
> the final inductance, capacitance and swr values from the auto tuner
> digital display after matching is completed and back calculate the
> impedance that the tuner is seeing. Is there an online calculator that
> will do this?
>
> Many thanks for replys.

In a quick scan of the replies, one thing I didn't see mentioned is that if the indicated SWR is not 1:1, then there's an uncertainty in your answer. For example, a 1.1:1 indicated SWR, taken with a meter calibrated accurately to 50 ohms, could represent 55 ohms or 45.5 ohms, or any other impedance with the same magnitude of reflection coefficient relative to 50 ohms. If you start at 55 ohms, you'll get a different answer for a particular L and C than if you start at 45.5 ohms. Of course, each of those will be different than the answers for other phase angles of the same reflection coefficient. You can get rid of that particular uncertainty by adjusting to 1:1 SWR. Of course, you're still left with other uncertainties, but since you have control over that particular one (presumably), at least get rid of it.

I'd use WinSmith to do the calc you mention, or hack a simple spreadsheet if I had several to do, or put the values into Matlab or Scilab.

Cheers,
Tom

188. Re: Hexbeam Antenna Modeling

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-05 02:30:29 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <abCdnYJCxq7bHrXXnZ2dnUVZ_q6dnZ2d@giganews.com>
Source record: 14950

J.B. Wood wrote:
>
> Thanks for the reply, Steve. As for exaggerated claims, I'd have to
> give the award to the designers of (and explainers of the "theory"
> behind) the Crossed-Field Antenna (CFA). (Of course the CFA has been
> the subject of numerous antenneX articles but I'm not placing yours in
> that group!) 73s,

Here's my candidate for the award, embodied in a U.S. patent:
http://tinyurl.com/h546u

Roy Lewallen, W7EL

189. Re: Using Tuner to Determine Line Input Impedance

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-05 03:45:26 UTC
From: dykesc <cupstidd@bellsouth.net>
Message-ID: <d067082b-5f55-48ce-95a9-bbb5c8099f6c@l12g2000yqo.googlegroups.com>
Source record: 14851

On Jun 4, 12:06 pm, Richard Clark <kb7...@comcast.net> wrote:

> The source code is at:http://www.hoflink.com/~mkozma/match19cb.html
> which, if you can follow the design and make your own changes, should
> be ammenable to your needs.
>
> 73's
> Richard Clark, KB7QHC

Thanks Richard. I found the source code. I have done a little
programing long ago, but modifying the code there would be a little
much for me I'm afraid.

73
Dykes AD5VS

190. Re: Using Tuner to Determine Line Input Impedance

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-05 03:52:51 UTC
From: dykesc <cupstidd@bellsouth.net>
Message-ID: <3c298d5d-23fa-48f1-bee0-3eba1e7a5124@b9g2000yqm.googlegroups.com>
Source record: 14852

On Jun 4, 12:29 pm, "Jerry" <jerrymar...@verizon.net> wrote:
>
> I may be missing something. But, if the objective it to learn if the
> local 105 MHz signal is actually introducing error into your impedance
> measurement, only a few Smith Chart Polts are needed. You know the path (on
> the Chart) the shunt reactance will have taken while being adjusted to make
> a "match". You also know the path the series reactance took. Start from
> the Chart center and move the impedance along the circles of constant
> resistance for the series reactor. Move along the circles of constant
> admittance for the shunt reactance. When the Xc and Xl are both known, and
> you know which is closest to the "transmitter", it seems that a "program" is
> unnecessary. What am I mising?
>
> Jerry KD6JDJ

Thanks Jerry. No you aren't missing anything other than the fact that
my familiarity with Smith Chart analysis is limited to working through
a few exercises in the last chapter of the ARRL Antenna book. I will
be looking for more Smith Chart tutorial info on the web and am
certain I can get myself up to speed enough to start working with
conductance, suseptance, admittance, etc.

Thanks again. From your post it appears it will be a straight forward
exercise once I get my head around it.

73
Dykes AD5VS

191. Re: Using Tuner to Determine Line Input Impedance

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-05 03:53:55 UTC
From: dykesc <cupstidd@bellsouth.net>
Message-ID: <09ebe94a-d52a-411e-9f13-a405b7369104@y17g2000yqn.googlegroups.com>
Source record: 14853

On Jun 4, 2:13 pm, dave <d...@dave.dave> wrote:

> RF Cafe has one that uses Excel. www.rfcafe.com

Thanks Dave. I just downloaded it.

192. Re: Using Tuner to Determine Line Input Impedance

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-05 04:11:49 UTC
From: dykesc <cupstidd@bellsouth.net>
Message-ID: <ba42ee61-92e9-47cf-8da8-cf00f1f06491@f19g2000yqh.googlegroups.com>
Source record: 14854

On Jun 4, 4:33 pm, Owen Duffy <n...@no.where> wrote:

> I have thought about this in the past, mainly the prospect of a relay
> switched autotuner that reported a calculated load Z based on the found
> matching solution, but I concluded that it was not likely to be of
> reasonable accuracy over the tuner range.

Probably would be as accurate as any other gear we can afford Owen.
I'm going to suggest that MFJ make that a feature on an auto tuner. I
don't live to far from their headquarters in Starkville, MS. I have a
son going to Mississipi State there and have never been to their
facility. This will make a good topic of conversation.

> There is at least one instrument for the
> ham market that purports to make such measurements at normal transmitter
> power. IIRC, R&S used make a commercial product, but it wouldn't have
> come cheap.

I looked on the R&S site. The only thing I found was a "Field Fox"
analyzer selling for $7,599.00. It is the cat's meow, but guess I'll
have to stick with my 259B.

> There is at least one other low level antenna analyser that represents
> that it is less affected by interference than the '259B.

Which one Owen.

> If I were looking for an instrument, I would desire one that could refer
> the measurements to a point closer to the antenna (eg the feedpoint)
> given the characteristics of the transmission line between the
> measurement point and the desired reference plane.

Now that would be a great feature. Input your line type and physical
length and the analyzer does the transform. Lots of programs available
on the web for that, but would be nice to have at your fingertips.

> VNAs will peform this calculation, but most low cost VNAs use a broadband
> detector and low power, so they are susceptible to interference when used
> on antenna systems.

That has become very obvious to me.

193. Re: Using Tuner to Determine Line Input Impedance

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-05 04:16:37 UTC
From: dykesc <cupstidd@bellsouth.net>
Message-ID: <73e8acea-bba5-465a-b8e5-76877f07cd6b@x5g2000yqk.googlegroups.com>
Source record: 14855

On Jun 4, 7:24 pm, K7ITM <k7...@msn.com> wrote:

> > In a quick scan of the replies, one thing I didn't see mentioned is
> that if the indicated SWR is not 1:1, then there's an uncertainty in
> your answer. For example, a 1.1:1 indicated SWR, taken with a meter
> calibrated accurately to 50 ohms, could represent 55 ohms or 45.5
> ohms, or any other impedance with the same magnitude of reflection
> coefficient relative to 50 ohms. If you start at 55 ohms, you'll get
> a different answer for a particular L and C than if you start at 45.5
> ohms. Of course, each of those will be different than the answers for
> other phase angles of the same reflection coefficient. You can get
> rid of that particular uncertainty by adjusting to 1:1 SWR. Of
> course, you're still left with other uncertainties, but since you have
> control over that particular one (presumably), at least get rid of it.

Yes, I thought about that Tom. The premise of my undertaking is that I
can achieve a 1:1 match. At times I'll bet my tuner won't make it.

> I'd use WinSmith to do the calc you mention, or hack a simple
> spreadsheet if I had several to do, or put the values into Matlab or
> Scilab.

I'll check them out.

Thanks for taking the time to help me out.

73

Dykes AD5VS

194. Re: Using Tuner to Determine Line Input Impedance

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-05 04:44:49 UTC
From: Dale Parfitt <parinc1@verizon.net>
Message-ID: <5p1WI.759$u86.343@nwrddc01.gnilink.net>
Source record: 14856

"dykesc" <cupstidd@bellsouth.net> wrote in message
news:ba42ee61-92e9-47cf-8da8-cf00f1f06491@f19g2000yqh.googlegroups.com...
On Jun 4, 4:33 pm, Owen Duffy <n...@no.where> wrote:

> I have thought about this in the past, mainly the prospect of a relay
> switched autotuner that reported a calculated load Z based on the found
> matching solution, but I concluded that it was not likely to be of
> reasonable accuracy over the tuner range.

Probably would be as accurate as any other gear we can afford Owen.
I'm going to suggest that MFJ make that a feature on an auto tuner. I
don't live to far from their headquarters in Starkville, MS. I have a
son going to Mississipi State there and have never been to their
facility. This will make a good topic of conversation.

Unless they can find someone elses to copy, it won't happen.

Dale W4OP

195. Re: Using Tuner to Determine Line Input Impedance

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-05 04:53:53 UTC
From: dykesc <cupstidd@bellsouth.net>
Message-ID: <9980b208-960f-438a-9369-be20ae9416be@z14g2000yqa.googlegroups.com>
Source record: 14857

On Jun 4, 11:30 am, Cecil Moore <nos...@w5dxp.com> wrote:

> That is a trivial problem. What configuration?
> What does the schematic look like?

The auto tuner is a simple LC network (series inductor, shunt capacitor) Cecil. It reports the inductor and capacitor values and the side of the network the shunt capacitor is on (transmitter or antenna). Of course it reports final SWR as well.

For instance, at 28.7Mhz it matched with an inductor value of 0.17 microhenries and 0 pF at an SWR of 1.0 (1:1).

My MFJ-259B reported 25-j11 at 28.7 Mhz which obviously is not in agreement with the auto

Thanks Cecil

Dykes AD5VS

196. Re: Using Tuner to Determine Line Input Impedance

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-05 05:00:48 UTC
From: dykesc <cupstidd@bellsouth.net>
Message-ID: <263b1bc4-8e99-47c6-8c81-e6a07a9a3f03@q16g2000yqg.googlegroups.com>
Source record: 14858

On Jun 4, 11:09 am, Jim Lux <james.p....@jpl.nasa.gov> wrote:

> you can do it with an Excel Spreadsheet..

> A spreadsheet like XLZIZL does it in a flash.

Thanks Jim. I found and downloaded XLZIZL

73
Dykes AD5VS

197. Re: Using Tuner to Determine Line Input Impedance

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-05 05:05:00 UTC
From: jimlux@earthlink.net
Message-ID: <eb978b9f-6f04-4039-a7dd-40f7c68493d6@h2g2000yqg.googlegroups.com>
Source record: 14859

On Jun 4, 12:18 pm, Richard Clark <kb7...@comcast.net> wrote:
> On Thu, 04 Jun 2009 11:47:31 -0700, Jim Lux <james.p....@jpl.nasa.gov>
> wrote:
>
> >By the way, the assumption that the run of the mill ham rig has a 50 ohm
> >resistive output impedance is not necessarily valid.
>
> By the way, this comment above is another assumption in that it lacks
> a quantifiable. I find it offered quite often as a negative assertion
> to which the several many posters who offer them never provide an
> actual value to prove what the run of the mill ham rig is, much less
> is "not."

Actually, I did a casual search for such data, but couldn't find any
for the "run of the mill" solidstate 100W ham rig . There is a fair
amount of data for one tube rig or another). There is some data in
the Moto Ap notes by Granberg, etc, that's reasonably representative,
but it doesn't include the effect of the inevitable LPF on the output.

So, looking at things with which I have practical experience and
measurements.. MMIC amps tend to be be pretty flat over octave
bandwidths, but I don't think they're representative of ham rigs with
either FET or Bipolar output stages (which have to cover multiple
octaves, in any case). Hot microwave FET amps have output impedances
that are anything but 50 ohms, and designing the output networks keeps
lots of RF engineers employed, especially over temperature and device
parameter variation.

I'd love to see some real data for ham rigs.

 Rarer, indeed, is any effort put forward by those posters
> to show they have attempted to quantify their own equipment.

Perhaps that's because this is, after all, "rec. radio", as in, nobody
is paying people to comment here, and unless you have a particular
need to know the output Z, it's not worth it to spend the time to
measure it. As previously commented, either you're in the "no tuner"
category, and you tolerate whatever mismatch there is on both ends of
the transmission line, or you have a tuner, and you tune for "best
match", with whatever the output Z is.

For all we know, the folks that complain about not getting a good
match on a Brand X antenna, when everyone else does, have a rig with a
bad match on the output.

>
> As there are posters here who have performed this work, shown their
> data, and such data follows conventional design considerations (which
> is easily revealed within the page cited athttp://www.wy2u.com/);

Indeed? I'd love to see the data.

> then these assumptions dressed in denial are rather unprofound proofs.
> As this topic has been visited many times, and as it quickly descends
> into equally unsupported claims (although often annotated with vague
> references and citations that are quickly demolished); I doubt
> anything said here is going to sway those assumptions.
>

My original contention is that if you're going to measure Antenna Z by
using an autotuner and seeing where it tunes, one of the underlying
assumptions is that the other side of the tuner is 50 ohms.

In reality, having actually done this (e.g. use LDG AT200PC tuners to
measure the mutual impedance matrix of an array), I think the
resolution/step size of the tuner is a bigger problem with the
technique. Given the availability of low cost VNAs for the ham
market, that's a MUCH better solution to measuring antenna impedances.

> As an amusing exercise (I anticipate none will tread down this path),
> the page athttp://www.wy2u.com/offers a means to test your own rig's
> Source Z - if, in fact, you can cope with translating your tuner's
> settings into picofarads and nanohenries, and if you can obtain a
> known mismatch. These impediments are Herculean to most,
> unfortunately.

Looking at that page, I don't see an obvious link.

Measuring the output Z of the transmitter would be an interesting
exercise.. for microwave circuits, one uses a load-pull setup..

The challenge is, of course, that the amplifier is an active device,
so the output Z probably changes depending on the load. It's not like
an antenna, where the feedpoint Z at a given frequency is pretty much
constant, regardless of the incident power.

>
> 73's
> Richard Clark, KB7QHC

198. Re: Using Tuner to Determine Line Input Impedance

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-05 05:30:37 UTC
From: Owen Duffy <none@no.where>
Message-ID: <Xns9C219DC7945C7nonenowhere@61.9.191.5>
Source record: 14860

dykesc <cupstidd@bellsouth.net> wrote in
news:ba42ee61-92e9-47cf-8da8-cf00f1f06491@f19g2000yqh.googlegroups.com:

> On Jun 4, 4:33 pm, Owen Duffy <n...@no.where> wrote:
>
>> I have thought about this in the past, mainly the prospect of a relay
>> switched autotuner that reported a calculated load Z based on the
>> found matching solution, but I concluded that it was not likely to be
>> of reasonable accuracy over the tuner range.
>
> Probably would be as accurate as any other gear we can afford Owen.

I doubt it. Again it relates to the loss characterisation of the
components. If you could do that, the device could also calculate its own
efficiency... now that would be a feature that would kill the market!!!

> I'm going to suggest that MFJ make that a feature on an auto tuner. I

See above.

...
>
>> There is at least one instrument for the
>> ham market that purports to make such measurements at normal
>> transmitter power. IIRC, R&S used make a commercial product, but it
>> wouldn't have come cheap.
>
> I looked on the R&S site. The only thing I found was a "Field Fox"
> analyzer selling for $7,599.00. It is the cat's meow, but guess I'll
> have to stick with my 259B.

http://www.telepostinc.com/ for a ham instrument (LP-100).

>
>
>> There is at least one other low level antenna analyser that
>> represents that it is less affected by interference than the '259B.
>
> Which one Owen.
>

http://w5big.com/ AIM4170.

The operative word in my statement was "represents". As to whether it is
actually better, and whether it is adequate, you will need to depend on
owners. The badging of the instrument as AS doesn't add value for me.

Problem is that many of the people using these things see them as a magic bullet and don't actually understand transmission line fundamentals, which questions their opinion of the performance of the instrument.

>
> That has become very obvious to me.

We haven't dispensed with the need for a good reflectometer in capable hands, or is it just that we haven't dispensed with the need for capable hands?

BTW, for referring measurements at one place to another, TLLC at http://www.vk1od.net/calc/tl/tllc.php may be of interest. It would be a challenge to incorporate those calcs in a small 8 bit microcontroller, their capacity and performance on logs, hyperbolic cosines, etc is the issue. Probably why most of the tools that do this, use a client on a PC to do the calcs and presentation.

Owen

199. Re: Using Tuner to Determine Line Input Impedance

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-05 06:16:38 UTC
From: Jerry <jerrymartes@verizon.net>
Message-ID: <aL2WI.762$u86.18@nwrddc01.gnilink.net>
Source record: 14861

"dykesc" <cupstidd@bellsouth.net> wrote in message
news:3c298d5d-23fa-48f1-bee0-3eba1e7a5124@b9g2000yqm.googlegroups.com...
On Jun 4, 12:29 pm, "Jerry" <jerrymar...@verizon.net> wrote:
>
> I may be missing something. But, if the objective it to learn if the
> local 105 MHz signal is actually introducing error into your impedance
> measurement, only a few Smith Chart Polts are needed. You know the path
> (on
> the Chart) the shunt reactance will have taken while being adjusted to
> make
> a "match". You also know the path the series reactance took. Start from
> the Chart center and move the impedance along the circles of constant
> resistance for the series reactor. Move along the circles of constant
> admittance for the shunt reactance. When the Xc and Xl are both known, and
> you know which is closest to the "transmitter", it seems that a "program"
> is
> unnecessary. What am I mising?
>
> Jerry KD6JDJ

Thanks Jerry. No you aren't missing anything other than the fact that
my familiarity with Smith Chart analysis is limited to working through
a few exercises in the last chapter of the ARRL Antenna book. I will
be looking for more Smith Chart tutorial info on the web and am
certain I can get myself up to speed enough to start working with
conductance, suseptance, admittance, etc.

Thanks again. From your post it appears it will be a straight forward
exercise once I get my head around it.

73
Dykes AD5VS

Hi Dykes

As you may already know, the Smith Chart is simply a plot that shows *all*
impedances with a real resistance. Smith displays the impedances so the
user can quickly see how any given impedance can be adjusted by adding any
series or parallel resistances and/or reactances. Series inductance moves
the impedance "upward" along the circles of constant Resistance. Shunt
inductance will move an impedance along the circles of constant conductance.

Jerry KD6JDJ

200. Re: Tube and Twin lead Slim Jim

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-05 06:23:04 UTC
From: "Sal M. Onella" <salmonella@food.poisoning.org>
Message-ID: <dR2Wl.423$f36.27@newsfe19.iad>
Source record: 14862

"Jerry" <jerrymartes@verizon.net> wrote in message
news:JsSVl.256$tr5.139@nwrddc02.gnilink.net...
>
> "Sal M. Onella" <salmonella@food.poisoning.org> wrote in message
> news:iDIVl.201$f36.47@newsfe19.iad...
> >
> > "Jerry" <jerrymartes@verizon.net> wrote in message
> > news:yzxVl.25$tr5.0@nwrddc02.gnilink.net...
> >>
> >
> >
> > < snip >
> >
> >
> >> I share your thoughts about a pattern range. I recently talked my
> > buddy
> >> into writing a program that plots Elevation Plane patterns of an
antenna
> >> when scaled to a frequency sent from any Polar Orbiting Satellite. I
> >> use
> >> it alot using the 137 MHz beacons sent from NOAA satellites. Some HAM
> >> satellites could be used. There are also L-band beacons sent from the
> > NOAA
> >> satellites.
> >
> > That's an interesting approach. Thanks.
>
> Hi "Sal"
> If you ever get involved with that Pattern Range, Patrik Tast publishes
> information on his program on the web. Everything Patrik does is *hobby
> related* and available free. Nothing I do is sophisticated or difficult
to
> reproduce or to improve upon.
> I was using Excel to plot the RSSI level before I asked Patrik to make a
> program to display the signal strength in polar form. I can get actual
> patterns that Very closely resemble EZNEC plots.

Thanks. Whatever I set up will probably be for signal strength A/B testing
between antennas at a fixed distance.

201. Re: Using Tuner to Determine Line Input Impedance

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-05 07:00:46 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <75ch25lvtvckrhdvu3fs2bkupsocpetuqh@4ax.com>
Source record: 14863

On Thu, 4 Jun 2009 22:05:00 -0700 (PDT), jimlux@earthlink.net wrote:

>On Jun 4, 12:18ï¿½pm, Richard Clark <kb7...@comcast.net> wrote:
>> On Thu, 04 Jun 2009 11:47:31 -0700, Jim Lux <james.p....@jpl.nasa.gov>
>> wrote:
>>
>> >By the way, the assumption that the run of the mill ham rig has a 50 ohm
>> >resistive output impedance is not necessarily valid.
>>
>> By the way, this comment above is another assumption in that it lacks
>> a quantifiable. ï¿½I find it offered quite often as a negative assertion
>> to which the several many posters who offer them never provide an
>> actual value to prove what the run of the mill ham rig is, much less
>> is "not."
>
>Actually, I did a casual search for such data, but couldn't find any
>for the "run of the mill" solidstate 100W ham rig . There is a fair
>amount of data for one tube rig or another).

Hi Jim,

Searching and measuring are worlds apart.

>There is some data in
>the Moto Ap notes by Granberg, etc, that's reasonably representative,
>but it doesn't include the effect of the inevitable LPF on the output.

Now, this is the most curious statement of them all. Every LPF that
is mounted in any Ham grade HF rig is designed with both a 50 Ohm
input Z and a 50 Ohm output Z. This is easily verified through the
same page that does the calculations, or through trivial math for the
individual components' Z.

>So, looking at things with which I have practical experience and
>measurements.. MMIC amps tend to be be pretty flat over octave
>bandwidths, but I don't think they're representative of ham rigs with
>either FET or Bipolar output stages (which have to cover multiple
>octaves, in any case).

Why not? Those same HF rigs have switched LPFs for each octave. This
has been a staple of solid state design for 30+ years. Consult a
schematic.

>Hot microwave FET amps have output impedances
>that are anything but 50 ohms, and designing the output networks keeps
>lots of RF engineers employed, especially over temperature and device
>parameter variation.

And for those same 30+ years of HF solid state rigs, their power transistors have had (and still do) output "native" Z of several Ohms. This is not a remarkable deviation by the progression to FET, the FET is simply a different "native" Z with a different transform to get to the same 50 Ohms. Consult any schematic where the Z transform in the output transformer is clearly in a Z step-up in the proper ratio. This stuff has been slam-dunk for decades.

>I'd love to see some real data for ham rigs.

Mine (Drake TR-7 and Kenwood TS-430s) exhibit values that vary around 50 Ohms with a low of 35 Ohms and a high of 70 Ohms in the margins. Those rigs also suffer in those margins. Measurements were done by pull, by substitution, by looking into the antenna connector with an RF Bridge and all confirmed by simple reverse design principles. Variations between any method rarely departed from one another, and never from the values above. Walt Maxwell has reported his own data (tube set albeit, but the principles of transformation and exhibited Source Z are not dependant upon technology).

>> ï¿½Rarer, indeed, is any effort put forward by those posters
>> to show they have attempted to quantify their own equipment.
>
>Perhaps that's because this is, after all, "rec. radio", as in, nobody
>is paying people to comment here, and unless you have a particular
>need to know the output Z, it's not worth it to spend the time to
>measure it.

This apology condemns the hobby to the lowest common denominator. If it were meaningful, we would be reading yet another miracle antenna claim without hint of skeptical enquiry braced with theory, hammered with models and test gear behind it.

>As previously commented, either you're in the "no tuner"
>category, and you tolerate whatever mismatch there is on both ends of
>the transmission line, or you have a tuner, and you tune for "best
>match", with whatever the output Z is.

Every problem is reduced to those two options?

>For all we know, the folks that complain about not getting a good
>match on a Brand X antenna, when everyone else does, have a rig with a
>bad match on the output.

That is arguably so, and my experience described above about operation in the margins would suggest so. But it would be a very atrocious Source Z that would lead one to that observation. My experience was noted only by close examination, not a smoking finals deck. The complainants experience would argue that the rig is flat out broken with the drivers pushing 5 or 10 W through incapacitated finals.

More likely the complaining is related to issues outside of the rig.

>> As there are posters here who have performed this work, shown their
>> data, and such data follows conventional design considerations (which
>> is easily revealed within the page cited athttp://www.wy2u.com/);
>
>Indeed? I'd love to see the data.

Op. Cit.

>> then these assumptions dressed in denial are rather unprofound proofs.
>> As this topic has been visited many times, and as it quickly descends
>> into equally unsupported claims (although often annotated with vague
>> references and citations that are quickly demolished); I doubt
>> anything said here is going to sway those assumptions.
>>
>
>My original contention is that if you're going to measure Antenna Z by
>using an autotuner and seeing where it tunes, one of the underlying
>assumptions is that the other side of the tuner is 50 ohms.
>
>In reality, having actually done this (e.g. use LDG AT200PC tuners to
>measure the mutual impedance matrix of an array), I think the
>resolution/step size of the tuner is a bigger problem with the
>technique. Given the availability of low cost VNAs for the ham
>market, that's a MUCH better solution to measuring antenna impedances.
>
>> As an amusing exercise (I anticipate none will tread down this path),
>> the page athttp://www.wy2u.com/offers a means to test your own rig's
>> Source Z - if, in fact, you can cope with translating your tuner's
>> settings into picofarads and nanohenries, and if you can obtain a
>> known mismatch. ï¿½These impediments are Herculean to most,
>> unfortunately.
>
>Looking at that page, I don't see an obvious link.

Can you supply a known mismatch? It is inputable at that page;
Can you supply a known C from a tuner that has matched that load? It
is inputable at that page;
Can you supply a known L from a tuner that has matched that load? It
is inputable at that page;
Can you adjust the source Z when the tuner has matched that load? It
is inputable at that page.

This is a substitution method.

These steps reveal the common design criteria for building an LPF for
an output stage. Consult "Filters, Image-Parameter Design" in any
copy of "Reference Data for Radio Engineers." Consult, further,
"Filters, Modern-Network-Theory Design" in the same source. Read the
caption of Fig. 2 in that section:
"The Generator and Load must be considered part of the filter."
In the supporting text:
"The generator and load resistors can be assigned any value
between zero and infinity."

Fig. 25 shows the mathematical impact of Source Z (as R or G) to the Network response. It also shows the Load Z as a mirror R or G in symmetry to the source. These commonplace considerations are repeated in Fig. 27, 28, and 29.

Consult Fig. 34 where both ends can be "interchanged." And repeated out through Fig. 56.

In the section entitled "Low-Impedance Generator and Load" observe:
"A low impedance generator and/or load may be used with
the above filter by ... an effective turns ratio that transforms
the low impedance to the value required..."
>
>Measuring the output Z of the transmitter would be an interesting
>exercise.. for microwave circuits, one uses a load-pull setup..
>
>The challenge is, of course, that the amplifier is an active device,
>so the output Z probably changes depending on the load.

I've heard that platitude far too many times. Of course it is an active device. Of course the output Z changes with load. Do you have anything more to offer than simple qualitative musings? One could as easily dream that output Z varies with room temperature, with humidity, with time of day, with elevation, and if the total of those variations were capped off with a quantitative measurement of an accumulated ï¿½10%, then the whole list of objections would get hooted off the stage. Give me a metric instead of looking under the bed for spooks.

>It's not like
>an antenna, where the feedpoint Z at a given frequency is pretty much
>constant, regardless of the incident power.

It is also not like a resistor, or a capacitor, or an inductor. Nor is it like an audio amp or its speaker. The output Z is not like so many things that to start this list only leads into an infinity of trivial comparisons that wander the landscape.

So, the output Z is not like the load Z. What significance does that bring?

On the other hand, I have worked with high power Transistor circuits that have acted exactly as resistors, inductors, and capacitors and output Z was exactly like an antenna at a given frequency (or rather input Z, as one design was an active 100W load).

73's
Richard Clark, KB7QHC

202. Re: Sun Spots

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-05 07:24:31 UTC
From: Szczepan Białek <sz.bialek@wp.pl>
Message-ID: <h0a7u2euv1@node1.news.atman.pl>
Source record: 14864

```
"Tom Donaly" <dtdonaly@sbcglobal.net> wrote
news:HTYVl.18174$jZ1.7038@flpi144.ffdc.sbc.com...
> Dave wrote:
>>
>> "Szczepan Bialek" <sz.bialek@wp.pl> wrote in message
>> news:h07n6h$1br$1@node1.news.atman.pl...
>>>
>>> "Dave" <noone@nowhere.com> wrote
>>> news:u7DVl.524$u86.66@nwrddc01.gnilink.net...
>>>>
>>>
>>> But what radiate? Magnetic whirls or pressure-like electric wave?
>>> S*
>> magnets don't whirl and 'electric waves' are not like pressure... they
>> magnetic and electric field vectors are at right angles to each other and
>> the direction of propagation... both the electric and magnetic components
>> are needed for propagation... you can't have one without the other.
>
> It's hard to tell, but he's probably referring to the curl of a
> magnetic field which he obviously doesn't understand. The idea of
> a "pressure-like electric wave" is pure fantasy.

There is the fantastic example:
http://www.radartutorial.eu/06.antennas/an14.en.html
S*
```

203. Re: Using Tuner to Determine Line Input Impedance

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-05 07:26:32 UTC
From: Owen Duffy <none@no.where>
Message-ID: <Xns9C21B16EF3BF6nonenowhere@61.9.191.5>
Source record: 14865

"Jerry" <jerrymartes@verizon.net> wrote in
news:aL2Wl.762$u86.18@nwrddc01.gnilink.net:

...
> As you may already know, the Smith Chart is simply a plot that shows
> *all*
> impedances with a real resistance. Smith displays the impedances so
> the user can quickly see how any given impedance can be adjusted by
> adding any series or parallel resistances and/or reactances. Series
> inductance moves the impedance "upward" along the circles of constant
> Resistance. Shunt inductance will move an impedance along the circles
> of constant conductance.

There are a range of formats for plotting "*all* impedances with a real resistance", and Philip Smith found some of them in his quest for what is now known as the Smith chart. It is not simply a plot of R and X, but in fact a plot of the complex voltage reflection coefficient and it can have R and X scales overlaid (along with a bunch of TL related radial scales), and because of the behaviour of transmission lines, G and B scales. The R, X, G, B scales are a consequence of the plot of the voltage reflection coefficient, an overlay, and not the fundamental quantity plotted.

The magic that underlies the Smith chart is the Telegrapher's Equation (or a lossless form for most applications).

Owen

204. Re: Sun Spots

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-05 07:53:13 UTC
From: Szczepan Białek <sz.bialek@wp.pl>
Message-ID: <h0a9jr$f7l$1@node1.news.atman.pl>
Source record: 14866

"Dave" <noone@nowhere.com> wrote
news:KhYVl.296$tr5.117@nwrddc02.gnilink.net...
>
> "Szczepan Bialek" <sz.bialek@wp.pl> wrote in message
> news:h07mgn$18v$1@node1.news.atman.pl...
>>
>> In the History you find how many people analysed the issue: longitudinal
>> vs. transversal. In 1905 all stop.
>> But after 1905 peole build antennas. And they do not worry what the
>> radiation is like.
>> Sunner or later the issue appears again.
>> S*
>
> only when time travelers bring back scientists from the 1800's... or
> people like you try to reinvent the discarded theories of old.

Some theories are taught some not. But people after 25 can use what they
want. It seems to me that engineering people do not use the EM theory.
S*
>

205. Re: Sun Spots

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-05 11:25:08 UTC
From: Dave <noone@nowhere.com>
Message-ID: <og7Wl.773$u86.73@nwrddc01.gnilink.net>
Source record: 14867

```
"Szczepan Bialek" <sz.bialek@wp.pl> wrote in message
news:h0a7u2$euv$1@node1.news.atman.pl...
>
> "Tom Donaly" <dtdonaly@sbcglobal.net> wrote
> news:HTYVl.18174$jZ1.7038@flpi144.ffdc.sbc.com...
>> Dave wrote:
>>>
>>> "Szczepan Bialek" <sz.bialek@wp.pl> wrote in message
>>> news:h07n6h$1br$1@node1.news.atman.pl...
>>>>
>>>> "Dave" <noone@nowhere.com> wrote
>>>> news:u7DVl.524$u86.66@nwrddc01.gnilink.net...
>>>>>
>>>>
>>>> But what radiate? Magnetic whirls or pressure-like electric wave?
>>>> S*
>>> magnets don't whirl and 'electric waves' are not like pressure... they
>>> magnetic and electric field vectors are at right angles to each other
>>> and the direction of propagation... both the electric and magnetic
>>> components are needed for propagation... you can't have one without the
>>> other.
>>
>> It's hard to tell, but he's probably referring to the curl of a
>> magnetic field which he obviously doesn't understand. The idea of
>> a "pressure-like electric wave" is pure fantasy.
>
> There is the fantastic example:
> http://www.radartutorial.eu/06.antennas/an14.en.html
> S*
>

and how are you misinterpreting what that is showing?
```

206. Re: Sun Spots

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-05 11:26:57 UTC
From: Dave <noone@nowhere.com>
Message-ID: <5i7Wl.774$u86.582@nwrddc01.gnilink.net>
Source record: 14868

"Szczepan Bialek" <sz.bialek@wp.pl> wrote in message
news:h0a9jr$f7l$1@node1.news.atman.pl...
>
> "Dave" <noone@nowhere.com> wrote
> news:KhYVl.296$tr5.117@nwrddc02.gnilink.net...
>>
>> "Szczepan Bialek" <sz.bialek@wp.pl> wrote in message
>> news:h07mgn$18v$1@node1.news.atman.pl...
>>>
>>> In the History you find how many people analysed the issue: longitudinal
>>> vs. transversal. In 1905 all stop.
>>> But after 1905 peole build antennas. And they do not worry what the
>>> radiation is like.
>>> Sunner or later the issue appears again.
>>> S*
>>
>> only when time travelers bring back scientists from the 1800's... or
>> people like you try to reinvent the discarded theories of old.
>
> Some theories are taught some not. But people after 25 can use what they
> want. It seems to me that engineering people do not use the EM theory.
> S*
>>

Theories that aren't taught have probably been dropped for a good reason.
usually because they are wrong or don't do anything useful. I don't know
about other engineers but i use EM theory, all my antennas were designed
using it, and i test it regularly with my own equipment... it has never
failed me.

207. Re: Using Tuner to Determine Line Input Impedance

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-05 12:51:18 UTC
From: Roger D Johnson <n1rj~@roadrunner.com>
Message-ID: <ax8Wl.1536$Fj2.665@newsfe14.iad>
Source record: 14869

dykesc wrote:
> I am trying to validate impedance values I am measuring with my
> MFJ-259B. I want to do this by using my MFJ-993B auto tuner. The tuner
> uses a simple L network to create the conjugate match. I want to take
> the final inductance, capacitance and swr values from the auto tuner
> digital display after matching is completed and back calculate the
> impedance that the tuner is seeing. Is there an online calculator that
> will do this?
>
> Many thanks for replys.

Yes! It's called RevLoad and is available free from Tonne Software.

http://tonnesoftware.com/

73, Roger

--
Remove tilde (~) to reply

Remember the USS Liberty (AGTR-5)
http://ussliberty.org/

208. Re: Using Tuner to Determine Line Input Impedance

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-05 13:27:48 UTC
From: Jerry <jerrymartes@verizon.net>
Message-ID: <o39Wl.792$u86.379@nwrddc01.gnilink.net>
Source record: 14870

"Roger D Johnson" <n1rj~@roadrunner.com> wrote in message
news:ax8Wl.1536$Fj2.665@newsfe14.iad...
> dykesc wrote:
>> I am trying to validate impedance values I am measuring with my
>> MFJ-259B. I want to do this by using my MFJ-993B auto tuner. The tuner
>> uses a simple L network to create the conjugate match. I want to take
>> the final inductance, capacitance and swr values from the auto tuner
>> digital display after matching is completed and back calculate the
>> impedance that the tuner is seeing. Is there an online calculator that
>> will do this?
>>
>> Many thanks for replys.
>
> Yes! It's called RevLoad and is available free from Tonne Software.
>
> http://tonnesoftware.com/
>
> 73, Roger

Thanks Roger Thats a great program.

Jerry KD6JDJ

209. Re: Using Tuner to Determine Line Input Impedance

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-05 13:29:48 UTC
From: jimlux@earthlink.net
Message-ID: <9934cfbc-41ff-4c45-8e50-037f80d26d45@x6g2000vbg.googlegroups.com>
Source record: 14871

On Jun 4, 10:30 pm, Owen Duffy <n...@no.where> wrote:

> I doubt it. Again it relates to the loss characterisation of the
> components. If you could do that, the device could also calculate its own
> efficiency... now that would be a feature that would kill the market!!!
>

Actually, you could probably do this with a series of lookup table. A tuner mfr has a fairly good idea (or can get a fairly good idea, with some time to do appropriate measurements) of the loss properties of the tuner components. Based on measuring some AT200PCs with a TenTec VNA, there is *some* interaction between the components, so it's not a perfect linear scaling as you step through the values. The tuner knows the frequency, it knows the L and C, and it knows the parasitic Rs, and it knows that it's "matched", so it should be able to calculate currents and voltages, and figure out loss.

Whether you could do it in a tiny PIC... I don't know.

> > I'm going to suggest that MFJ make that a feature on an auto tuner. I
>
> See above.
>
> BTW, for referring measurements at one place to another, TLLC
athttp://www.vk1od.net/calc/tl/tllc.phpmay be of interest. It would be a
> challenge to incorporate those calcs in a small 8 bit microcontroller,
> their capacity and performance on logs, hyperbolic cosines, etc is the
> issue. Probably why most of the tools that do this, use a client on a PC
> to do the calcs and presentation.
>

You'd be surprised.. the question is whether someone is motivated enough to try and do it. There's not much commercial market, so it would be a labor of love, and that requires a somewhat bizarre intersection of someone who takes pride in putting complex math (in both senses of complex) into a limited processor AND someone who is familiar with the relevant equations and their use.

In any case, given that folks have done this sort of thing on Z80/8085/6502 class processors... It doesn't have to be fast.. 10 seconds is a LOT of CPU clock cycles.
jim

210. Re: Using Tuner to Determine Line Input Impedance

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-05 14:18:17 UTC
From: jimlux@earthlink.net
Message-ID: <60653d15-aa89-492e-8484-2be26c674b09@e24g2000vbe.googlegroups.com>
Source record: 14872

On Jun 5, 12:00 am, Richard Clark <kb7...@comcast.net> wrote:
> On Thu, 4 Jun 2009 22:05:00 -0700 (PDT), jim...@earthlink.net wrote:
> >On Jun 4, 12:18 pm, Richard Clark <kb7...@comcast.net> wrote:
> >>
> Hi Jim,
>
> Searching and measuring are worlds apart.

In the context of discussing on a newsgroup, I'm willing to spend a
few minutes searching. I'm not willing to spend hours measuring.
Others might. I seem to have recalled seeing some data a few years
ago, but I couldn't find it with google.

>
> >There is some data in
> >the Moto Ap notes by Granberg, etc, that's reasonably representative,
> >but it doesn't include the effect of the inevitable LPF on the output.
>
> Now, this is the most curious statement of them all. Every LPF that
> is mounted in any Ham grade HF rig is designed with both a 50 Ohm
> input Z and a 50 Ohm output Z. This is easily verified through the
> same page that does the calculations, or through trivial math for the
> individual components' Z.

Uh huh... and all manufacturers use high precision components, and the
impedance at one end of the filter isn't affected by the impedance at
the other end?

My original point is that, barring measurement, you don't KNOW.
(which is sort of your argument too, eh?)

>
> >So, looking at things with which I have practical experience and
> >measurements.. MMIC amps tend to be be pretty flat over octave
> >bandwidths, but I don't think they're representative of ham rigs with
> >either FET or Bipolar output stages (which have to cover multiple
> >octaves, in any case).
>
> Why not?

Because the MMICs are a totally different design model. To start
with, they're also Class A, while most ham rigs run Class AB. They
also tend to be "detuned" for broadbanding, at the expense of
efficiency. (not all MMICs are this way.. I'm talking about the MAR-n
series, for instance)

> >Hot microwave FET amps have output impedances
> >that are anything but 50 ohms, and designing the output networks keeps
> >lots of RF engineers employed, especially over temperature and device
> >parameter variation.
>
> And for those same 30+ years of HF solid state rigs, their power
> transistors have had (and still do) output "native" Z of several Ohms.

Would that the active device has a Z that is constant, but it's not.
Sure, the MRF454 data sheet says the output Z is 1+.2j ohms (or
something like that) at 30MHz, but is it still that at 1MHz?

Looking at a more modern power FET for amplifier use, the IXZ210N50L..
There's a whole page of S parameters, and S22 goes from 0.88@-51deg at
2MHz to 0.43@-117.37 at 14.32 MHz to 0.54@-130.17 at 30 MHz... that's
at Ids =200mA.. bump Ids to 500mA, and the magnitudes stay about the
same, but the phases change, by tens of degrees.

Having actually worked on an amplifier design with similar parts, I
can also say that the datasheet is only a "get you in the ballpark for
the design" tool. The "real parts" (especially when packaged on a
board and attached to the heat sink) are substantially different.

No simple transformer is going to make that look like a constant 50
ohms.
>
> >I'd love to see some real data for ham rigs.
>
> Mine (Drake TR-7 and Kenwood TS-430s) exhibit values that vary around
> 50 Ohms with a low of 35 Ohms and a high of 70 Ohms in the margins.
> Those rigs also suffer in those margins.

so the VSWR looking back from the tuner into your transmitter is
1.4:1? A return loss of around 15dB... what's that work out to... an
error of about 10-15% in the "measuring impedance with a tuner"
technique... not bad, but not great, either, especially stacked up
with the other uncertainties..

Good enough to give a "cross check" on another measurement? Maybe...
if the tuner technique showed I had a load Z of 100+50j, and the MFJ
gave a result of 90 + 40j.. yeah, I'd say it is consistent.

Measurements were done by
> pull, by substitution, by looking into the antenna connector with an
> RF Bridge and all confirmed by simple reverse design principles.
> Variations between any method rarely departed from one another, and
> never from the values above.

Although you have to admit that a 2:1 impedance variation isn't a
particularly outstanding "constant impedance load"

>
> >> Rarer, indeed, is any effort put forward by those posters
> >> to show they have attempted to quantify their own equipment.

>
> >Perhaps that's because this is, after all, "rec. radio", as in, nobody
> >is paying people to comment here, and unless you have a particular
> >need to know the output Z, it's not worth it to spend the time to
> >measure it.
>
> This apology condemns the hobby to the lowest common denominator. If
> it were meaningful, we would be reading yet another miracle antenna
> claim without hint of skeptical enquiry braced with theory, hammered
> with models and test gear behind it.

Not at all.. just because *I* don't want to spend the time measuring it doesn't mean that the information is of no value to the community. I would venture that of all the data that hams, collectively, could measure, this is actually not as useful as some other data.. It just doesn't have that much impact on day to day operation. Very few hams adjust their tuner by calculating L and C based on measured data, or else there wouldn't be a plethora of articles and posts about "tuning", "pruning", "trimming" and the techniques for doing this, and arguments about whether a Brand X meter is better than a Brand Y meter, etc.

Hams, by and large, adjust their tuners by minimizing the reflected power, and don't much care what the actual component values are. (e.g. what ham tuner actually has accurate dial calibrations in pF or uH?)

Professionals, on the other hand, do CARE, and do make the measurements, particularly if they're doing phased arrays, or designing circuits for mass production, or have to document that their system will work over wide ranges of temperatures, aging, and other effects. But, because they're getting *paid* to do it, they're more than happy to do so. It makes the rest of the job easier.

>
> >As previously commented, either you're in the "no tuner"
> >category, and you tolerate whatever mismatch there is on both ends of
> >the transmission line, or you have a tuner, and you tune for "best
> >match", with whatever the output Z is.
>
> Every problem is reduced to those two options?

Obviously not, but I'll bet that it covers over 90% of hamdom (and a lower percentage of the folks reading this thread).

> >Looking at that page, I don't see an obvious link.
>
> Can you supply a known mismatch? It is inputable at that page;
>
> This is a substitution method.

Ahh.. I misunderstood.. I thought you were pointing to process for doing the measurement and/or some measured data. The cited page is

just the calculator for part of the problem.

>
> >Measuring the output Z of the transmitter would be an interesting
> >exercise.. for microwave circuits, one uses a load-pull setup..
>
> >The challenge is, of course, that the amplifier is an active device,
> >so the output Z probably changes depending on the load.
>
> I've heard that platitude far too many times. Of course it is an
> active device. Of course the output Z changes with load. Do you have
> anything more to offer than simple qualitative musings?

Sure.. check out the Ixys data sheet. Plenty of grist for "Z varies
with load and frequency"
Phase of S22 varies 40-50 degrees with Ids. That's in your 10%
ballpark
> On the other hand, I have worked with high power Transistor circuits
> that have acted exactly as resistors, inductors, and capacitors and
> output Z was exactly like an antenna at a given frequency (or rather
> input Z, as one design was an active 100W load).

Yes.. but were those run-of-the-mill amateur transceivers? (the
original question).. I have no doubt that it is possible to build
amplifiers with constant Z (to any degree of constancy desired.. heck,
a 1000W amp and a 60db pad gives you a 1mW amplifier with very good
output Z, regardless of what the amp does).

But, does a "designed for mass production and cost target" transmitter
fall into that category?
It's not a published spec
ARRL doesn't measure it when they review rigs

So it's left to someone who cares to do so.

211. Re: Sun Spots

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-05 16:22:40 UTC
From: Szczepan Białek <sz.bialek@wp.pl>
Message-ID: <h0b7es$j6i$1@node1.news.atman.pl>
Source record: 14873

```
"Dave" <noone@nowhere.com> wrote
news:5i7Wl.774$u86.582@nwrddc01.gnilink.net...
>
> "Szczepan Bialek" <sz.bialek@wp.pl> wrote in message
> news:h0a9jr$f7l$1@node1.news.atman.pl...
>>
>> "Dave" <noone@nowhere.com> wrote
>> news:KhYVl.296$tr5.117@nwrddc02.gnilink.net...
>>>
>>> "Szczepan Bialek" <sz.bialek@wp.pl> wrote in message
>>> news:h07mgn$18v$1@node1.news.atman.pl...
>>>>
>>>> In the History you find how many people analysed the issue:
>>>> longitudinal vs. transversal. In 1905 all stop.
>>>> But after 1905 peole build antennas. And they do not worry what the
>>>> radiation is like.
>>>> Sunner or later the issue appears again.
>>>> S*
>>>
>>> only when time travelers bring back scientists from the 1800's... or
>>> people like you try to reinvent the discarded theories of old.
>>
>> Some theories are taught some not. But people after 25 can use what they
>> want. It seems to me that engineering people do not use the EM theory.
>> S*
>>>
>
> Theories that aren't taught have probably been dropped for a good reason.
> usually because they are wrong or don't do anything useful. I don't know
> about other engineers but i use EM theory, all my antennas were designed
> using it, and i test it regularly with my own equipment... it has never
> failed me.

You do not use the EM theory. In EM no electrons. You use electrons:
"Electronics is a branch of science and technology that deals with the flow
of electrons through nonmetallic conductors, mainly semiconductors such as
silicon. It is distinct from electrical science and technology, which deal
with the flow of electrons and other charge carriers through metal
conductors such as copper. This distinction started around 1906 with the
invention by Lee De Forest of the triode. Until 1950 this field was called
"radio technology" because its principal application was the design and
theory of radio transmitters, receivers and vacuum tubes."

Electrons never failed us.
```

S*

>

212. Re: Sun Spots

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-05 16:40:04 UTC
From: Dave <noone@nowhere.com>
Message-ID: <ETbWl.819$u86.724@nwrddc01.gnilink.net>
Source record: 14874

```
"Szczepan Bialek" <sz.bialek@wp.pl> wrote in message
news:h0b7es$j6i$1@node1.news.atman.pl...
>
> "Dave" <noone@nowhere.com> wrote
> news:5i7Wl.774$u86.582@nwrddc01.gnilink.net...
>>
>> "Szczepan Bialek" <sz.bialek@wp.pl> wrote in message
>> news:h0a9jr$f7l$1@node1.news.atman.pl...
>>>
>>> "Dave" <noone@nowhere.com> wrote
>>> news:KhYVl.296$tr5.117@nwrddc02.gnilink.net...
>>>>
>>>> "Szczepan Bialek" <sz.bialek@wp.pl> wrote in message
>>>> news:h07mgn$18v$1@node1.news.atman.pl...
>>>>>
>>>>> In the History you find how many people analysed the issue:
>>>>> longitudinal vs. transversal. In 1905 all stop.
>>>>> But after 1905 peole build antennas. And they do not worry what the
>>>>> radiation is like.
>>>>> Sunner or later the issue appears again.
>>>>> S*
>>>>
>>>> only when time travelers bring back scientists from the 1800's... or
>>>> people like you try to reinvent the discarded theories of old.
>>>
>>> Some theories are taught some not. But people after 25 can use what
>>> they want. It seems to me that engineering people do not use the EM
>>> theory.
>>> S*
>>>>
>>
>> Theories that aren't taught have probably been dropped for a good reason.
>> usually because they are wrong or don't do anything useful. I don't know
>> about other engineers but i use EM theory, all my antennas were designed
>> using it, and i test it regularly with my own equipment... it has never
>> failed me.
>
> You do not use the EM theory. In EM no electrons. You use electrons:
> "Electronics is a branch of science and technology that deals with the
> flow of electrons through nonmetallic conductors, mainly semiconductors
> such as silicon. It is distinct from electrical science and technology,
> which deal with the flow of electrons and other charge carriers through
> metal conductors such as copper. This distinction started around 1906 with
> the invention by Lee De Forest of the triode. Until 1950 this field was
```

> called "radio technology" because its principal application was the design
> and theory of radio transmitters, receivers and vacuum tubes."
>
> Electrons never failed us.

if you want to talk with MODERN engineers, then you should use MODERN definitions. i don't know who wrote that wikipedia definition but you would find it very hard to work with just non-metalic stuff in the electronics I know. even the smallest integrated circuits use metalic conductors to connect components and for connections to the outside world. All radios (aren't radios electronic) use metallic antennas in one form or another... check some other definitions:

the branch of physics that deals with the emission and effects of electrons and with the use of electronic devices
wordnet.princeton.edu/perl/webwn

electronic - of or relating to electronics; concerned with or using devices that operate on principles governing the behavior of electrons; "electronic devices"
wordnet.princeton.edu/perl/webwn

the branch of technology concerned with the development and application of circuits or systems using electron devices, including magnetic amplifiers, transistors
www.tki.org.nz/r/technology/curriculum/p85_86_e.php

electronic - Pertaining to the energies, distributions, and behaviors of electrons; see mechanical.
e-drexler.com/d/06/00/Nanosystems/glossary/glossary_e.html

do not 'electronic devices' include transformers?? aren't most of them made out of metallic conductors?? what about capacitors, don't most of them have metallic plates? magnetic amplifiers are most definately made of metallic conductors.

EM or ElectroMagnetic theory does indeed include charged particles. Maxwell's equations are definately based on charged particles. just where does the 'i' term come from if not from moving charges? and where does the charge term in art's favorite Gauss' law that is part of Maxwell's equations come from if not from charged particles??

213. Re: Sun Spots

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-05 16:45:47 UTC
From: Szczepan Białek <sz.bialek@wp.pl>
Message-ID: <h0b8q6jeq1@node1.news.atman.pl>
Source record: 14875

"Dave" <noone@nowhere.com> wrote
news:og7Wl.773$u86.73@nwrddc01.gnilink.net...
>
> "Szczepan Bialek" <sz.bialek@wp.pl> wrote in message

>>
>> There is the fantastic example:
>> http://www.radartutorial.eu/06.antennas/an14.en.html
>> S*
>>
>
> and how are you misinterpreting what that is showing?

It seems to me that the radiating elements radiate from the ends.
Is it misinterpreting?
S*

214. Re: Sun Spots

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-05 17:03:13 UTC
From: Szczepan Białek <sz.bialek@wp.pl>
Message-ID: <h0b9qsjjk1@node1.news.atman.pl>
Source record: 14876

"Dave" <noone@nowhere.com> wrote
news:ETbWl.819$u86.724@nwrddc01.gnilink.net...
>
>
> EM or ElectroMagnetic theory does indeed include charged particles.
> Maxwell's equations are definately based on charged particles. just where
> does the 'i' term come from if not from moving charges?

Take a glance in Maxwell's Treatise. There is the incompressible massles
fluid.
Maxwell did the math to Faraday ideas. But with one exception. Faraday
discovered the atomic nature of electricity (at electrolise).
Maxwell ignored it. He prefered fluids and whirls. Todays teachers also
prefere it.

>and where does the charge term in art's favorite Gauss' law that is part of
>Maxwell's equations come from if not from charged particles??

Each genius wrote his own Electrodynamics. They are in some points similar.
But the incompressible fluid is only in Maxwell's.
S*

215. Re: Sun Spots

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-05 17:56:25 UTC
From: Dave <noone@nowhere.com>
Message-ID: <d%cWl.820$u86.137@nwrddc01.gnilink.net>
Source record: 14877

"Szczepan Bialek" <sz.bialek@wp.pl> wrote in message
news:h0b8q6jeq1@node1.news.atman.pl...
>
> "Dave" <noone@nowhere.com> wrote
> news:og7Wl.773$u86.73@nwrddc01.gnilink.net...
>>
>> "Szczepan Bialek" <sz.bialek@wp.pl> wrote in message
>
>>>
>>> There is the fantastic example:
>>> http://www.radartutorial.eu/06.antennas/an14.en.html
>>> S*
>>>
>>
>> and how are you misinterpreting what that is showing?
>
> It seems to me that the radiating elements radiate from the ends.
> Is it misinterpreting?
> S*
you are misinterpreting what they are trying to show in the simplified
drawings of the pattern and phasing animation.

216. Re: Sun Spots

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-05 17:58:20 UTC
From: Dave <noone@nowhere.com>
Message-ID: <01dWl.821$u86.494@nwrddc01.gnilink.net>
Source record: 14878

"Szczepan Bialek" <sz.bialek@wp.pl> wrote in message
news:h0b9qsjjk1@node1.news.atman.pl...
>
> "Dave" <noone@nowhere.com> wrote
> news:ETbWl.819$u86.724@nwrddc01.gnilink.net...
>>
>>
>> EM or ElectroMagnetic theory does indeed include charged particles.
>> Maxwell's equations are definately based on charged particles. just
>> where does the 'i' term come from if not from moving charges?
>
> Take a glance in Maxwell's Treatise. There is the incompressible massles
> fluid.
> Maxwell did the math to Faraday ideas. But with one exception. Faraday
> discovered the atomic nature of electricity (at electrolise).
> Maxwell ignored it. He prefered fluids and whirls. Todays teachers also
> prefere it.
>
>>and where does the charge term in art's favorite Gauss' law that is part
>>of Maxwell's equations come from if not from charged particles??
>
> Each genius wrote his own Electrodynamics. They are in some points
> similar. But the incompressible fluid is only in Maxwell's.
> S*

the final result of the collection of Maxwell's equations does not rely on
an incompressible massless fluid. It says nothing about the nature of
space, only the relationship between the charges and fields... which is all
that is needed to completely describe charged particle and electro-magnetic
field interactions.

217. Re: Sun Spots

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-05 18:07:08 UTC
From: Art Unwin <ArthurUnwin@gmail.com>
Message-ID: <a9b6e014-330d-4b43-a267-3cf1ae83e64d@h23g2000vbc.googlegroups.com>
Source record: 14879

On Jun 5, 12:03 pm, Szczepan Białek <sz.bia...@wp.pl> wrote:
> "Dave" <no...@nowhere.com> wrotenews:ETbWl.819$u86.724@nwrddc01.gnilink.net...
>
>
>
> > EM or ElectroMagnetic theory does indeed include charged particles.
> > Maxwell's equations are definately based on charged particles. just where
> > does the 'i' term come from if not from moving charges?
>
> Take a glance in Maxwell's Treatise. There is the incompressible massles
> fluid.
> Maxwell did the math to Faraday ideas. But with one exception. Faraday
> discovered the atomic nature of electricity (at electrolise).
> Maxwell ignored it. He prefered fluids and whirls. Todays teachers also
> prefere it.
>
> >and where does the charge term in art's favorite Gauss' law that is part of
> >Maxwell's equations come from if not from charged particles??
>
> Each genius wrote his own Electrodynamics. They are in some points similar.
> But the incompressible fluid is only in Maxwell's.
> S*

Rather than using the term "whirls" you should use the term
"cavitation" then you have a good analogy since the clustered charged
particles can be seen as non compressible.
When seen like this then you can use the same equations, which is why
initial introduction
uses the liquid analogy. PV =WRT then can come into play. The main
point to remember
that once the liquid departs from the nozzle of flow cavitation does
not exist and thus gravity takes over. This is the basics of my
combination/ loop dipole antenna where the liquid rotates around the
loop until there is a partial balance such that liquid may reach the
end of the dipole ie high voltage low current which is resonance
because of the phase. Basically the loop is acting as a tank circuit
where it is cavitation is acting as the displacement current. This all
goes back to the existence of the four forces being the basics of all
science in the Universe otherwise known as Classical Physics. The
bottom line "S" is that radiation needs spin (cavitation if you will)
to radiate in a straight line projection away from the hose direction
which a liquid does not have when released from a hose. (Cavitation
is a combination of two vectors which creates spin).
This is the basic reason why Reg used to hang on to the transmission

line theme for a radiator where two parallel lines were accompanied by
a capacitive jumper at intervals
which in conjunction with current flow created displacement/cavitation/
skin depth e.t.c to provide spin, swirl, or what ever you want to call
it
Art

218. Re: Using Tuner to Determine Line Input Impedance

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-05 18:19:22 UTC
From: dplatt@radagast.org
Message-ID: <a64of6-rkq.ln1@radagast.org>
Source record: 14881

In article <aL2Wl.762$u86.18@nwrddc01.gnilink.net>,
Jerry <jerrymartes@verizon.net> wrote:

>Thanks Jerry. No you aren't missing anything other than the fact that
>my familiarity with Smith Chart analysis is limited to working through
>a few exercises in the last chapter of the ARRL Antenna book. I will
>be looking for more Smith Chart tutorial info on the web and am
>certain I can get myself up to speed enough to start working with
>conductance, suseptance, admittance, etc.

I strongly encourage you to work it through from the basic math:

- Impedances and admittances are complex numbers, with both real
(pure-resistive) and imaginary (reactive) components.

- When you put two things in series, add their impedances

- When you put two things in parallel, add their admittances

- Admittance = (1+j0) / impedance, and vice versa.

The math is quite easy to implement in FORTRAN, or any other
programming language which has native complex-number capability. C
doesn't, alas, and you'd have to use a complex-number library or write
your own. I'm sure that there are standard C++ classes and methods
for handling complex numbers.

Although I haven't yet used the capability, it looks to me as if
modern spreadsheet systems (e.g. Excel, OpenOffice Calc) can deal with
complex numbers. You can't use the normal arithmetic operators (at
least, not in OpenOffice Calc) but myst use special complex-number
functions such as IMPRODUCT and IMDIV and IMSUM.

Not too hard to do, though.

I'd suggest starting out with the simplest calculation (e.g. a
inductor or capacitor, in series with a pure resistance). That one's
really easy, you just calculate the impedance of the reactive
component at the frequency of interest, and do a complex addition.

Then, do an inductor or capacitor, shunted in parallel with a pure
resistance... calculate the reactive impedance, invert the impedances
to get admittances, sum them, invert again to get the final impedance.

Once you can do those two basic steps, you can simply repeat them as
necessary to determine the effect of L and T matching networks, tanks,
and so forth.

The Smith chart makes it easy to do this via graphical means - it's faster than using a slide rule or table of logarithms - but it's very instructive to do the math youself (with the aid of a spreadsheet).

With the Smith chart, it's usual to normalize all of the impedances to your reference value (e.g. divide by 50 ohms), do the calculations, and then denormalize (e.g. multiply by 50 ohms).

Doing so isn't necessary if you do the complex-number calculations yourself... you *can* normalize/denormalize if you wish, but you'll get the same results if you work directly with the raw impedances and admittances.

--
Dave Platt <dplatt@radagast.org> AE6EO
Friends of Jade Warrior home page: http://www.radagast.org/jade-warrior
I do _not_ wish to receive unsolicited commercial email, and I will boycott any company which has the gall to send me such ads!

219. Re: Sun Spots

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-05 18:56:25 UTC
From: Dave <noone@nowhere.com>
Message-ID: <tTdWl.829$u86.158@nwrddc01.gnilink.net>
Source record: 14880

"Art Unwin" <ArthurUnwin@gmail.com> wrote in message
news:a9b6e014-330d-4b43-a267-3cf1ae83e64d@h23g2000vbc.googlegroups.com...

<snip drivel>

until art can provide a reference to the equation for the" Gaussian law of statics" you should distrust everything he says as being baseless rambling junk.

220. Re: Sun Spots

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-05 19:31:38 UTC
From: Art Unwin <ArthurUnwin@gmail.com>
Message-ID: <7098097b-07ef-43af-9923-132b636a2be3@s28g2000vbp.googlegroups.com>
Source record: 14882

On Jun 5, 1:56 pm, "Dave" <no...@nowhere.com> wrote:
> "Art Unwin" <ArthurUn...@gmail.com> wrote in message
>
> news:a9b6e014-330d-4b43-a267-3cf1ae83e64d@h23g2000vbc.googlegroups.com...
>
> <snip drivel>
>
> until art can provide a reference to the equation for the" Gaussian law of
> statics" you should distrust everything he says as being baseless rambling
> junk.

David is quite correct. Unless the above is fully understood and in
line with all the sciences
as YOU know it then you should push it away as there is no progress to
your understanding
Art

221. Re: Using Tuner to Determine Line Input Impedance

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-05 19:40:23 UTC
From: dykesc <cupstidd@bellsouth.net>
Message-ID: <72969608-46b8-4654-858d-64574ccff28d@b1g2000vbc.googlegroups.com>
Source record: 14883

On Jun 5, 7:51 am, Roger D Johnson <n1...@roadrunner.com> wrote:

> Yes! It's called RevLoad and is available free from Tonne Software.
>
> http://tonnesoftware.com/
>
> 73, Roger
>

Many thanks Roger. Exactly what I was looking for.

73

Dykes AD5VS

222. Re: Using Tuner to Determine Line Input Impedance

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-05 20:19:22 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <btii2558u1pdovl3qkprqlthv33og2i2jf@4ax.com>
Source record: 14884

On Fri, 5 Jun 2009 07:18:17 -0700 (PDT), jimlux@earthlink.net wrote:

>> Now, this is the most curious statement of them all. ï¿½Every LPF that
>> is mounted in any Ham grade HF rig is designed with both a 50 Ohm
>> input Z and a 50 Ohm output Z. ï¿½This is easily verified through the
>> same page that does the calculations, or through trivial math for the
>> individual components' Z.
>
>Uh huh... and all manufacturers use high precision components, and the
>impedance at one end of the filter isn't affected by the impedance at
>the other end?

Hi Jim,

I haven't the slightest idea why your objection demanding "high
precision components" is necessary. Do you have anything that is
quantifiable to sustain this concern? Give us a Monte Carlo result of
those quantified precisions and their impact on Z.

>My original point is that, barring measurement, you don't KNOW.
>(which is sort of your argument too, eh?)

Given decades of lock-step design that conforms to accepted practices,
why would anyone have to measure something to KNOW what it is? These
are exceedingly basic considerations that do not demand differential
calculus to get to the first pass approximation. A simple algebraic
approximation is going to be quite good. Measurement will confirm.

You recite Motorola without context, I will fill that gap:
"The network theory for power amplifier design is
well known but is useless unless the designer
has valid input and output impedance data for
the transistor."

Motorola has for years recited at least three different means to
obtain large signal transistor output Z, and has characterized
individual transistors over frequency in charts. I have enumerated
these in the past to no obvious response from other objectors that
Motorola knows what they are doing (even when objectors recited the
exact same references!), but I will proceed once again:
1. Load pull (which satisfies NOT using small signal parameters);
2. Transistor saturation, current, and supply voltage;
3. transition and diffusion capacitances at the collector junction.

This last method responds to your nervous wondering about low
frequency response (UP TO the highest frequency, Z does not undergo
dramatic changes).

I haven't seen a 13.6V, 100W amplifier deck in the last 30 years that varies one iota from any other - and for good reason: this stuff has been cookie-cutter design for decades using transistors with known and optimized characteristics that haven't varied either. Yes, FETs have emerged in those years, and so have high voltage PNPs and NPNs. Their contributions have only shifted the design points, not the topology, nor the matching principles. With absolutely every new component's introduction, there have been more than sufficient discussion of matching principles that describe their output Z.

>> >So, looking at things with which I have practical experience and
>> >measurements.. MMIC amps tend to be be pretty flat over octave
>> >bandwidths, but I don't think they're representative of ham rigs with
>> >either FET or Bipolar output stages (which have to cover multiple
>> >octaves, in any case). ï¿½
>>
>> Why not? ï¿½
>
>Because the MMICs are a totally different design model. To start
>with, they're also Class A, while most ham rigs run Class AB. They
>also tend to be "detuned" for broadbanding, at the expense of
>efficiency. (not all MMICs are this way.. I'm talking about the MAR-n
>series, for instance)

That is not a reason, nor is it different to any great degree. The same issues dominate both topologies. Further, efficiency is not always a goal when it contradicts the need for gain; and both may not satisfy match (as there is more than one form of match: conjugate match and Z match). I don't suppose you have anything quantitative here either, do you?

>> And for those same 30+ years of HF solid state rigs, their power
>> transistors have had (and still do) output "native" Z of several Ohms.
>
>Would that the active device has a Z that is constant, but it's not.
>Sure, the MRF454 data sheet says the output Z is 1+.2j ohms (or
>something like that) at 30MHz, but is it still that at 1MHz?

This is another strange objection. You flatly state it is not, but you are wholly uninformed about it specifically. Your nervousness is odd with its faltering expectation for performance at what the industry generally considers to be a very undemanding frequency. Your question's implied suggestion is: "is the Z for 30MHz the same as the Z for 29.9MHz?", which from your limited perspective (you are really reading a rather thin spec sheet) won't answer either. Study something more encompassing; Motorola has vastly more informed resources than your meager recitation. A simple browse of half a dozen transistors from the same production series provides quite specific details.

My Drake TR-7 uses MRF421s and those transistors are rated at 100W PEP (my rig is rated at 140-150W CW) where their output resistance varies from 1.8 Ohm to 1 Ohm over more than 4 octaves. The spec sheets are

more detailed and do not depart from others of that class. As such, I do not expect your MRF454 would either, but your qualitative expectations are hard to account for and no parts engineer would cut a purchase req from them.

>Looking at a more modern power FET for amplifier use, the IXZ210N50L..
>There's a whole page of S parameters, and S22 goes from 0.88@-51deg at
>2MHz to 0.43@-117.37 at 14.32 MHz to 0.54@-130.17 at 30 MHz... that's
>at Ids =200mA.. bump Ids to 500mA, and the magnitudes stay about the
>same, but the phases change, by tens of degrees.

Again, Motorola specifically rejects small signal parameterization for power applications. This is, perhaps, your problem with characterizing amplifier issues.

>Having actually worked on an amplifier design with similar parts, I
>can also say that the datasheet is only a "get you in the ballpark for
>the design" tool. The "real parts" (especially when packaged on a
>board and attached to the heat sink) are substantially different.

I have selected, inspected, and validated transistors to Mil Spec and found very few wandered from commercial specification. You must inhabit a very different realm where production lots contain product that are "substantially different." Do you have some quantification for "substantially?" Or is this another example of a technician's shrug?

>No simple transformer is going to make that look like a constant 50
>ohms.

Ah, are we now down to parsing this to "exactly 50 Ohms" where in your objections you offer few quantifications? Does 49 Ohms invalidate the premise and score a home run for the opposing team?

>> >I'd love to see some real data for ham rigs.
>>
>> Mine (Drake TR-7 and Kenwood TS-430s) exhibit values that vary around
>> 50 Ohms with a low of 35 Ohms and a high of 70 Ohms in the margins.
>> Those rigs also suffer in those margins. ï¿½
>
>so the VSWR looking back from the tuner into your transmitter is
>1.4:1? A return loss of around 15dB... what's that work out to... an
>error of about 10-15% in the "measuring impedance with a tuner"
>technique... not bad, but not great, either, especially stacked up
>with the other uncertainties..

Not great? You have already suggested it was unknowable, and others state it was immaterial. It gives me pause to have given a concrete result to now find what was unknown is now "uncertain" and what was immaterial now counts for little at "not great."

>> Measurements were done by
>> pull, by substitution, by looking into the antenna connector with an

>> RF Bridge and all confirmed by simple reverse design principles.
>> Variations between any method rarely departed from one another, and
>> never from the values above. ï¿½
>
>Although you have to admit that a 2:1 impedance variation isn't a
>particularly outstanding "constant impedance load"

This characteristic that is "not particularly outstanding" was formerly deemed impossible to determine and immaterial by others. I would say that the gulf that I bridged goes a good deal further than demurrals such as yours. As for the sudden emergence of the qualification for "outstanding," that can be obtained if you care to indulge in quantifying what "outstanding" means to you. Am I being set up with an impossible goal to satisfy your point? This performance characteristic that I have published has served an active market for generations; and that in its own right responds to issues of "outstanding." The market would respond: "sufficiently so."

As to could it be better? Without a doubt, and again, design would proceed from knowing the transistor source Z, not "by guess and by golly." This again goes to conventional design considerations that were enumerated by H.W. Bode in the late 30s.

>just because *I* don't want to spend the time measuring
>it doesn't mean that the information is of no value to the community.
>I would venture that of all the data that hams, collectively, could
>measure, this is actually not as useful as some other data.. It just
>doesn't have that much impact on day to day operation.

What a tedious reply in the face of correspondence in other topics that struggle to pass as intelligent discussion. I wonder why you put such effort to responding here if this has so little impact, no relative importance, no relation to design, nor application to "using a tuner to determine Line Input Impedance" (a fully informed topic of great impact on day to day operation, isn't it?).

>Very few hams
>adjust their tuner by calculating L and C based on measured data, or
>else there wouldn't be a plethora of articles and posts about
>"tuning", "pruning", "trimming" and the techniques for doing this, and
>arguments about whether a Brand X meter is better than a Brand Y
>meter, etc.

Your comments to the original poster, then, could have been reduced to one response of one line telling him to abandon his quest by this same logic.

>Hams, by and large, adjust their tuners by minimizing the reflected
>power, and don't much care what the actual component values are. (e.g.
>what ham tuner actually has accurate dial calibrations in pF or uH?)

Do I need to quote that correspondent's post? And if I did, what objection would fall from that? another step descending into

intellectual entropy.

>Professionals, on the other hand, do CARE,

and Hams do NOT. By this standard, our group would dissolve to the merits of photons bouncing waves off each other.

>> Every problem is reduced to those two options?
>
>Obviously not, but I'll bet that it covers over 90% of hamdom (and a
>lower percentage of the folks reading this thread).

90% of hamdom - leaving some several many thousands who are interested is sufficient enough. Not for you? Not enough readers here? Diminishing the level of discourse is not going to build audience to that several many thousand potential, will it?

>> On the other hand, I have worked with high power Transistor circuits
>> that have acted exactly as resistors, inductors, and capacitors and
>> output Z was exactly like an antenna at a given frequency (or rather
>> input Z, as one design was an active 100W load).
>
>
>Yes.. but were those run-of-the-mill amateur transceivers? (the
>original question)..

Yes.. but indeed - how tedious. I have responded to the specific question; I have responded to the specific component; I am responding to correlating designs. Every response is rooted in published and quantified characteristics.

>I have no doubt that it is possible to build
>amplifiers with constant Z (to any degree of constancy desired.. heck,
>a 1000W amp and a 60db pad gives you a 1mW amplifier with very good
>output Z, regardless of what the amp does).

Why does your imposed solution have to come with a crippling hit to efficiency or match? The only inhibition against designing an amplifier to meet your unquantified expectations is the cost involved, not loss of efficiency, not loss of match. You said you have experience in amplifier design, this cannot be such an impossibility can it?

>But, does a "designed for mass production and cost target" transmitter
>fall into that category?
>It's not a published spec

You mean you haven't read the spec. I have seen this objection too. When I've offered just such specs, objectors have then recursed back into how output Z is unknowable and immaterial as if the topic had never been encountered before.

>ARRL doesn't measure it when they review rigs

Now THERE's an authority! Do they measure efficiency?

73's
Richard Clark, KB7QHC

223. Re: hi sos

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-05 20:27:05 UTC
From: discretman16@gmail.com
Message-ID: <e9629be8-eff6-4bfb-946e-7fa63d1692d3@y7g2000yqa.googlegroups.com>
Source record: 14885

hi Jerry KD6JDJ
yes i'll be thankful if u show how do it

224. Re: Sun Spots

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-05 21:06:15 UTC
From: Dave <noone@nowhere.com>
Message-ID: <bNfWI.483$tr5.262@nwrddc02.gnilink.net>
Source record: 14886

"Art Unwin" <ArthurUnwin@gmail.com> wrote in message
news:7098097b-07ef-43af-9923-132b636a2be3@s28g2000vbp.googlegroups.com...
On Jun 5, 1:56 pm, "Dave" <no...@nowhere.com> wrote:
>> "Art Unwin" <ArthurUn...@gmail.com> wrote in message
>> <snip drivel>
>>
>> until art can provide a reference to the equation for the" Gaussian law
>> of
>> statics" you should distrust everything he says as being baseless
>> rambling
>> junk.
>
>David is quite correct. Unless the above is fully understood and in
>line with all the sciences
>as YOU know it then you should push it away as there is no progress to
>your understanding
>Art

hey, i was right about something! of course there is no way for him to
understand the above since even you can't explain it or provide a reference!

225. Re: Sun Spots

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-05 21:29:21 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <JdgWl.17746$pr6.15784@flpi149.ffdc.sbc.com>
Source record: 14887

Szczepan Białż˝ek wrote:
> It seems to me that the radiating elements radiate from the ends.

The maximum radiation occurs where the electrons are
experiencing the maximum deceleration. That doesn't
appear to be at the ends of a dipole.
--
73, Cecil, IEEE, OOTC, http://www.w5dxp.com

226. Re: hi sos

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-05 23:03:53 UTC
From: Jerry <jerrymartes@verizon.net>
Message-ID: <tvhWl.861$u86.465@nwrddc01.gnilink.net>
Source record: 14888

<discretman16@gmail.com> wrote in message
news:e9629be8-eff6-4bfb-946e-7fa63d1692d3@y7g2000yqa.googlegroups.com...
> hi Jerry KD6JDJ
yes i'll be thankful if u show how do it

Hi "disc"

I can help you a little with learning to use EZNEC to model a Quad Helix.
I have a few Quad Helix antennas modeled for 137 MHz. That data is
available to you.
I can show you how to design your own hemispheric coverage antenna that
will perform better than a Quad Helix for reception of signals from polar
orbiting satallites.

What do you want to do?

Jerry KD6JDJ

>

227. Re: Sun Spots

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-05 23:15:08 UTC
From: Art Unwin <ArthurUnwin@gmail.com>
Message-ID: <6a5b841c-d1dd-42d2-8522-4dd7b7e0c7fe@t21g2000yqi.googlegroups.com>
Source record: 14889

On Jun 5, 4:29 pm, Cecil Moore <nos...@w5dxp.com> wrote:
> Szczepan Bia³ek wrote:
> > It seems to me that the radiating elements radiate from the ends.
>
> The maximum radiation occurs where the electrons are
> experiencing the maximum deceleration. That doesn't
> appear to be at the ends of a dipole.
> --
> 73, Cecil, IEEE, OOTC, http://www.w5dxp.com

That is the second time you have suggested that a radiater
loses mass during use. Where did you get that idea from?
Art

228. Re: Sun Spots

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-05 23:30:23 UTC
From: Jim Kelley <jwkelley@uci.edu>
Message-ID: <h0ca0v$7n2$1@news.service.uci.edu>
Source record: 14891

Cecil Moore wrote:
> Szczepan Białż˝ek wrote:
>> But what radiate?
>
> Particles called photons radiate.

Photons are radiated. They do not, themselves radiate.

> Photons are
> emitted by decelerating electrons.

True, but Bremsstrahlung (synchrotron) radiation has nothing to do with antennas.

ac6xg

229. Re: Using Tuner to Determine Line Input Impedance

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-05 23:32:42 UTC
From: jimlux@earthlink.net
Message-ID: <f3b7caa5-bd27-45c5-b450-a5cc82c6d738@e20g2000vbc.googlegroups.com>
Source record: 14890

On Jun 5, 1:19 pm, Richard Clark <kb7...@comcast.net> wrote:
> On Fri, 5 Jun 2009 07:18:17 -0700 (PDT), jim...@earthlink.net wrote:
>
> >Uh huh... and all manufacturers use high precision components, and the
> >impedance at one end of the filter isn't affected by the impedance at
> >the other end?
>
> Hi Jim,
>
> I haven't the slightest idea why your objection demanding "high
> precision components" is necessary. Do you have anything that is
> quantifiable to sustain this concern? Give us a Monte Carlo result of
> those quantified precisions and their impact on Z.

I'm not going to bother. If you care, you can do so, or point to a published summary, rather than spending hundreds of words reciting how to do something we both know how to do.

Again.. without published data from the transceiver maker (whether derived by measurement or analysis, it matters not) or data from somewhere else, I made the initial assertion that since using the tuner to measure impedance depended on the source being 50 ohms (or at least, known Z), one should not blindly assume that a rig has a output Z of 50 ohms. You provided one set of data for your rig (35 to 70 ohms), which does actually bound the problem, assuming that yours is representative of the general class. It might be, it might not. There's no "trivial" (as in spending no more than 5 minutes) way to know.

For myself, I don't care, today, what my rig's output Z is, because everything I use it with doesn't care much (e.g. the auto matching network finds a match, and whether it's matching 50, 30, or 70 ohms, there's not much difference). If I were doing something different (measuring Z with a tuner) I would care, and I'd measure it.

> Given decades of lock-step design that conforms to accepted practices,
> why would anyone have to measure something to KNOW what it is?

Funny thing, then... there's remarkably little published (as in findable with google) data on the output impedance of solid state transmitters. Yes, the designs are pretty cookbook, but there's a dearth of published test or analysis (I maintain, of course, it's because nobody really cares much in actual application situations).

For other RF power amp applications (like plasma etchers, RF heating, etc) there IS data, but those devices aren't ham transmitters.

I did find a couple master's theses that have some data (but over a
very small frequency range around 7MHz) because they used a ham rig as
a source for a bridge scheme of some sort.

>
> Motorola has for years recited at least three different means to
> obtain large signal transistor output Z, and has characterized
> individual transistors over frequency in charts.
Sure..

>
> >> And for those same 30+ years of HF solid state rigs, their power
> >> transistors have had (and still do) output "native" Z of several Ohms.
>
> >Would that the active device has a Z that is constant, but it's not.
> >Sure, the MRF454 data sheet says the output Z is 1+.2j ohms (or
> >something like that) at 30MHz, but is it still that at 1MHz?

Just happened to be a data sheet I have handy... As you say, others
have more data.
(for large signals, no less)

>
> >Looking at a more modern power FET for amplifier use, the IXZ210N50L..
> >There's a whole page of S parameters, and S22 goes from 0.88@-51deg at
> >2MHz to 0...@-117.37 at 14.32 MHz to 0...@-130.17 at 30 MHz... that's
> >at Ids =200mA.. bump Ids to 500mA, and the magnitudes stay about the
> >same, but the phases change, by tens of degrees.
>
> Again, Motorola specifically rejects small signal parameterization for
> power applications. This is, perhaps, your problem with
> characterizing amplifier issues.

Those are actually large signal parameters.. that's a 150V transistor
running at several amps drain current.

Again, it just happens to be a datasheet I had laying around.

>
> I have selected, inspected, and validated transistors to Mil Spec and
> found very few wandered from commercial specification. You must
> inhabit a very different realm where production lots contain product
> that are "substantially different." Do you have some quantification
> for "substantially?" Or is this another example of a technician's
> shrug?

Substantially, as in Output C being off by a factor of more than 2.
But that could also be packaging effects, which are easier to quantify
by experiment than analysis. That's what breadboards are all about.

I would imagine that for parts used in amateur radios, this is all
thoroughly thrashed out, and there would be no big surprises. Just
that the "as implemented" data isn't readily available in 10 minutes
of searching.

> >No simple transformer is going to make that look like a constant 50
> >ohms.
>
> Ah, are we now down to parsing this to "exactly 50 Ohms" where in your
> objections you offer few quantifications? Does 49 Ohms invalidate the
> premise and score a home run for the opposing team?

Hmm depends on what sort of accuracy you want in your impedance
measurment, eh? If all you care about is 15-20% accuracy, a pretty
big variation will be ok.

>
> >> >I'd love to see some real data for ham rigs.
>
> >> Mine (Drake TR-7 and Kenwood TS-430s) exhibit values that vary around
> >> 50 Ohms with a low of 35 Ohms and a high of 70 Ohms in the margins.
> >> Those rigs also suffer in those margins.
>
> >so the VSWR looking back from the tuner into your transmitter is
> >1.4:1?   A return loss of around 15dB... what's that work out to... an
> >error of about 10-15% in the "measuring impedance with a tuner"
> >technique... not bad, but not great, either, especially stacked up
> >with the other uncertainties..
>
> Not great? You have already suggested it was unknowable,

I never said it was unknowable. I said it wasn't readily available or
known. Clearly one can measure it, and then know it. And now we do,
at least to 1 sig fig sorts of accuracies.. which is better than we
were 24 hours ago.

and others
> state it was immaterial. It gives me pause to have given a concrete
> result to now find what was unknown is now "uncertain" and what was
> immaterial now counts for little at "not great."

Immaterial in the usual amateur application (feeding a tuner which
feeds a transmission line which feeds an antenna).. not immaterial
when using the tuner to measure Z.

>
> >Although you have to admit that a 2:1 impedance variation isn't a
> >particularly outstanding "constant impedance load"
>
> This characteristic that is "not particularly outstanding" was
> formerly deemed impossible to determine and immaterial by others.

You're confusing "data not easily available in 5 minutes on the web"
with "impossible to determine".

>
> Your comments to the original poster, then, could have been reduced to
> one response of one line telling him to abandon his quest by this same
> logic.

yes, probably.

230. Re: Using Tuner to Determine Line Input Impedance

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-05 23:48:51 UTC
From: jimlux@earthlink.net
Message-ID: <c2230afa-4481-4764-b6b6-c4c8fa53d25f@j20g2000vbp.googlegroups.com>
Source record: 14892

>
> >But, does a "designed for mass production and cost target" transmitter
> >fall into that category?
> >It's not a published spec
>
> You mean you haven't read the spec.

--- Hmm. don't see any tolerance on the output impedance spec on my
IC-7000.. page 150 of the manual: Specifications.
All it says is:
Antenna Connector: SO-239x2/50 ohm.

Page 11, where it describes the back panel
Antenna Connector [ANT1][ANT2} Accepts a 50 ohm antenna with a PL-259
connector.

Page 15, provides a recomendation that the load impedance have a SWR
<1.5:1, and a boxed warning that at SWR higher than approximately
2.0:1 it drops power.

The service manual isn't much better, although it does have a
calibration procedure for the built in SWR meter, where you attach a
50 ohm dummy load and set to SWR=1, and then 100 ohms and set SWR=2.
That just calibrates the meter, though, it doesn't imply that the
actual output impedance is 50 ohms.

 I have seen this objection too.
> When I've offered just such specs, objectors have then recursed back
> into how output Z is unknowable and immaterial as if the topic had
> never been encountered before.
>
> >ARRL doesn't measure it when they review rigs
>
> Now THERE's an authority! Do they measure efficiency?

At least they do some measurements and they publish their results.

They do measure efficiency, in a round about way (e.g. they measure
output power into a dummy load and they measure DC input power).

jim

231. transciever output Z

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-06 00:04:15 UTC
From: jimlux@earthlink.net
Message-ID: <a0978410-feef-4520-a7df-694ad666c903@r13g2000vbr.googlegroups.com>
Source record: 14893

Found some test data on the web
http://www.sarl.org.za/forum/topic.asp?TOPIC_ID=3714
About a couple months old

Done using a variety of techniques: reverse injection, load pull, etc.

No details on the amplifier being tested, other than its a 100W class
AB of some sort.

232. Re: Sun Spots

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-06 00:15:20 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <oyiWl.34667$ZP4.6434@nlpi067.nbdc.sbc.com>
Source record: 14894

Art Unwin wrote:
> On Jun 5, 4:29 pm, Cecil Moore <nos...@w5dxp.com> wrote:
>> The maximum radiation occurs where the electrons are
>> experiencing the maximum deceleration. That doesn't
>> appear to be at the ends of a dipole.
>
> That is the second time you have suggested that a radiater
> loses mass during use. Where did you get that idea from?

Are you familiar with the the equation e=mc^2?
It is the equation that illustrates the equivalence
of mass and energy. Energy can be converted to mass
and mass can be converted to energy.

The transmitter driving the radiator increases the
energy=mass*c^2 of the radiator. What choice does the
radiator have except to release that extra acquired
energy=mass*c^2? If it didn't release it as radiation,
what would happen?
--
73, Cecil, IEEE, OOTC, http://www.w5dxp.com

233. Re: Sun Spots

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-06 00:23:32 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <4GiWl.34670$ZP4.13057@nlpi067.nbdc.sbc.com>
Source record: 14895

Jim Kelley wrote:
> Cecil Moore wrote:
>> Particles called photons radiate.
>
> Photons are radiated. They do not, themselves radiate.

Another poor choice of words. I should have said:
"Particles called photons are radiated." Are you going
to bad-mouth me for this poor choice of words five years
hence? Of course you will as you always have done!

>> Photons are
>> emitted by decelerating electrons.
>
> True, but Bremsstrahlung (synchrotron) radiation has nothing to do with
> antennas.

Exactly true, but Bremsstrahlung radiation also has
nothing to do with free electrons in a conductor which
are the source of the radiation from the antenna. You
might as well have said "Exactly true, but tomorrow is
June 6".
--
73, Cecil, IEEE, OOTC, http://www.w5dxp.com

234. Re: Using Tuner to Determine Line Input Impedance

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-06 01:24:43 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <1bgj25pttmk6vh849etdps9ah8dgnt51oh@4ax.com>
Source record: 14896

On Fri, 5 Jun 2009 16:48:51 -0700 (PDT), jimlux@earthlink.net wrote:

>> Now THERE's an authority! ï¿½Do they measure efficiency?

>They do measure efficiency, in a round about way (e.g. they measure
>output power into a dummy load and they measure DC input power).

Any round about reports of achieving better than a traditional conjugate matched 50% efficiency for CW? My Drake so qualifies at probably 60-70% (250W input with approx 30W for non-amp circuitry). Does a thirty year old design still represent the hallmark of modern performance? (Actually, I consider the Drake spec as being overly optimistic, but there you are. Too many would feel cheated for CW not to tip efficiency at a higher premium.)

And imagine again that internal resistance just sizzling several pounds of heat sink with all those immaterial (ephemeral?) calories.

73's
Richard Clark, KB7QHC

235. Re: Using Tuner to Determine Line Input Impedance

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-06 01:46:27 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <2bhj25psgnk9ipgnbktf0p5d4pd4msgrno@4ax.com>
Source record: 14897

On Fri, 5 Jun 2009 16:32:42 -0700 (PDT), jimlux@earthlink.net wrote:

>> I haven't the slightest idea why your objection demanding "high
>> precision components" is necessary. ï¿½Do you have anything that is
>> quantifiable to sustain this concern? ï¿½Give us a Monte Carlo result of
>> those quantified precisions and their impact on Z.
>
>I'm not going to bother.

Hi Jim,

I knew that going in. It was your point about the cost of lacking
precision, I merely asked for quantifiable evidence - never expecting
any.

>
>Again.. without published data from the transceiver maker (whether
>derived by measurement or analysis, it matters not) or data from
>somewhere else, I made the initial assertion that since using the
>tuner to measure impedance depended on the source being 50 ohms (or at
>least, known Z), one should not blindly assume that a rig has a output
>Z of 50 ohms.

I have demonstrated (and years of engineering has conformed to) that
expecting anything broadly outside of that value as a norm is fraught
with illusion.

>You provided one set of data for your rig (35 to 70
>ohms), which does actually bound the problem, assuming that yours is
>representative of the general class. It might be, it might not.

Two personal rigs, not one, and quite a bit of bench time working with
many RF power sources (and sinks) that are more than trivial signal
generators (and loads).

>There's no "trivial" (as in spending no more than 5 minutes) way to
>know.

But there is a trivial way to dismiss it.

>Funny thing, then... there's remarkably little published (as in
>findable with google) data on the output impedance of solid state
>transmitters. Yes, the designs are pretty cookbook, but there's a
>dearth of published test or analysis (I maintain, of course, it's
>because nobody really cares much in actual application situations).

You can draw any conclusion from an uninspired search, certainly. I
used your own reference of Motorola whose technical libraries have

enough titles specific to the topic. I will anticipate you are too
bored with the topic to go to your own choice of authority.

>You're confusing "data not easily available in 5 minutes on the web"
>with "impossible to determine".

I am comparing experience against unwarranted presumptions.

>> Your comments to the original poster, then, could have been reduced to
>> one response of one line telling him to abandon his quest by this same
>> logic.
>
>yes, probably.

Roger Johnson delivered.

73's
Richard Clark, KB7QHC

236. Re: Sun Spots

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-06 01:54:01 UTC
From: Art Unwin <ArthurUnwin@gmail.com>
Message-ID: <76080ce2-aa91-4f3c-819d-ef631e385043@g1g2000yqh.googlegroups.com>
Source record: 14898

On Jun 5, 7:23 pm, Cecil Moore <nos...@w5dxp.com> wrote:
> Jim Kelley wrote:
> > Cecil Moore wrote:
> >> Particles called photons radiate.
>
> > Photons are radiated. They do not, themselves radiate.
>
> Another poor choice of words. I should have said:
> "Particles called photons are radiated." Are you going
> to bad-mouth me for this poor choice of words five years
> hence? Of course you will as you always have done!
>
> >> Photons are
> >> emitted by decelerating electrons.
>
> > True, but Bremsstrahlung (synchrotron) radiation has nothing to do with
> > antennas.
>
> Exactly true, but Bremsstrahlung radiation also has
> nothing to do with free electrons in a conductor which
> are the source of the radiation from the antenna. You
> might as well have said "Exactly true, but tomorrow is
> June 6".
> --
> 73, Cecil, IEEE, OOTC, http://www.w5dxp.com

Interesting aproach Cecil, but matter and energy cannot be created or
destroyed which confuses what you stated!
With respect to free electrons that " may " reside inside matter,
surely you are aware that
current flows on the surface and therefore would not come in contact
with free electrons,
at least to my mind.
Unbound electrons are totally different as they reside upon the
surface which then allows for possible levitation. Either way, using
"mc sqd" the way you are implies loss of matter from the radiator. Now
this can happen with the onslaught of temperature where the matter
vaporizes into a gas as with a light bulb where gas is state of
matter, thus the filament becomes lighter. This does not happen with a
radiator of normal temperature. This is my opinion of course and you
have yours which is part and parcel of debate. This is what I enjoy.
Regards
Art

237. Re: Hexbeam Antenna Modeling

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-06 02:05:04 UTC
From: Jeff Liebermann <jeffl@cruzio.com>
Message-ID: <5hhj25d162q8gcrkijdp424q2c0d34r4q7@4ax.com>
Source record: 14899

On Thu, 04 Jun 2009 19:30:29 -0700, Roy Lewallen <w7el@eznec.com>
wrote:

>Here's my candidate for the award, embodied in a U.S. patent:
>http://tinyurl.com/h546u
>Roy Lewallen, W7EL

The link first returned:
crt0: ERROR couldn't open /usr/lib/dld.sl errno:000000023
Error #1010
Error: Filter Process terminated abnormally. Document may be
truncated.

A few minutes later, it was:
Error #1006
Error!
BRS was unable to process your request. A diagnostic message was
mailed to the appropriate personnel.

I hate days like this.... Eventually the patent appeared, but no
illustrations on that page. Instead, see:
<http://www.google.com/patents/about?id=csYDAAAAEBAJ&dq=6,025,810>
for the schematics, illustrations and a parts list. Hmmm.... only
works above 1000F temperature. Googling a bit deeper, I find that the
patent holder, David L. Strom, is currently a real estate agent in
Colorado.
<http://www.homethinking.com/180340-David-L-Strom-Coldwell-Banker-Strom--Associates-Inc.ht
ml>

Here's my favorite:
<http://www.google.com/patents/about?id=N_sEAAAAEBAJ&dq=5,982,276>
Not exactly an antenna. It uses a MASER to (somehow) magnetically
couple Gigabit data to the power lines. The company is still around:
<http://www.mediafusionllc.net>

238. Re: "Large" volume antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-06 02:18:13 UTC
From: Art Unwin <ArthurUnwin@gmail.com>
Message-ID: <5d5c08b2-34ab-4d95-96da-39251d7b6547@y7g2000yqa.googlegroups.com>
Source record: 14900

On Jun 1, 2:42 pm, Art Unwin <ArthurUn...@gmail.com> wrote:
> I have just made a larger than usual antenna that radiates well below
> the broadcast band so I may study generated radiation patterns. The
> antenna
> is on a structure that rotates as well as a tipping action, all about
> 4 feet above the ground. Initially I will just listen to signal
> variences when aim and tilt is in the best position. I recognise that
> I may have to put a digital meter across the S meter terminals
> together with a holding capacitor but for the moment I will be guided
> by the S meter. On the upper frequencies I will hook up to a TV for a
> visual. SWR readings will be initially recorded
> across all frequencies in the horizontal position to be used as a
> datum
> which certainly be required as shielding is added in the near future.
> Comments?
> Regards
> Art

Just measured the SWR using mfj 259b where it measures 2:1@2 Mhz with
slight variences as the frequency increases. The meter only goes to
175 Mhz so I cannot measure further. How ever the varience is ever
decreasing so I would say in the Ghz range it should be linear at
something less than 2:1 So a normal transmitter will not require an
external tuner as frequencies are scanned. Real neat. Weight is in
the order of 6.5 lbs and a weather balloon is capable of lifting 7 lbs
so that is something to contemplate this summer for top band. Have the
tilt set for approx 6 degrees which puts me above ground clutter and
will leave it there to get some experience on different bands and
conditions.
Art

239. Re: Sun Spots

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-06 02:24:28 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <%ikWl.5406$fD.1317@flpi145.ffdc.sbc.com>
Source record: 14951

Art Unwin wrote:
> With respect to free electrons that " may " reside inside matter,
> surely you are aware that
> current flows on the surface and therefore would not come in contact
> with free electrons, at least to my mind.

Free electrons are in the outside shells. The outside
shells are on the surface of the conductor. Only the
free electrons close to the surface of the conductor
are involved in the skin effect.

As far as m=e/c^2 mass loss due to radiation is concerned,
during steady-state, the RF source is supplying exactly
that same amount of m=e/c^2 per unit time at the feedpoint.
--
73, Cecil, IEEE, OOTC, http://www.w5dxp.com

240. Re: "Large" volume antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-06 03:17:28 UTC
From: tom <news4792@taring.org>
Message-ID: <4a29dfe6$0$92355$8046368a@newsreader.iphouse.net>
Source record: 14952

Art Unwin wrote:
> Just measured the SWR using mfj 259b where it measures 2:1@2 Mhz with
> slight variences as the frequency increases. The meter only goes to
> 175 Mhz so I cannot measure further. How ever the varience is ever
> decreasing so I would say in the Ghz range it should be linear at
> something less than 2:1 So a normal transmitter will not require an
> external tuner as frequencies are scanned. Real neat. Weight is in
> the order of 6.5 lbs and a weather balloon is capable of lifting 7 lbs
> so that is something to contemplate this summer for top band. Have the
> tilt set for approx 6 degrees which puts me above ground clutter and
> will leave it there to get some experience on different bands and
> conditions.
> Art

LOL

tom
K0TAR

241. Re: "Large" volume antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-06 03:26:08 UTC
From: tom <news4792@taring.org>
Message-ID: <4a29e19b$0$18864$8046368a@newsreader.iphouse.net>
Source record: 14953

Art Unwin wrote:
> Just measured the SWR using mfj 259b where it measures 2:1@2 Mhz with
> slight variences as the frequency increases. The meter only goes to
> 175 Mhz so I cannot measure further. How ever the varience is ever
> decreasing so I would say in the Ghz range it should be linear at
> something less than 2:1 So a normal transmitter will not require an
> external tuner as frequencies are scanned. Real neat. Weight is in
> the order of 6.5 lbs and a weather balloon is capable of lifting 7 lbs
> so that is something to contemplate this summer for top band. Have the
> tilt set for approx 6 degrees which puts me above ground clutter and
> will leave it there to get some experience on different bands and
> conditions.
> Art

So why haven't you already used it on 160, 80/75, 60, 40, 20, 17, 15,
12, 10, 6, or 2 and told use about your results?

I am quite anxious to hear how well this works, because if it works
well, I will be one of the first to make one.

Please include signal reports from the station you work as well as
signal reports concerning other stations they work.

A very good frequency to try this on would be 14.300, as they are quite
good net control operators. If you work one of the 14.300 net controls,
please include their callsign and the time you worked them.

tom
K0TAR

242. Re: Sun Spots

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-06 03:33:51 UTC
From: Art Unwin <ArthurUnwin@gmail.com>
Message-ID: <8c457341-62c1-4a84-804b-368cca58e392@e21g2000yqb.googlegroups.com>
Source record: 14954

On Jun 5, 9:24 pm, Cecil Moore <nos...@w5dxp.com> wrote:
> Art Unwin wrote:
> > With respect to free electrons that " may " reside inside matter,
> > surely you are aware that
> > current flows on the surface and therefore would not come in contact
> > with free electrons, at least to my mind.
>
> Free electrons are in the outside shells. The outside
> shells are on the surface of the conductor. Only the
> free electrons close to the surface of the conductor
> are involved in the skin effect.
>
> As far as m=e/c^2 mass loss due to radiation is concerned,
> during steady-state, the RF source is supplying exactly
> that same amount of m=e/c^2 per unit time at the feedpoint.
> --
> 73, Cecil, IEEE, OOTC, http://www.w5dxp.com

Then where do you think these free electrons come from?
Skin effect is displacement current which is surface and below
oriented
and "free" or unbound electrons are on the surface and above oriented.
This use of m=e/c sqd seems to be going over the top with respect to
radiation.
Art

243. Re: "Large" volume antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-06 03:44:33 UTC
From: Art Unwin <ArthurUnwin@gmail.com>
Message-ID: <bd2fc015-bd87-46dd-97f5-9ded3d1dfb1a@i6g2000yqj.googlegroups.com>
Source record: 14955

On Jun 5, 10:26 pm, tom <news4...@taring.org> wrote:
> Art Unwin wrote:
> > Just measured the SWR using mfj 259b where it measures 2:1@2 Mhz with
> > slight variences as the frequency increases. The meter only goes to
> > 175 Mhz so I cannot measure further. How ever the varience is ever
> > decreasing so I would say in the Ghz range it should be linear at
> > something less than 2:1 So a normal transmitter will not require an
> > external tuner as frequencies are scanned. Real neat. Weight is in
> > the order of 6.5 lbs and a weather balloon is capable of lifting 7 lbs
> > so that is something to contemplate this summer for top band. Have the
> > tilt set for approx 6 degrees which puts me above ground clutter and
> > will leave it there to get some experience on different bands and
> > conditions.
> > Art
>
> So why haven't you already used it on 160, 80/75, 60, 40, 20, 17, 15,
> 12, 10, 6, or 2 and told use about your results?
>
> I am quite anxious to hear how well this works, because if it works
> well, I will be one of the first to make one.
>
> Please include signal reports from the station you work as well as
> signal reports concerning other stations they work.
>
> A very good frequency to try this on would be 14.300, as they are quite
> good net control operators. If you work one of the 14.300 net controls,
> please include their callsign and the time you worked them.
>
> tom
> K0TAR

Tom, I do not work for you and I am not in your employ. When and if I
publish it you can try to make it, but for why? It is just a miracle
in my own mind! You are one of the few that have decided that
experimenting is only for those weak in mind where-as you can predict
all results while lounging on a sofa. I suppose because I still
experiment I have not reached
your advanced stage of brain power where all is known and results are
predictable.

244. Re: "Large" volume antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-06 03:53:56 UTC
From: tom <news4792@taring.org>
Message-ID: <4a29e872$0$92355$8046368a@newsreader.iphouse.net>
Source record: 14956

Art Unwin wrote:
>> A very good frequency to try this on would be 14.300, as they are quite
>> good net control operators. If you work one of the 14.300 net controls,
>> please include their callsign and the time you worked them.
>>
>> tom
>> K0TAR
>
> Tom, I do not work for you and I am not in your employ. When and if I
> publish it you can try to make it, but for why? It is just a miracle
> in my own mind! You are one of the few that have decided that
> experimenting is only for those weak in mind where-as you can predict
> all results while lounging on a sofa. I suppose because I still
> experiment I have not reached
> your advanced stage of brain power where all is known and results are
> predictable.

In other words, your antenna doesn't work.

Just as I suspected.

tom
K0TAR

245. Re: "Large" volume antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-06 04:16:54 UTC
From: Art Unwin <ArthurUnwin@gmail.com>
Message-ID: <a958eebf-2c36-4717-9a88-5726e6e865b0@c19g2000yqc.googlegroups.com>
Source record: 14957

On Jun 5, 10:53 pm, tom <news4...@taring.org> wrote:
> Art Unwin wrote:
> >> A very good frequency to try this on would be 14.300, as they are quite
> >> good net control operators. If you work one of the 14.300 net controls,
> >> please include their callsign and the time you worked them.
>
> >> tom
> >> K0TAR
>
> > Tom, I do not work for you and I am not in your employ. When and if I
> > publish it you can try to make it, but for why? It is just a miracle
> > in my own mind! You are one of the few that have decided that
> > experimenting is only for those weak in mind where-as you can predict
> > all results while lounging on a sofa. I suppose because I still
> > experiment I have not reached
> > your advanced stage of brain power where all is known and results are
> > predictable.
>
> In other words, your antenna doesn't work.
>
> Just as I suspected.
>
> tom
> K0TAR

It is just a miracle in my own mind. Just as you suspected or deduced.
But then again what does "work" mean? All antennas "work" whether you
want it to or not. But..... I have an antenna that does not "work" the
way you say it "should" work, just as you predicted!

246. Re: transciever output Z

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-06 07:01:26 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <564k25dnckbfq2gu05ho5fd7va11pi17ga@4ax.com>
Source record: 14958

On Fri, 5 Jun 2009 17:04:15 -0700 (PDT), jimlux@earthlink.net wrote:

>Found some test data on the web
>http://www.sarl.org.za/forum/topic.asp?TOPIC_ID=3714
>About a couple months old
>
>Done using a variety of techniques: reverse injection, load pull, etc.
>
>No details on the amplifier being tested, other than its a 100W class
>AB of some sort.

Hi Jim,

It is described as a 24VDC design. The description in the report of negative feed back is in fact compensation, not negative feedback. The data clearly reveals its lack.

The means of rigorously enforcing an uniform presentation of output Z across loads, frequency, drive, power supply sag (what have you) would appear through the usage of negative feedback. However, as this would be a very costly addition, it is found no where except in premium designs. Total RF gain in the typical finals deck is not particularly great, so there is very little latitude for this in conventional designs. If there were, there would be no need for LPF in the output, and you could tailor the output Z to any of a multitude of reasonable values (say from 10 Ohms to 200 Ohms) on-the-fly that would further obviate the need for a tuner.

Tuners and LPFs are cheaper, however.

73's
Richard Clark, KB7QHC

247. Re: Sun Spots

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-06 07:27:13 UTC
From: Szczepan Białek <sz.bialek@wp.pl>
Message-ID: <h0cseh$qg3$1@node1.news.atman.pl>
Source record: 14959

"Cecil Moore" <nospam@w5dxp.com> wrote
news:JdgWl.17746$pr6.15784@flpi149.ffdc.sbc.com...
> Szczepan Biaďż˝ek wrote:
>> It seems to me that the radiating elements radiate from the ends.
>
> The maximum radiation occurs where the electrons are
> experiencing the maximum deceleration.

Bremsstrahlung.

> That doesn't appear to be at the ends of a dipole.

Look once more on the original Hertz apparatus.
In the centre the sparks (electrons) jump with the high velocity. They
oscillate. Where is the maximum deceleration?
S*

248. Polarized radiation

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-06 08:26:44 UTC
From: Szczepan Białek <sz.bialek@wp.pl>
Message-ID: <h0cvu7$qr9$1@node1.news.atman.pl>
Source record: 14960

In: http://www.ycars.org/EFRA/Module%20C/AntLoop.htm is wrote:

"It is possible to create either horizontally or vertically polarized radiation with a large loop antenna. The polarization is determined by the location of the feed point as shown below. If the feed point is in a horizontal side of the loop, the polarization is horizontal. If the feed point is in a vertical side of the loop, the polarization is vertical."

For me the LARGE loop antenna is also a dipole with the two ends. It radiates from the ends the coupled electric waves.

But what radiate 1/4 wave antenna (mast) with the one end only? Is the radiation polarized?
S*

249. Re: Polarized radiation

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-06 11:10:31 UTC
From: Dave <noone@nowhere.com>
Message-ID: <H8sWl.932$u86.298@nwrddc01.gnilink.net>
Source record: 14961

"Szczepan Bialek" <sz.bialek@wp.pl> wrote in message
news:h0cvu7$qr9$1@node1.news.atman.pl...
> In: http://www.ycars.org/EFRA/Module%20C/AntLoop.htm is wrote:
>
> "It is possible to create either horizontally or vertically polarized
> radiation with a large loop antenna. The polarization is determined by the
> location of the feed point as shown below. If the feed point is in a
> horizontal side of the loop, the polarization is horizontal. If the feed
> point is in a vertical side of the loop, the polarization is vertical."
>
> For me the LARGE loop antenna is also a dipole with the two ends. It
> radiates from the ends the coupled electric waves.

no, it radiates from the whole length of the wire.

>
> But what radiate 1/4 wave antenna (mast) with the one end only? Is the
> radiation polarized?
> S*

yes, it is polarized and easily measured as such.

250. Re: Sun Spots

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-06 11:15:54 UTC
From: Dave <noone@nowhere.com>
Message-ID: <KdsWl.933$u86.599@nwrddc01.gnilink.net>
Source record: 14962

"Art Unwin" <ArthurUnwin@gmail.com> wrote in message
news:76080ce2-aa91-4f3c-819d-ef631e385043@g1g2000yqh.googlegroups.com...
>With respect to free electrons that " may " reside inside matter,
>surely you are aware that
>current flows on the surface and therefore would not come in contact
>with free electrons,
>at least to my mind.

well, your mind is wrong. it doesn't flow 'on the surface' it flows in the metal with higher current near the surface and exponentially decreasing as it moves in toward the center of the conductor... but all the current IS the result of moving the free electrons IN the metal.

>Unbound electrons are totally different as they reside upon the
>surface which then allows for possible levitation.

ohhh, levitating electrons! now that is a new one! before it was just the magical diamagnetic levitating solar neutrinos that flew off the antenna. he never could figure out how my ferromagnetic antenna worked.

251. Re: Sun Spots

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-06 12:53:14 UTC
From: Art Unwin <ArthurUnwin@gmail.com>
Message-ID: <4d800b1e-550f-462d-9266-d07c8c23d26a@3g2000yqk.googlegroups.com>
Source record: 14963

On Jun 6, 6:15 am, "Dave" <no...@nowhere.com> wrote:
> "Art Unwin" <ArthurUn...@gmail.com> wrote in message
>
> news:76080ce2-aa91-4f3c-819d-ef631e385043@g1g2000yqh.googlegroups.com...
>
> >With respect to free electrons that " may " reside inside matter,
> >surely you are aware that
> >current flows on the surface and therefore would not come in contact
> >with free electrons,
> >at least to my mind.
>
> well, your mind is wrong. it doesn't flow 'on the surface' it flows in the
> metal with higher current near the surface and exponentially decreasing as
> it moves in toward the center of the conductor... but all the current IS the
> result of moving the free electrons IN the metal.

You are correct, Am I allowed a senior moment?

>
> >Unbound electrons are totally different as they reside upon the
> >surface which then allows for possible levitation.
>
> ohhh, levitating electrons! now that is a new one! before it was just the
> magical diamagnetic levitating solar neutrinos that flew off the antenna.
> he never could figure out how my ferromagnetic antenna worked.

That is not strictly correct. Maxwell accounted for all forces to
determine maximum efficiency. Ferro magnetic materials have a
hysteresus effect or energy loss compared to diamagnetic materials so
the former does work but not with the efficiencies of the latter.
As far as solar is concerned it is these abnormalities or disturbances
which preceed all
major radio activities thus there is a bond between these observances
that cannot be denied. The Sun is within a boundary that fractures all
the time because of temperature increase and thus expells matter. It
would seem reasonable that such matter finds its way to Earth to
settle thus giving a connection between the arrival of external
particles or electrons as opposed to free electrons that exist in
place.
As for levitation is concerned that has been known for a long time and
is presently used in Industry in many places by the introduction of
displacement current. Read up on it.
Elementary my dear Watson

252. Re: Polarized radiation

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-06 13:00:49 UTC
From: Art Unwin <ArthurUnwin@gmail.com>
Message-ID: <ff3713eb-d153-4b4d-8875-5d3ae9f77518@c36g2000yqn.googlegroups.com>
Source record: 14964

On Jun 6, 3:26 am, Szczepan Białek <sz.bia...@wp.pl> wrote:
> In:http://www.ycars.org/EFRA/Module%20C/AntLoop.htm is wrote:
>
> "It is possible to create either horizontally or vertically polarized
> radiation with a large loop antenna. The polarization is determined by the
> location of the feed point as shown below. If the feed point is in a
> horizontal side of the loop, the polarization is horizontal. If the feed
> point is in a vertical side of the loop, the polarization is vertical."
>
> For me the LARGE loop antenna is also a dipole with the two ends. It
> radiates from the ends the coupled electric waves.
>
> But what radiate 1/4 wave antenna (mast) with the one end only? Is the
> radiation polarized?
> S*

S* what you are missing is the effect of spin which provides straight
line projection.
The radiation energy is released in pulses. Depending where these
pulses occur determines if there is one or two vectors of energy
applied. At the ends of the radiator which is a fraction of a
wavelength there is only one vector and thus no spin imparted.
The result of just the single pulse of energy is the spark that you
observed.

253. Re: Sun Spots

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-06 13:36:55 UTC
From: Dave <noone@nowhere.com>
Message-ID: <XhuWl.569$tr5.568@nwrddc02.gnilink.net>
Source record: 14965

"Art Unwin" <ArthurUnwin@gmail.com> wrote in message
news:4d800b1e-550f-462d-9266-d07c8c23d26a@3g2000yqk.googlegroups.com...
>You are correct, Am I allowed a senior moment?

you have been having one big senior moment on here.

>That is not strictly correct. Maxwell accounted for all forces to
>determine maximum efficiency.

no he didn't. show me where gravity, the weak nuclear force, or the strong nuclear force are accounted for in the equations. specific terms, no handwaving and don't fall back on the stupid tilted vertical argument, give the equations where those terms are included.

254. Re: hi sos

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-06 14:28:39 UTC
From: discretman16@gmail.com
Message-ID: <75eaf7ce-480d-4504-98cf-0d596719c44e@r37g2000yqd.googlegroups.com>
Source record: 14966

On 6 juin, 00:03, "Jerry" <jerrymar...@verizon.net> wrote:
> <discretma...@gmail.com> wrote in message
>
> news:e9629be8-eff6-4bfb-946e-7fa63d1692d3@y7g2000yqa.googlegroups.com...> hi Jerry
KD6JDJ
>
> yes i'll be thankful if u show how do it
>
> Hi "disc"
>
> I can help you a little with learning to use EZNEC to model a Quad Helix.
> I have a few Quad Helix antennas modeled for 137 MHz. That data is
> available to you.
> I can show you how to design your own hemispheric coverage antenna that
> will perform better than a Quad Helix for reception of signals from polar
> orbiting satallites.
>
> What do you want to do?
>
> Jerry KD6JDJ
>
>
>
> - Masquer le texte des messages précédents -
>
> - Afficher le texte des messages précédents -

hi "jerry"

i want QHA models and i try to adapt them for 2GHZ it's for
heliosynchron
satellite for earth sensing
thank u

255. Re: Sun Spots

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-06 14:55:24 UTC
From: Art Unwin <ArthurUnwin@gmail.com>
Message-ID: <abdd4e73-6074-4b3f-8fd5-47f84fe8e0b9@e20g2000vbc.googlegroups.com>
Source record: 14967

On Jun 6, 8:36 am, "Dave" <no...@nowhere.com> wrote:
> "Art Unwin" <ArthurUn...@gmail.com> wrote in message
>
> news:4d800b1e-550f-462d-9266-d07c8c23d26a@3g2000yqk.googlegroups.com...
>
> >You are correct, Am I allowed a senior moment?
>
> you have been having one big senior moment on here.
>
> >That is not strictly correct. Maxwell accounted for all forces to
> >determine maximum efficiency.
>
> no he didn't. show me where gravity, the weak nuclear force, or the strong
> nuclear force are accounted for in the equations. specific terms, no
> handwaving and don't fall back on the stupid tilted vertical argument, give
> the equations where those terms are included.

For equilibrium a full wave verticle antenna must be tipped from
vertical.
This way you do not get a pattern of a donut but a boundary that is
spherical such that the
pressure on the borders is uniform.If your vertical was arranged that
way you could trace a satellite without moving the radiator. In
defence work you would arrange your antennas in such a way so as to
avoid undetected entry via the donut hole in a vertical radiator.
That is not stupid. Equilibrium is an important factor in all
scientific laws and must be taken into account.

256. Re: Sun Spots

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-06 15:00:05 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <RvvWl.18242$jZ1.2433@flpi144.ffdc.sbc.com>
Source record: 14968

Art Unwin wrote:
> Then where do you think these free electrons come from?

They are a characteristic of conductors. My physics books says the free electrons are bound to positive ions of the conductor material and (usually) cannot escape the attractive force of the metal ions. They are "free" to move from ion to ion while remaining with the conductor. The movement can be random or orderly caused by an EMF.

> ... "free" or unbound electrons are on the surface ...

Free electrons are loosely bound to atoms of conductors but they are not "free" to leave the conductor unless they are in contact with another conductor. When you hold a piece of metal, what you are "feeling" is the repulsive force between electrons.

> This use of m=e/c sqd seems to be going over the top with respect to
> radiation.

You brought it up, Art, so I explained it. Please note that if one joule per second is radiated from an antenna because one joule per second is being supplied to the antenna during steady-state, the mass supplied and lost during each second is one joule divided by the square of the speed of light which is a very small magnitude of mass.
--
73, Cecil, IEEE, OOTC, http://www.w5dxp.com

257. Re: hi sos

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-06 15:05:01 UTC
From: Jerry <jerrymartes@verizon.net>
Message-ID: <xAvWl.579$tr5.211@nwrddc02.gnilink.net>
Source record: 14969

<discretman16@gmail.com> wrote in message
news:75eaf7ce-480d-4504-98cf-0d596719c44e@r37g2000yqd.googlegroups.com...
On 6 juin, 00:03, "Jerry" <jerrymar...@verizon.net> wrote:
> <discretma...@gmail.com> wrote in message
>
> news:e9629be8-eff6-4bfb-946e-7fa63d1692d3@y7g2000yqa.googlegroups.com...>
> hi Jerry KD6JDJ
>
> yes i'll be thankful if u show how do it
>
> Hi "disc"
>
> I can help you a little with learning to use EZNEC to model a Quad Helix.
> I have a few Quad Helix antennas modeled for 137 MHz. That data is
> available to you.
> I can show you how to design your own hemispheric coverage antenna that
> will perform better than a Quad Helix for reception of signals from polar
> orbiting satallites.
>
> What do you want to do?
>
> Jerry KD6JDJ
>
>
>
> - Masquer le texte des messages pr&#65533;c&#65533;dents -
>
> - Afficher le texte des messages pr&#65533;c&#65533;dents -

```
hi "jerry"

i want QHA models and i try to adapt them for 2GHZ it's for
heliosynchron
satellite for earth sensing
thank u

Hi "disc"

Wow, thats a small Quad Helix. Tell me the dimensions. I'll try to model
it for you using EZNEC.
Is this a real project? That is, do you have the antenna, or are you
planning to build one? If you have a "store bought" 2 GHz Quad helix,
there are certainly some patterns available from the mnanufacturer. If you
plan to build the Quad helix, are you able to make any impedance
measurements of the model?
```

As you know, the fundamental plan in the Quad Helix design is to make one loop radiate 90 degrees later than the other due to the impedance difference between the two loops.

Jerry KD6JDJ

258. Re: Sun Spots

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-06 15:20:13 UTC
From: Art Unwin <ArthurUnwin@gmail.com>
Message-ID: <a3552aa8-7f26-495e-af5b-a291026dffcf@n4g2000vba.googlegroups.com>
Source record: 14970

On Jun 6, 10:00 am, Cecil Moore <nos...@w5dxp.com> wrote:
> Art Unwin wrote:
> > Then where do you think these free electrons come from?
>
> They are a characteristic of conductors. My physics
> books says the free electrons are bound to positive
> ions of the conductor material and (usually) cannot
> escape the attractive force of the metal ions. They
> are "free" to move from ion to ion while remaining
> with the conductor. The movement can be random or
> orderly caused by an EMF.
>
> > ... "free" or unbound electrons are on the surface ...
>
> Free electrons are loosely bound to atoms of
> conductors but they are not "free" to leave the
> conductor unless they are in contact with another
> conductor. When you hold a piece of metal, what
> you are "feeling" is the repulsive force between
> electrons.
>
> > This use of m=e/c sqd seems to be going over the top with respect to
> > radiation.
>
> You brought it up, Art, so I explained it. Please
> note that if one joule per second is radiated
> from an antenna because one joule per second is
> being supplied to the antenna during steady-state,
> the mass supplied and lost during each second is
> one joule divided by the square of the speed of
> light which is a very small magnitude of mass.
> --
> 73, Cecil, IEEE, OOTC, http://www.w5dxp.com

It is as I thought, you were referring to electrons within the subject
matter
I provided the link to the solar system in particular to the Sun.
Where or what is your solar
link or do you deny such a linkage?
Regards
Art

259. Re: Sun Spots

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-06 15:24:11 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <rSvWI.18249$jZ1.17802@flpi144.ffdc.sbc.com>
Source record: 14971

Szczepan Białż˝ek wrote:
> Look once more on the original Hertz apparatus.
> In the centre the sparks (electrons) jump with the high velocity. They
> oscillate. Where is the maximum deceleration?

The electrons are essentially oscillating back and
forth within a few micrometers of their center positions
under the influence of RF source energy. The maximum
deceleration would therefore occur within a few
micrometers of the maximum current point.

The maximum current point in a center-fed 1/2WL
dipole is at the feedpoint.
--
73, Cecil, IEEE, OOTC, http://www.w5dxp.com

260. Re: Polarized radiation

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-06 15:27:45 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <MVvWI.18251$jZ1.6066@flpi144.ffdc.sbc.com>
Source record: 14972

Szczepan Białˊżˊek wrote:
> But what radiate 1/4 wave antenna (mast) with the one end only? Is the
> radiation polarized?

Why not download the free demo version of EZNEC from
www.eznec.com which will tell you that the radiation
from a 1/4WL vertical monopole is primarily vertically
polarized.
--
73, Cecil, IEEE, OOTC, http://www.w5dxp.com

261. Re: Sun Spots

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-06 15:31:37 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <pZvWl.31276$yr3.7176@nlpi068.nbdc.sbc.com>
Source record: 14973

Dave wrote:
> ohhh, levitating electrons! now that is a new one!

I suspect that a direct lightning strike on a
Yagi antenna will levitate some electrons. :-)
--
73, Cecil, IEEE, OOTC, http://www.w5dxp.com

262. Re: Sun Spots

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-06 16:03:42 UTC
From: Art Unwin <ArthurUnwin@gmail.com>
Message-ID: <60657b85-b1fc-46b7-b8e8-5969dd2b32dc@k20g2000vbp.googlegroups.com>
Source record: 14974

On Jun 6, 10:31 am, Cecil Moore <nos...@w5dxp.com> wrote:
> Dave wrote:
> > ohhh, levitating electrons! now that is a new one!
>
> I suspect that a direct lightning strike on a
> Yagi antenna will levitate some electrons. :-)
> --
> 73, Cecil, IEEE, OOTC, http://www.w5dxp.com

Yes and with the multi frequency of emmission of lightning one does
not have to be choosey
about the resonance or length of your radiator

263. Re: "Large" volume antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-06 16:35:14 UTC
From: JIMMIE <JIMMIEDEE123@YAHOO.COM>
Message-ID: <d6f60707-e077-418a-8d93-cb6acfbac410@a7g2000yqk.googlegroups.com>
Source record: 14975

On Jun 5, 11:26 pm, tom <news4...@taring.org> wrote:
> Art Unwin wrote:
> > Just measured the SWR using mfj 259b where it measures 2:1@2 Mhz with
> > slight variences as the frequency increases. The meter only goes to
> > 175 Mhz so I cannot measure further. How ever the varience is ever
> > decreasing so I would say in the Ghz range it should be linear at
> > something less than 2:1 So a normal transmitter will not require an
> > external tuner as frequencies are scanned. Real neat. Weight is in
> > the order of 6.5 lbs and a weather balloon is capable of lifting 7 lbs
> > so that is something to contemplate this summer for top band. Have the
> > tilt set for approx 6 degrees which puts me above ground clutter and
> > will leave it there to get some experience on different bands and
> > conditions.
> > Art
>
> So why haven't you already used it on 160, 80/75, 60, 40, 20, 17, 15,
> 12, 10, 6, or 2 and told use about your results?
>
> I am quite anxious to hear how well this works, because if it works
> well, I will be one of the first to make one.
>
> Please include signal reports from the station you work as well as
> signal reports concerning other stations they work.
>
> A very good frequency to try this on would be 14.300, as they are quite
> good net control operators. If you work one of the 14.300 net controls,
> please include their callsign and the time you worked them.
>
> tom
> K0TAR

Tom, he is never going to try the antenna or admit it doest work. Heck
I built the stupid thing knowing it was a dummy load and a CBer's
joke just to say I built it. (I was also very sick and bored at the
time). It doesnt work because the impedance of the antenna consist
primarily of ohmic resistance and dielectric losses. I doubt if he has
ever buit the damned thing .
Giving that the design of his antenna is a known CBers prank, I
suspect Art comes from the same place.

Unfortunately I also have known of someone else who behaves like Art.
He was truly a brillant person who repaired banks tabulating machines
back when they were all mechanical. He was brillant in more ways than
just mechanics, a true rennisance man if ever I met one. Then he had a
stroke. He latched on to this EXACT same "antenna" saying that he had

designed it even though I knew of its CB use years before he discovered it. He used to be a good family friend until I showed him his antenna did not work comparing it side by side to a simple dipole. For Arts sake I hope he truly is just a prankster. I wouldnt wish the changes I saw on the poor guy I knew on anyone.

I know I have seen the "antenna" before I knew it as a CB joke. I am pretty sure it was in my grandfathers collection of radio books which dated from the 20s to the 40s used as a dummy load.

Jimmie

264. Re: Polarized radiation

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-06 17:03:55 UTC
From: Szczepan Białek <sz.bialek@wp.pl>
Message-ID: <h0du7l$uj3$1@node1.news.atman.pl>
Source record: 14976

"Cecil Moore" <nospam@w5dxp.com> wrote
news:MVvWl.18251$jZ1.6066@flpi144.ffdc.sbc.com...
> Szczepan Biaďż˝ek wrote:
>> But what radiate 1/4 wave antenna (mast) with the one end only? Is the
>> radiation polarized?
>
> Why not download the free demo version of EZNEC from
> www.eznec.com which will tell you that the radiation
> from a 1/4WL vertical monopole is primarily vertically
> polarized.

What means "primarily"?
Is in reality an antenna which radiate unpolarized radio waves?
S*

265. Re: "Large" volume antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-06 17:07:20 UTC
From: Art Unwin <ArthurUnwin@gmail.com>
Message-ID: <ac27530d-67fe-47a5-b6c9-6f1d0aa1b143@n4g2000vba.googlegroups.com>
Source record: 14977

On Jun 6, 11:35 am, JIMMIE <JIMMIEDEE...@YAHOO.COM> wrote:
> On Jun 5, 11:26 pm, tom <news4...@taring.org> wrote:
>
>
>
> > Art Unwin wrote:
> > > Just measured the SWR using mfj 259b where it measures 2:1@2 Mhz with
> > > slight variences as the frequency increases. The meter only goes to
> > > 175 Mhz so I cannot measure further. How ever the varience is ever
> > > decreasing so I would say in the Ghz range it should be linear at
> > > something less than 2:1 So a normal transmitter will not require an
> > > external tuner as frequencies are scanned. Real neat. Weight is in
> > > the order of 6.5 lbs and a weather balloon is capable of lifting 7 lbs
> > > so that is something to contemplate this summer for top band. Have the
> > > tilt set for approx 6 degrees which puts me above ground clutter and
> > > will leave it there to get some experience on different bands and
> > > conditions.
> > > Art
>
> > So why haven't you already used it on 160, 80/75, 60, 40, 20, 17, 15,
> > 12, 10, 6, or 2 and told use about your results?
>
> > I am quite anxious to hear how well this works, because if it works
> > well, I will be one of the first to make one.
>
> > Please include signal reports from the station you work as well as
> > signal reports concerning other stations they work.
>
> > A very good frequency to try this on would be 14.300, as they are quite
> > good net control operators. If you work one of the 14.300 net controls,
> > please include their callsign and the time you worked them.
>
> > tom
> > K0TAR
>
> Tom, he is never going to try the antenna or admit it doest work. Heck
> I built the stupid thing knowing it was a dummy load and a CBer's
> joke just to say I built it. (I was also very sick and bored at the
> time). It doesnt work because the impedance of the antenna consist
> primarily of ohmic resistance and dielectric losses. I doubt if he has
> ever buit the damned thing .
> Giving that the design of his antenna is a known CBers prank, I
> suspect Art comes from the same place.
>

> Unfortunately I also have known of someone else who behaves like Art.
> He was truly a brillant person who repaired banks tabulating machines
> back when they were all mechanical. He was brillant in more ways than
> just mechanics, a true rennisance man if ever I met one. Then he had a
> stroke. He latched on to this EXACT same "antenna" saying that he had
> designed it even though I knew of its CB use years before he
> discovered it. He used to be a good family friend until I showed him
> his antenna did not work comparing it side by side to a simple dipole.
> For Arts sake I hope he truly is just a prankster. I wouldnt wish the
> changes I saw on the poor guy I knew on anyone.
>
> I know I have seen the "antenna" before I knew it as a CB joke. I am
> pretty sure it was in my grandfathers collection of radio books which
> dated from the 20s to the 40s used as a dummy load.
>
> Jimmie

Jimmie
I hate to tell you but the antenna that you made was a result of
various statements where it would seem that the main object was to
proof me in error. So I gave a description of such an antenna to
satisfy the desires of my critics in the hopes that they would be
content.
That antenna is not the one I use . Sorry you went to a lot of work
for nothing.
Art

266. Re: "Large" volume antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-06 17:25:38 UTC
From: Art Unwin <ArthurUnwin@gmail.com>
Message-ID: <da916836-880e-42c7-b5b5-1d1f0f3ca102@j20g2000vbp.googlegroups.com>
Source record: 14978

On Jun 6, 12:07 pm, Art Unwin <ArthurUn...@gmail.com> wrote:
> On Jun 6, 11:35 am, JIMMIE <JIMMIEDEE...@YAHOO.COM> wrote:
>
>
>
> > On Jun 5, 11:26 pm, tom <news4...@taring.org> wrote:
>
> > > Art Unwin wrote:
> > > > Just measured the SWR using mfj 259b where it measures 2:1@2 Mhz with
> > > > slight variences as the frequency increases. The meter only goes to
> > > > 175 Mhz so I cannot measure further. How ever the varience is ever
> > > > decreasing so I would say in the Ghz range it should be linear at
> > > > something less than 2:1 So a normal transmitter will not require an
> > > > external tuner as frequencies are scanned. Real neat. Weight is in
> > > > the order of 6.5 lbs and a weather balloon is capable of lifting 7 lbs
> > > > so that is something to contemplate this summer for top band. Have the
> > > > tilt set for approx 6 degrees which puts me above ground clutter and
> > > > will leave it there to get some experience on different bands and
> > > > conditions.
> > > > Art
>
> > > So why haven't you already used it on 160, 80/75, 60, 40, 20, 17, 15,
> > > 12, 10, 6, or 2 and told use about your results?
>
> > > I am quite anxious to hear how well this works, because if it works
> > > well, I will be one of the first to make one.
>
> > > Please include signal reports from the station you work as well as
> > > signal reports concerning other stations they work.
>
> > > A very good frequency to try this on would be 14.300, as they are quite
> > > good net control operators. If you work one of the 14.300 net controls,
> > > please include their callsign and the time you worked them.
>
> > > tom
> > > K0TAR
>
> > Tom, he is never going to try the antenna or admit it doest work. Heck
> > I built the stupid thing knowing it was a dummy load and a CBer's
> > joke just to say I built it. (I was also very sick and bored at the
> > time). It doesnt work because the impedance of the antenna consist
> > primarily of ohmic resistance and dielectric losses. I doubt if he has
> > ever buit the damned thing .
> > Giving that the design of his antenna is a known CBers prank, I

> > suspect Art comes from the same place.
>
> > Unfortunately I also have known of someone else who behaves like Art.
> > He was truly a brillant person who repaired banks tabulating machines
> > back when they were all mechanical. He was brillant in more ways than
> > just mechanics, a true rennisance man if ever I met one. Then he had a
> > stroke. He latched on to this EXACT same "antenna" saying that he had
> > designed it even though I knew of its CB use years before he
> > discovered it. He used to be a good family friend until I showed him
> > his antenna did not work comparing it side by side to a simple dipole.
> > For Arts sake I hope he truly is just a prankster. I wouldnt wish the
> > changes I saw on the poor guy I knew on anyone.
>
> > I know I have seen the "antenna" before I knew it as a CB joke. I am
> > pretty sure it was in my grandfathers collection of radio books which
> > dated from the 20s to the 40s used as a dummy load.
>
> > Jimmie
>
> Jimmie
> I hate to tell you but the antenna that you made was a result of
> various statements where it would seem that the main object was to
> proof me in error. So I gave a description of such an antenna to
> satisfy the desires of my critics in the hopes that they would be
> content.
> That antenna is not the one I use . Sorry you went to a lot of work
> for nothing.
> Art

Jimmie
In most antenna books they tell you that twisted pair wires act as a
transmission line where local signals are canceled by the opposing
wire. What they state is correct and used often on field day to
connect to a real radiator for when used in a real emergency.
But the antenna experts never brought that to the attention of readers
until you just did
which says a lot about existing antenna expertise on this newsgroup.
Seem like that some things in the ARRL books are disregarded by the
gurus!
Regards
Art

267. Re: hi sos

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-06 17:46:01 UTC
From: discretman16@gmail.com
Message-ID: <b988a6d6-947d-4789-b498-86b7da39154c@f16g2000vbf.googlegroups.com>
Source record: 14979

On 6 juin, 16:05, "Jerry" <jerrymar...@verizon.net> wrote:
> <discretma...@gmail.com> wrote in message
>
> news:75eaf7ce-480d-4504-98cf-0d596719c44e@r37g2000yqd.googlegroups.com...
> On 6 juin, 00:03, "Jerry" <jerrymar...@verizon.net> wrote:
>
>
>
>
>
> > <discretma...@gmail.com> wrote in message
>
> >news:e9629be8-eff6-4bfb-946e-7fa63d1692d3@y7g2000yqa.googlegroups.com...>
> > hi Jerry KD6JDJ
>
> > yes i'll be thankful if u show how do it
>
> > Hi "disc"
>
> > I can help you a little with learning to use EZNEC to model a Quad Helix.
> > I have a few Quad Helix antennas modeled for 137 MHz. That data is
> > available to you.
> > I can show you how to design your own hemispheric coverage antenna that
> > will perform better than a Quad Helix for reception of signals from polar
> > orbiting satallites.
>
> > What do you want to do?
>
> > Jerry KD6JDJ
>
> > - Masquer le texte des messages précédents -
>
> > - Afficher le texte des messages précédents -
>
> hi "jerry"
>
> i want QHA models and i try to adapt them for 2GHZ it's for
> heliosynchron
> satellite for earth sensing
> thank u
>
> Hi "disc"
>
> Wow, thats a small Quad Helix. Tell me the dimensions. I'll try to model

> it for you using EZNEC.
> Is this a real project? That is, do you have the antenna, or are you
> planning to build one? If you have a "store bought" 2 GHz Quad helix,
> there are certainly some patterns available from the mnanufacturer. If you
> plan to build the Quad helix, are you able to make any impedance
> measurements of the model?
> As you know, the fundamental plan in the Quad Helix design is to make one
> loop radiate 90 degrees later than the other due to the impedance difference
> between the two loops.
>
> Jerry KD6JDJ- Masquer le texte des messages précédents -
>
> - Afficher le texte des messages précédents -

hi jerry
yes too difficult to construct such antenna
us i said, it's a project for my post graduate thesis, the idea is to
apply multidisciplinary robust design optimization algorithms to have
a good antenna for earth sensing satellite satellite (800KM altitude),
it will be a contribution for the algerian satellite alsat1-b, i'll
study the antenna from EM, mechanecal to thermo-aerodynamic and the
great problem is a structural adjusting of two QHA antennas on the
pannel facing the earth.
thank u

268. Re: Polarized radiation

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-06 18:00:01 UTC
From: jimp@specsol.spam.sux.com
Message-ID: <cnmqf6-lee.ln1@mail.specsol.com>
Source record: 14980

```
Szczepan Białek <sz.bialek@wp.pl> wrote:
>
> "Cecil Moore" <nospam@w5dxp.com> wrote
> news:MVvWl.18251$jZ1.6066@flpi144.ffdc.sbc.com...
>> Szczepan Białek wrote:
>>> But what radiate 1/4 wave antenna (mast) with the one end only? Is the
>>> radiation polarized?
>>
>> Why not download the free demo version of EZNEC from
>> www.eznec.com which will tell you that the radiation
>> from a 1/4WL vertical monopole is primarily vertically
>> polarized.
>
> What means "primarily"?
> Is in reality an antenna which radiate unpolarized radio waves?
> S*

That you would use the term "unpolarized radio waves" shows you haven't
a clue what you are talking about.

http://en.wikipedia.org/wiki/Polarization

--
Jim Pennino

Remove .spam.sux to reply.
```

269. Re: "Large" volume antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-06 18:23:03 UTC
From: JIMMIE <JIMMIEDEE123@YAHOO.COM>
Message-ID: <feabefa7-47a1-4773-a2af-285cb0e154b2@e24g2000vbe.googlegroups.com>
Source record: 14981

On Jun 6, 1:25 pm, Art Unwin <ArthurUn...@gmail.com> wrote:
> On Jun 6, 12:07 pm, Art Unwin <ArthurUn...@gmail.com> wrote:
>
>
>
>
>
> > On Jun 6, 11:35 am, JIMMIE <JIMMIEDEE...@YAHOO.COM> wrote:
>
> > > On Jun 5, 11:26 pm, tom <news4...@taring.org> wrote:
>
> > > > Art Unwin wrote:
> > > > > Just measured the SWR using mfj 259b where it measures 2:1@2 Mhz with
> > > > > slight variences as the frequency increases. The meter only goes to
> > > > > 175 Mhz so I cannot measure further. How ever the varience is ever
> > > > > decreasing so I would say in the Ghz range it should be linear at
> > > > > something less than 2:1 So a normal transmitter will not require an
> > > > > external tuner as frequencies are scanned. Real neat. Weight is in
> > > > > the order of 6.5 lbs and a weather balloon is capable of lifting 7 lbs
> > > > > so that is something to contemplate this summer for top band. Have the
> > > > > tilt set for approx 6 degrees which puts me above ground clutter and
> > > > > will leave it there to get some experience on different bands and
> > > > > conditions.
> > > > > Art
>
> > > > So why haven't you already used it on 160, 80/75, 60, 40, 20, 17, 15,
> > > > 12, 10, 6, or 2 and told use about your results?
>
> > > > I am quite anxious to hear how well this works, because if it works
> > > > well, I will be one of the first to make one.
>
> > > > Please include signal reports from the station you work as well as
> > > > signal reports concerning other stations they work.
>
> > > > A very good frequency to try this on would be 14.300, as they are quite
> > > > good net control operators. If you work one of the 14.300 net controls,
> > > > please include their callsign and the time you worked them.
>
> > > > tom
> > > > K0TAR
>
> > > Tom, he is never going to try the antenna or admit it doest work. Heck
> > > I built the stupid thing knowing it was a dummy load and a CBer's
> > > joke just to say I built it. (I was also very sick and bored at the

> > > time). It doesnt work because the impedance of the antenna consist
> > > primarily of ohmic resistance and dielectric losses. I doubt if he has
> > > ever buit the damned thing .
> > > Giving that the design of his antenna is a known CBers prank, I
> > > suspect Art comes from the same place.
>
> > > Unfortunately I also have known of someone else who behaves like Art.
> > > He was truly a brillant person who repaired banks tabulating machines
> > > back when they were all mechanical. He was brillant in more ways than
> > > just mechanics, a true rennisance man if ever I met one. Then he had a
> > > stroke. He latched on to this EXACT same "antenna" saying that he had
> > > designed it even though I knew of its CB use years before he
> > > discovered it. He used to be a good family friend until I showed him
> > > his antenna did not work comparing it side by side to a simple dipole.
> > > For Arts sake I hope he truly is just a prankster. I wouldnt wish the
> > > changes I saw on the poor guy I knew on anyone.
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> > > I know I have seen the "antenna" before I knew it as a CB joke. I am
> > > pretty sure it was in my grandfathers collection of radio books which
> > > dated from the 20s to the 40s used as a dummy load.
>
> > > Jimmie
>
> > Jimmie
> > I hate to tell you but the antenna that you made was a result of
> > various statements where it would seem that the main object was to
> > proof me in error. So I gave a description of such an antenna to
> > satisfy the desires of my critics in the hopes that they would be
> > content.
> > That antenna is not the one I use . Sorry you went to a lot of work
> > for nothing.
> > Art
>
> Jimmie
> In most antenna books they tell you that twisted pair wires act as a
> transmission line where local signals are canceled by the opposing
> wire. What they state is correct and used often on field day to
> connect to a real radiator for when used in a real emergency.
> But the antenna experts never brought that to the attention of readers
> until you just did
> which says a lot about existing antenna expertise on this newsgroup.
> Seem like that some things in the ARRL books are disregarded by the
> gurus!
> Regards
> Art- Hide quoted text -
>
> - Show quoted text -

Art , I am proud of you. You gave a very direct, and accurate reply.
Your reply also indicates you are aware that your antenna could not

possibly function with any practical degree of efficency for the reason you just stated. Sir I must complement you on the artistry, the audacity and the tennacity of your scam, I absolutely loved it.

Jimmie

270. Re: "Large" volume antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-06 18:31:12 UTC
From: Art Unwin <ArthurUnwin@gmail.com>
Message-ID: <25115049-4e95-4321-ae58-212755451417@u10g2000vbd.googlegroups.com>
Source record: 14982

On Jun 6, 1:23 pm, JIMMIE <JIMMIEDEE...@YAHOO.COM> wrote:
> On Jun 6, 1:25 pm, Art Unwin <ArthurUn...@gmail.com> wrote:
>
>
>
> > On Jun 6, 12:07 pm, Art Unwin <ArthurUn...@gmail.com> wrote:
>
> > > On Jun 6, 11:35 am, JIMMIE <JIMMIEDEE...@YAHOO.COM> wrote:
>
> > > > On Jun 5, 11:26 pm, tom <news4...@taring.org> wrote:
>
> > > > > Art Unwin wrote:
> > > > > > Just measured the SWR using mfj 259b where it measures 2:1@2 Mhz with
> > > > > > slight variences as the frequency increases. The meter only goes to
> > > > > > 175 Mhz so I cannot measure further. How ever the varience is ever
> > > > > > decreasing so I would say in the Ghz range it should be linear at
> > > > > > something less than 2:1 So a normal transmitter will not require an
> > > > > > external tuner as frequencies are scanned. Real neat. Weight is in
> > > > > > the order of 6.5 lbs and a weather balloon is capable of lifting 7 lbs
> > > > > > so that is something to contemplate this summer for top band. Have the
> > > > > > tilt set for approx 6 degrees which puts me above ground clutter and
> > > > > > will leave it there to get some experience on different bands and
> > > > > > conditions.
> > > > > > Art
>
> > > > > So why haven't you already used it on 160, 80/75, 60, 40, 20, 17, 15,
> > > > > 12, 10, 6, or 2 and told use about your results?
>
> > > > > I am quite anxious to hear how well this works, because if it works
> > > > > well, I will be one of the first to make one.
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> > > > > Please include signal reports from the station you work as well as
> > > > > signal reports concerning other stations they work.
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> > > > > A very good frequency to try this on would be 14.300, as they are quite
> > > > > good net control operators. If you work one of the 14.300 net controls,
> > > > > please include their callsign and the time you worked them.
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> > > > > tom
> > > > > K0TAR
>
> > > > Tom, he is never going to try the antenna or admit it doest work. Heck
> > > > I built the stupid thing knowing it was a dummy load and a CBer's
> > > > joke just to say I built it. (I was also very sick and bored at the

> > > > time). It doesnt work because the impedance of the antenna consist
> > > > primarily of ohmic resistance and dielectric losses. I doubt if he has
> > > > ever buit the damned thing .
> > > > Giving that the design of his antenna is a known CBers prank, I
> > > > suspect Art comes from the same place.
>
> > > > Unfortunately I also have known of someone else who behaves like Art.
> > > > He was truly a brillant person who repaired banks tabulating machines
> > > > back when they were all mechanical. He was brillant in more ways than
> > > > just mechanics, a true rennisance man if ever I met one. Then he had a
> > > > stroke. He latched on to this EXACT same "antenna" saying that he had
> > > > designed it even though I knew of its CB use years before he
> > > > discovered it. He used to be a good family friend until I showed him
> > > > his antenna did not work comparing it side by side to a simple dipole.
> > > > For Arts sake I hope he truly is just a prankster. I wouldnt wish the
> > > > changes I saw on the poor guy I knew on anyone.
>
> > > > I know I have seen the "antenna" before I knew it as a CB joke. I am
> > > > pretty sure it was in my grandfathers collection of radio books which
> > > > dated from the 20s to the 40s used as a dummy load.
>
> > > > Jimmie
>
> > > Jimmie
> > > I hate to tell you but the antenna that you made was a result of
> > > various statements where it would seem that the main object was to
> > > proof me in error. So I gave a description of such an antenna to
> > > satisfy the desires of my critics in the hopes that they would be
> > > content.
> > > That antenna is not the one I use . Sorry you went to a lot of work
> > > for nothing.
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> > Jimmie
> > In most antenna books they tell you that twisted pair wires act as a
> > transmission line where local signals are canceled by the opposing
> > wire. What they state is correct and used often on field day to
> > connect to a real radiator for when used in a real emergency.
> > But the antenna experts never brought that to the attention of readers
> > until you just did
> > which says a lot about existing antenna expertise on this newsgroup.
> > Seem like that some things in the ARRL books are disregarded by the
> > gurus!
> > Regards
> > Art- Hide quoted text -
>
> > - Show quoted text -
>
> Art , I am proud of you. You gave a very direct, and accurate reply.
> Your reply also indicates you are aware that your antenna could not

> possibly function with any practical degree of efficency for the
> reason you just stated. Sir I must complement you on the artistry, the
> audacity and the tennacity of your scam, I absolutely loved it.
>
> Jimmie

Don't get me wrong I gave it in fraustration with respect to the
gurus knowledge level and how they were judging me. I am or was an
engineer from the U.K. and I am not inferior to those educated in the
U.S. as some seem to think.A good laugh is good for the soul, a cheap
laught is good for nothing.
Regards
Art

271. Re: hi sos

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-06 18:41:53 UTC
From: Rich Griffiths <richgrif@one.net>
Message-ID: <E42dnbkdXPTsJbfXnZ2dnUVZ_oCdnZ2d@posted.nuvoxcommunications>
Source record: 14983

<snip>

> hi "jerry"
>
> i want QHA models and i try to adapt them for 2GHZ it's for
> heliosynchron
> satellite for earth sensing
> thank u
>
> Hi "disc"
>
> Wow, thats a small Quad Helix. Tell me the dimensions. I'll try to
> model
> it for you using EZNEC.
> Is this a real project? That is, do you have the antenna, or are you
> planning to build one? If you have a "store bought" 2 GHz Quad helix,
> there are certainly some patterns available from the mnanufacturer. If
> you plan to build the Quad helix, are you able to make any impedance
> measurements of the model?
> As you know, the fundamental plan in the Quad Helix design is to make
> one
> loop radiate 90 degrees later than the other due to the impedance
> difference between the two loops.
>
> Jerry KD6JDJ

Remember that gigahertz-level quad helixes used on satellites are usually multiturn devices. Model results for a 137-MHz, half-turn antenna scaled up to 2 GHz may not be appropriate.

... Rich W2RG

272. Re: Polarized radiation

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-06 18:54:33 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <BQyWI.20804$8_3.1119@flpi147.ffdc.sbc.com>
Source record: 14984

Szczepan Białˇżˇek wrote:
>
> "Cecil Moore" <nospam@w5dxp.com> wrote
>> ... a 1/4WL vertical monopole is primarily vertically
>> polarized.
>
> What means "primarily"?

There is a small amount of radiation off the ends
of an unterminated antenna that has opposite
polarization to most of the other radiation. I
would call it a *secondary* radiation effect as
opposed to the *primary* radiation effect.
--
73, Cecil, IEEE, OOTC, http://www.w5dxp.com

273. Re: Sun Spots

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-06 19:14:56 UTC
From: Dave <noone@nowhere.com>
Message-ID: <QezWl.619$tr5.531@nwrddc02.gnilink.net>
Source record: 14985

"Art Unwin" <ArthurUnwin@gmail.com> wrote in message
news:abdd4e73-6074-4b3f-8fd5-47f84fe8e0b9@e20g2000vbc.googlegroups.com...
>For equilibrium a full wave verticle antenna must be tipped from
>vertical.

it an antenna is in equilibrium then it is not radiating. radiation is by
definition a violation of equilibrium since it is the flow of energy away
from the antenna.

274. Re: Sun Spots

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-06 19:20:22 UTC
From: Dave <noone@nowhere.com>
Message-ID: <WjzWl.620$tr5.466@nwrddc02.gnilink.net>
Source record: 14986

"Art Unwin" <ArthurUnwin@gmail.com> wrote in message
news:a3552aa8-7f26-495e-af5b-a291026dffcf@n4g2000vba.googlegroups.com...
>> the mass supplied and lost during each second is
>> one joule divided by the square of the speed of
>> light which is a very small magnitude of mass.
>It is as I thought, you were referring to electrons within the subject
>matter

it is not electrons that are being lost as the mass, it is the energy
contained in the electromagnetic waves...

275. Re: "Large" volume antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-06 19:22:01 UTC
From: Art Unwin <ArthurUnwin@gmail.com>
Message-ID: <56425714-5bf4-4387-8204-7e8ba821045a@e24g2000vbe.googlegroups.com>
Source record: 14987

```
On Jun 6, 1:31 pm, Art Unwin <ArthurUn...@gmail.com> wrote:
> On Jun 6, 1:23 pm, JIMMIE <JIMMIEDEE...@YAHOO.COM> wrote:
>
>
>
> > On Jun 6, 1:25 pm, Art Unwin <ArthurUn...@gmail.com> wrote:
>
> > > On Jun 6, 12:07 pm, Art Unwin <ArthurUn...@gmail.com> wrote:
>
> > > > On Jun 6, 11:35 am, JIMMIE <JIMMIEDEE...@YAHOO.COM> wrote:
>
> > > > > On Jun 5, 11:26 pm, tom <news4...@taring.org> wrote:
>
> > > > > > Art Unwin wrote:
> > > > > > > Just measured the SWR using mfj 259b where it measures 2:1@2 Mhz with
> > > > > > > slight variences as the frequency increases. The meter only goes to
> > > > > > > 175 Mhz so I cannot measure further. How ever the varience is ever
> > > > > > > decreasing so I would say in the Ghz range it should be linear at
> > > > > > > something less than 2:1 So a normal transmitter will not require an
> > > > > > > external tuner as frequencies are  scanned. Real neat. Weight is in
> > > > > > > the order of 6.5 lbs and a weather balloon is capable of lifting 7 lbs
> > > > > > > so that is something to contemplate this summer for top band. Have the
> > > > > > > tilt set for approx 6 degrees which puts me above ground clutter and
> > > > > > > will leave it there to get some experience on different bands and
> > > > > > > conditions.
> > > > > > > Art
>
> > > > > > So why haven't you already used it on 160, 80/75, 60, 40, 20, 17, 15,
> > > > > > 12, 10, 6, or 2 and told use about your results?
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> > > > > > I am quite anxious to hear how well this works, because if it works
> > > > > > well, I will be one of the first to make one.
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> > > > > > A very good frequency to try this on would be 14.300, as they are quite
> > > > > > good net control operators.  If you work one of the 14.300 net controls,
> > > > > > please include their callsign and the time you worked them.
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> > > > > > tom
> > > > > > K0TAR
>
> > > > > Tom, he is never going to try the antenna or admit it doest work. Heck
```

> > > > > I built the stupid thing knowing it was a dummy load and a CBer's
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> > > > > Giving that the design of his antenna is a known CBers prank, I
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> > > > satisfy the desires of my critics in the hopes that they would be
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> > > > for nothing.
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> > > Jimmie
> > > In most antenna books they tell you that twisted pair wires act as a
> > > transmission line where local signals are canceled by the opposing
> > > wire. What they state is correct and used often on field day to
> > > connect to a real radiator for when used in a real emergency.
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> > > gurus!
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> > Art , I am proud of you. You gave a very direct, and accurate reply.
> > Your reply also indicates you are aware that your antenna could not
> > possibly function with any practical degree of efficency for the
> > reason you just stated. Sir I must complement you on the artistry, the
> > audacity and the tennacity of your scam, I absolutely loved it.
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> > Jimmie
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> Don't get me wrong I gave it in fraustration with respect to the
> gurus knowledge level and how they were judging me. I am or was an
> engineer from the U.K. and I am not inferior to those educated in the
> U.S. as some seem to think.A good laugh is good for the soul, a cheap
> laught is good for nothing.
> Regards
> Art
Gentlemen and others
Before I depart from this subject let it be absolutely understood that
I do have a new design antenna, tho it is not of twisted wire. It does
exhibit 2 Mhz plus to ? ghz capabilities and can weigh less than 6.5
lbs if I chose to do so, as well as other properties that I have
stated.
Let it be fully understood that the nature of radiation and the
explanation of same is also correct. None of this should not be
confused with the tail of a twisted wire antenna which
came about accidently and was not an attempt to dismiss the expertise
of the gurus . Any embarrasement came about of their own choosing or
blind acceptance of what is presently stated in the books and
regurgitated by perceived experts in the field. In your own life time
you will be using such an antenna as well as the science books be
changed, so do not despair or be angry.
Best regards
Art Unwin KB9MZ.....xg (uk)

276. Re: "Large" volume antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-06 19:23:27 UTC
From: Dave <noone@nowhere.com>
Message-ID: <PmzWl.621$tr5.549@nwrddc02.gnilink.net>
Source record: 14988

"Art Unwin" <ArthurUnwin@gmail.com> wrote in message
news:25115049-4e95-4321-ae58-212755451417@u10g2000vbd.googlegroups.com...
>A good laugh is good for the soul, a cheap
>laught is good for nothing.

cheap laughs are good also, you supply many of them art so you should know!

277. Re: transciever output Z

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-06 19:50:42 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <6j9l25l8r6sde6ie4vp81aln0dmq1v8de3@4ax.com>
Source record: 14989

On Sat, 06 Jun 2009 00:01:26 -0700, Richard Clark <kb7qhc@comcast.net>
wrote:

>The means of rigorously enforcing an uniform presentation of output Z
>across loads, frequency, drive, power supply sag (what have you) would
>appear through the usage of negative feedback.

Hi All,

As this topic may appear to be magic, much less to those who take
religious exception to a source (such as your rig sitting on the
bench) exhibiting resistance (never mind the fan running on the
"heat"sink); I will expand upon the characteristics described above.

Those of you with any titles by Terman may follow along in the choir
book (others may consult the original work of H.W. Bode or H.F.
Mayer).

[heading] "Effect of Negative Feedback on Effective Output Impedance
of Amplifiers
"The output impedance of an amplifier can be defined as the
equivalent impedance that the load observes when looking back toward
the plate circuit of the final amplifier tube. The effective value of
this impedance is influenced to an important degree by the use of
negative feedback. Thus voltage feedback tends to make the output
voltage constant irrespective of load impedance: this equivalent to
decreasing the output impedance of the amplifier. In a similar
manner, current feedback tends to make the output current constant
irrespective of load impedance, and this equivalent to increasing the
effective output impedance of the amplifier."

[in my own words] In the absence of feedback, for an amplifier
condition known as being open loop (where its full gain, or open loop
gain, is available), the impedance looking back from the load in our
examples found in the link provided by Jim, and as exhibited in my own
measurements is on order of 50 Ohms. This 50 Ohms cascading back
through LPFs and through the Z transformation of the output
transformer is found to be very few Ohms intrinsic to the transistors.
Every step of your rig's design has been carefully managed to perform
these chain of transforms. One need only look at the topology of the
LPFs, calculate their individual component reactances at band center
to arrive at that 50 Ohm figure. The LPFs are symmetrical (mirrored
input and output) as they fully expect to see both a 50 Ohm source and
a 50 Ohm load. As these LPFs operate over an octave, it follows that
this 50 Ohm nominal value departs from the Z observed at the margins.
As a transmitter is not always run at rated power, it also follows

that the transistor's Z is not always presenting 50 Ohms through the output transformer. It follows that by the source's departure from 50 Ohms, the LPF in part must also suffer in performance. Given this region of departure is confined to lower Powers outside of amateur frequencies, that suffering is rarely exhibited in sparks or significant heat.

These variances do not argue
1. that your rig lacks source Z,
2. that is can never be found, or
3. that it is immaterial,
it merely acknowledges that this Z varies by the degree described. I find it remarkable that intelligent correspondents here carefully tally the lost power transfers of mismatch at the antenna, and wholly neglect the same mismatch at their preffered source of unknown Z. Where, by their astonishing claims your rig does NOT have a source Z of 50 Ohms, that there is no similar reckoning of lost power transfer with mismatch at that plane of transition.

When Jim noted that my source Z reports expressed a SWR of 1.4, it follows that this statement of mismatch also yields a reflected power at the input to the LPF that my rig absorbs and expresses in the heat sink, and this power is forever lost to the opportunity of transmitting it as RF radiation. A 30 Ohm source connected to a 50 Ohm load is NOT MATCHED. I cannot imagine how the arguement that a source of unknown Z (but definitely NOT 50 Ohms) could ever operate into a severe mismatch without considerable risk.

This, of course, begs the question: "Do you care if it is?" There are many competing agendas to rig operation, and 100W is rarely required when you unknowingly (through lost efficiencies through the chain of connections) radiate less and are happily engaged in a QSO of comfortable copy.

Putting that all aside and returning to negative feedback, some readers may find that they prefer to have a current source or a voltage source (there are advantages that go beyond matching, and efficiency). Negative feedback, as you may observe from Terman's quote above allows you to design an amplifier that exhibits ANY Z. If you had a short radiator - say a 14 foot whip used for 80M, then why would you want a transmitter with a 50 Ohm characteristic when two or three Ohms would more properly serve the lower radiation resistance?

This argues that you could as easily strip off the LPF and discard the output transformer to reach back to the Transistors' intrinsic resistance and ready ability to serve this purpose - but you would suffer horribly from the truly abysmal frequency hash that inhabits this last stage (LPFs are exceedingly necessary).

These distortion, noise, and frequency products can be reduced through negative feed back by the degree of feedback expressed as a portion of the open loop output. If you want to suppress them to one 100th, you

have to have 20dB of feedback (historically called "noise gain"). If your amplifier has only 20dB of gain, however, you have a net gain of 1, and your amp will now only source 1W. Terman explains this all at greater length.

How do you achieve 100W with one 100th the distortion, noise, and frequency products? Obviously you need 20dB more gain! This isn't going to be cheap to achieve your new Half Ohm source for your 14 foot 80M radiator.

If we invert the design goal to apply to a 5000 Ohm antenna, and design for a 5000 Ohm source from the rig on our bench, we will require a similar investment in that same 20dB negative feedback which, in turn, demands 20dB more stage gain.

Yes, I can imagine the multitude's eyes rolling collectively here (or the murmurs of suppress yawns). Let's go through the other benefits of employing negative feedback to the tune of 20dB:

Amplitude distortion:
who wants studio quality audio?

Harmonic distortion:
whose baritone comes out with Mickey Mouse highlights?

Higher stability:
ever have the rig trip out into self-oscillation?

Power Supply independence:
HiFi in the tube days could tolerate more hum from cheaper unfiltered supplies.

Load stability:
what happens when you forget to switch in the tuner or feed the wrong load?

Noise reduction:
modern rigs have a bajillion mixed oscillators that build to the eventual side band with lots of noise there and

Phase distortion:
same oscillators mixing comes with tons of this.

Linear operation:
who uses a wah-wah peddle on their transmissions, and yet give that impression to listeners?

There are other issues of finer granularity that achieve such improvements through negative feedback. You are not going to find it in your rig, and you will undoubtedly never add it yourself. Further, I seriously doubt you will go out and purchase it either. This financial barrier to entry is consequently responsible for keeping this topic out of mind (called denial), and in turn it renders the subject of source Z as one that is "immaterial" simply as a

psychological salve to the wounded ego of the wallet.

For an engineer and technician alike, source Z is very material.

73's
Richard Clark, KB7QHC

278. A reasoning on coaxial cables

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-06 20:00:57 UTC
From: Antonio Vernucci <vernucci@tin.it>
Message-ID: <4a2acaf8$0$844$4fafbaef@reader5.news.tin.it>
Source record: 14990

Everyone knows that, when a coaxial cable is terminated on a pure resistance equal to the cable characteristic impedance, one will measure the same resistance value at the other end of the cable, independently of the operating frequency.

In theory, this should occur at any frequency. In practice, not all cable types behave well when frequency is very high (say above 5 or 10 GHz). But do all cables behave well when the operating frequency is instead very low? This could seem an odd question, but let me explain my point.

Going down in frequency, one should expect that all cables continue to work well, even down to DC (a cable terminated on 50 ohm will show virtually 50 ohm to a DC generator).

Now my story. I recently got a 100-foot roll of RG-179 teflon cable, same size as RG-174 though 75 ohm instead of 50. Testing the cable with an ohmeter, I realized that the DC resistance of the (very thin) inner conductor is about 25 ohm, that is about 0.8 ohm per meter!

At DC, that cable roll terminated on a 75 ohm resistor whould show 100 ohm to the generator. Going up in frequency, the cable loss will progressively increase and the resistance measured at the cable end will then progressively get closer and closer to the cable characteristic impedance, that is 75 ohm. So, one may conclude that such cable works well only above a certain frequency.

But if one takes a much shorter run of RG-179 (say a few feet), this would work well also at the very low frequencies. So the problem seems not to be with cable type, but rather with cable lenght. As a matter of fact, if we take a very very long run of RG-8, a similar problem would be experienced at the low frequencies.

Could we then conclude that, if one envisages to operate at the low frequencies, the cable lenght should not exceed a certain maximum value (that varies with the coaxial cable type)? For instance the value of such threshold length could be the value at which the inner conductor resistance is not higher than say 1/20 of the cable characteristic impedance.

73

Tony I0JX

279. Re: hi sos

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-06 20:11:23 UTC
From: Jerry <jerrymartes@verizon.net>
Message-ID: <L3AWl.994$u86.802@nwrddc01.gnilink.net>
Source record: 14991

<discretman16@gmail.com> wrote in message
news:b988a6d6-947d-4789-b498-86b7da39154c@f16g2000vbf.googlegroups.com...
On 6 juin, 16:05, "Jerry" <jerrymar...@verizon.net> wrote:
> <discretma...@gmail.com> wrote in message
>
> news:75eaf7ce-480d-4504-98cf-0d596719c44e@r37g2000yqd.googlegroups.com...
> On 6 juin, 00:03, "Jerry" <jerrymar...@verizon.net> wrote:
>
>
>
>
>
> > <discretma...@gmail.com> wrote in message
>
> >news:e9629be8-eff6-4bfb-946e-7fa63d1692d3@y7g2000yqa.googlegroups.com...>
> > hi Jerry KD6JDJ
>
> > yes i'll be thankful if u show how do it
>
> > Hi "disc"
>
> > I can help you a little with learning to use EZNEC to model a Quad
> > Helix.
> > I have a few Quad Helix antennas modeled for 137 MHz. That data is
> > available to you.
> > I can show you how to design your own hemispheric coverage antenna that
> > will perform better than a Quad Helix for reception of signals from
> > polar
> > orbiting satallites.
>
> > What do you want to do?
>
> > Jerry KD6JDJ
>
> > - Masquer le texte des messages pr&#65533;c&#65533;dents -
>
> > - Afficher le texte des messages pr&#65533;c&#65533;dents -
>
> hi "jerry"
>
> i want QHA models and i try to adapt them for 2GHZ it's for
> heliosynchron
> satellite for earth sensing

> thank u
>
> Hi "disc"
>
> Wow, thats a small Quad Helix. Tell me the dimensions. I'll try to model
> it for you using EZNEC.
> Is this a real project? That is, do you have the antenna, or are you
> planning to build one? If you have a "store bought" 2 GHz Quad helix,
> there are certainly some patterns available from the mnanufacturer. If you
> plan to build the Quad helix, are you able to make any impedance
> measurements of the model?
> As you know, the fundamental plan in the Quad Helix design is to make one
> loop radiate 90 degrees later than the other due to the impedance
> difference
> between the two loops.
>
> Jerry KD6JDJ- Masquer le texte des messages pr&#65533;c&#65533;dents -
>
> - Afficher le texte des messages pr&#65533;c&#65533;dents -

hi jerry
yes too difficult to construct such antenna
us i said, it's a project for my post graduate thesis, the idea is to
apply multidisciplinary robust design optimization algorithms to have
a good antenna for earth sensing satellite satellite (800KM altitude),
it will be a contribution for the algerian satellite alsat1-b, i'll
study the antenna from EM, mechanecal to thermo-aerodynamic and the
great problem is a structural adjusting of two QHA antennas on the
pannel facing the earth.
thank u

Hi "disc'

This is getting a bit confused. I wouldnt consider the 2 GHz QHA antenna
too difficult to "construct". I'm a clumsey old guy and I think I could
build one. The big problem is the QHA is very critical to make work at 2
GHz. I would consider the QHA to be a poor choice for receiving satellite
signals from Earth. I am open to any discussion related to why I dont
recommend Quad Helix for reception of satellite signals from Earth.
Secondly, I assummed that "earth sensing" meant that the Quad Helix would
be on the Earth, sensing, the orbiting satellite. But, evidently, the
antenna you are investigating is to be located on an the satellite which
orbits the Earth, and there is no need to actually build one. The Quad
Helix could be a very desireable package for satellite mounted situations.

I jumped into this thread before I understood the problem. You probably
do need a complex modeling program to evaluate the radiation from the
antenna and the effects of the structure it is mounted on. The satellite
antenna will need only about 120 degree beamwidth to cover the Earth from
800 KM altitude. It is probably unnecessary for you to ever develop a
working model of the antenna. If you ever get the point where it is

necessary to know more about the Quad Helix, feel free to contact me for any discussion of hemispheric coverage CP antennas. I recognize that you may already know more about the Quad helix design concept that *I* do. I only meant to invite conversation based in facts and mild math.
If you want to model more than one Quad helix over a simple platform, EZNEC will do a great job for you. I consider the EZNEC a low cost tool that will be useful for a long time for many other "HAM" projects.

Jerry KD6JDJ

280. Re: hi sos

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-06 20:15:19 UTC
From: Jerry <jerrymartes@verizon.net>
Message-ID: <r7AWl.995$u86.290@nwrddc01.gnilink.net>
Source record: 14992

"Rich Griffiths" <richgrif@one.net> wrote in message
news:E42dnbkdXPTsJbfXnZ2dnUVZ_oCdnZ2d@posted.nuvoxcommunications...
> <snip>
>
>> hi "jerry"
>>
>> i want QHA models and i try to adapt them for 2GHZ it's for
>> heliosynchron
>> satellite for earth sensing
>> thank u
>>
>> Hi "disc"
>>
>> Wow, thats a small Quad Helix. Tell me the dimensions. I'll try to
>> model
>> it for you using EZNEC.
>> Is this a real project? That is, do you have the antenna, or are you
>> planning to build one? If you have a "store bought" 2 GHz Quad helix,
>> there are certainly some patterns available from the mnanufacturer. If
>> you plan to build the Quad helix, are you able to make any impedance
>> measurements of the model?
>> As you know, the fundamental plan in the Quad Helix design is to make
>> one
>> loop radiate 90 degrees later than the other due to the impedance
>> difference between the two loops.
>>
>> Jerry KD6JDJ
>
> Remember that gigahertz-level quad helixes used on satellites are usually
> multiturn devices. Model results for a 137-MHz, half-turn antenna scaled
> up to 2 GHz may not be appropriate.
>
> ... Rich W2RG

Hi Rich

Your comment helps. I wasnt aware that multiturn Quad Helix antennas
were used on satellites. can you point me to a site where the multiturn
Quad Helix is used for satellite application?

Thanks
Jerry KD6JDJ

281. Re: A reasoning on coaxial cables

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-06 21:13:41 UTC
From: Sven Lundbech <oz7s@hotmail.com>
Message-ID: <4a2adc07$0$15894$edfadb0f@dtext01.news.tele.dk>
Source record: 14993

"Antonio Vernucci" <vernucci@tin.it> skrev i en meddelelse
news:4a2acaf8$0$844$4fafbaef@reader5.news.tin.it...
> Everyone knows that, when a coaxial cable is terminated on a pure
> resistance equal to the cable characteristic impedance, one will measure
> the same resistance value at the other end of the cable, independently of
> the operating frequency.

This is only true for lossless cables/transmission lines.

>
> In theory, this should occur at any frequency. In practice, not all cable
> types behave well when frequency is very high (say above 5 or 10 GHz). But
> do all cables behave well when the operating frequency is instead very
> low? This could seem an odd question, but let me explain my point.
>
> Going down in frequency, one should expect that all cables continue to
> work well, even down to DC (a cable terminated on 50 ohm will show
> virtually 50 ohm to a DC generator).
>

Yes, but for lossless transmission lines only.

> Now my story. I recently got a 100-foot roll of RG-179 teflon cable, same
> size as RG-174 though 75 ohm instead of 50. Testing the cable with an
> ohmeter, I realized that the DC resistance of the (very thin) inner
> conductor is about 25 ohm, that is about 0.8 ohm per meter!
>
> At DC, that cable roll terminated on a 75 ohm resistor whould show 100 ohm
> to the generator. Going up in frequency, the cable loss will progressively
> increase and the resistance measured at the cable end will then
> progressively get closer and closer to the cable characteristic impedance,
> that is 75 ohm. So, one may conclude that such cable works well only above
> a certain frequency.
>
> But if one takes a much shorter run of RG-179 (say a few feet), this would
> work well also at the very low frequencies. So the problem seems not to be
> with cable type, but rather with cable lenght. As a matter of fact, if we
> take a very very long run of RG-8, a similar problem would be experienced
> at the low frequencies.
>
> Could we then conclude that, if one envisages to operate at the low
> frequencies, the cable lenght should not exceed a certain maximum value
> (that varies with the coaxial cable type)? For instance the value of such
> threshold length could be the value at which the inner conductor
> resistance is not higher than say 1/20 of the cable characteristic

> impedance.
>

No. The issue is that the simple transmission line theory you implicitly refer to holds for lossless lines only. If losses, either as ohmic losses in conductors and/or dielectric losses, are present, the line characteristic impedance Z0 is not constant nor real. It breaks up to be a complex number. You will have to apply the general transmission line theory for lossy lines.

As you suggest, the lossless line theory will hold with some approximation for slightly lossy lines.

> 73
>
> Tony I0JX
>
>

vy 73
OZ7S Sven

282. Re: "Large" volume antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-06 21:29:14 UTC
From: Dave <noone@nowhere.com>
Message-ID: <KcBWl.632$tr5.520@nwrddc02.gnilink.net>
Source record: 14994

"Art Unwin" <ArthurUnwin@gmail.com> wrote in message
news:56425714-5bf4-4387-8204-7e8ba821045a@e24g2000vbe.googlegroups.com...
>Before I depart from this subject let it be absolutely understood that
>I do have a new design antenna, tho it is not of twisted wire. It does
>exhibit 2 Mhz plus to ? ghz capabilities and can weigh less than 6.5
>lbs if I chose to do so, as well as other properties that I have
>stated.

and i have an antenna that works from 1MHZ to multi GHZ also, and it weighs
less than 6.5 ounces already! and i bet it works better than art's!

283. Re: Sun Spots

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-06 21:48:55 UTC
From: Art Unwin <ArthurUnwin@gmail.com>
Message-ID: <2e1d889f-3d25-4afc-8ed3-9b3e63060ba2@j18g2000yql.googlegroups.com>
Source record: 14995

On Jun 6, 2:14 pm, "Dave" <no...@nowhere.com> wrote:
> "Art Unwin" <ArthurUn...@gmail.com> wrote in message
>
> news:abdd4e73-6074-4b3f-8fd5-47f84fe8e0b9@e20g2000vbc.googlegroups.com...
>
> >For equilibrium a full wave verticle antenna must be tipped from
> >vertical.
>
> it an antenna is in equilibrium then it is not radiating. radiation is by
> definition a violation of equilibrium since it is the flow of energy away
> from the antenna.

I see where you are coming from David as a pendulum can be considered
in equilibrium when in a state of rest and time has not been added.
When a time varying field is added then you do have energy or flux
passing thru a boundary and the boundary has to re adjust
to establish equilibrium again, it is this change of energy that must
be accounted for as per Maxwell. Movement alone within a boundary does
not break equilibrium, only movement thru the boundary that fractures
same. Look at the boundary as an equal sign, what is lost to the
inside of a boundary is gained by that on the outside of the boundary.
From this observation you can see that energy or matter cannot be
created or destroyed even tho it may change its appearance. To
determine what is lost is to determine how long it takes for the
boundary to correct its borders. Since the action is repetitive we can
use this as the basic of time accurately and it is that of a single
"period" in time. This period length is a full wavelength, not a 1/4
or 1/2 or even a 5/8 wavelength and as yet resonance has not even
entered the picture, because we only know that repartition begins at
the point of one period where energy is placed into a radiator which
then expends that energy by the time the period end comes about. Now
you should be able to see the similarity to a tank circuit
where the period is broken up into two parts of unknown length,time it
receives energy and then the time to expend the energy. Then
repartition occurs. Now somebody in the past determined that these two
times was exactly equal, for why I do not know. For instance, the
first application of energy has the characteristic of overshoot, the
release of energy for radiation purposes is not its equal, thus
choosing the apparent resonant point as 1/2 a WL was a gigantic error
that lasts to the present day. Sooner or later that has to change or
be corrected
As must the "wave" tag which is a description parleyed by somebody as
a wave to the rotation of a particle containing a charge which has
been accelerated from the rest position

by an impact equal to that of the speed of light which actually was determined from a different source. So now we come to the subject of light which then was also determined as a wave contrary to how Newton viewed it. Now one can see that the particle of charge
is the generator of the speed of light from the initial action of displacement current and thus if momentum of the particle is changed the variation of speed between light and the particle is zero, just the change of spin has changed.
Here endeth the first lesson in Classical Physics which may or may not make it into the books of the ARRL
Art
and enlarged upon by Planck, a friend of Einstein.

284. Re: A reasoning on coaxial cables

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-06 21:50:14 UTC
From: Antonio Vernucci <vernucci@tin.it>
Message-ID: <4a2ae494$0$1112$4fafbaef@reader3.news.tin.it>
Source record: 14996

> No. The issue is that the simple transmission line theory you implicitly refer
> to holds for lossless lines only. If losses, either as ohmic losses in
> conductors and/or dielectric losses, are present, the line characteristic
> impedance Z0 is not constant nor real. It breaks up to be a complex number.
> You will have to apply the general transmission line theory for lossy lines.

Agreed, but then why the manufacturers describe the RG-179 (which has an ohmic loss of 0.8-ohm/meter neglecting the braid loss) as a "75-ohm coaxial cable"?

73

Tony I0JX

285. Re: A reasoning on coaxial cables

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-06 22:00:14 UTC
From: Art Unwin <ArthurUnwin@gmail.com>
Message-ID: <e6106fd8-6d07-4f43-9d9c-e68b7e655216@y9g2000yqg.googlegroups.com>
Source record: 14997

On Jun 6, 4:13 pm, "Sven Lundbech" <o...@hotmail.com> wrote:
> "Antonio Vernucci" <vernu...@tin.it> skrev i en
meddelelsenews:4a2acaf8$0$844$4fafbaef@reader5.news.tin.it...
>
> > Everyone knows that, when a coaxial cable is terminated on a pure
> > resistance equal to the cable characteristic impedance, one will measure
> > the same resistance value at the other end of the cable, independently of
> > the operating frequency.
>
> This is only true for lossless cables/transmission lines.
>
>
>
> > In theory, this should occur at any frequency. In practice, not all cable
> > types behave well when frequency is very high (say above 5 or 10 GHz). But
> > do all cables behave well when the operating frequency is instead very
> > low? This could seem an odd question, but let me explain my point.
>
> > Going down in frequency, one should expect that all cables continue to
> > work well, even down to DC (a cable terminated on 50 ohm will show
> > virtually 50 ohm to a DC generator).
>
> Yes, but for lossless transmission lines only.
>
>
>
> > Now my story. I recently got a 100-foot roll of RG-179 teflon cable, same
> > size as RG-174 though 75 ohm instead of 50. Testing the cable with an
> > ohmeter, I realized that the DC resistance of the (very thin) inner
> > conductor is about 25 ohm, that is about 0.8 ohm per meter!
>
> > At DC, that cable roll terminated on a 75 ohm resistor whould show 100 ohm
> > to the generator. Going up in frequency, the cable loss will progressively
> > increase and the resistance measured at the cable end will then
> > progressively get closer and closer to the cable characteristic impedance,
> > that is 75 ohm. So, one may conclude that such cable works well only above
> > a certain frequency.
>
> > But if one takes a much shorter run of RG-179 (say a few feet), this would
> > work well also at the very low frequencies. So the problem seems not to be
> > with cable type, but rather with cable lenght. As a matter of fact, if we
> > take a very very long run of RG-8, a similar problem would be experienced
> > at the low frequencies.
>

> > Could we then conclude that, if one envisages to operate at the low
> > frequencies, the cable lenght should not exceed a certain maximum value
> > (that varies with the coaxial cable type)? For instance the value of such
> > threshold length could be the value at which the inner conductor
> > resistance is not higher than say 1/20 of the cable characteristic
> > impedance.
>
> No. The issue is that the simple transmission line theory you implicitly
> refer to holds for lossless lines only. If losses, either as ohmic losses in
> conductors and/or dielectric losses, are present, the line characteristic
> impedance Z0 is not constant nor real. It breaks up to be a complex number.
> You will have to apply the general transmission line theory for lossy lines.
>
> As you suggest, the lossless line theory will hold with some approximation
> for slightly lossy lines.
>
> > 73
>
> > Tony I0JX
>
> vy 73
> OZ7S Sven

Exactly. Look at what constitutes a transmission line such as
resistance, G, capacitance, spacing of wires and whether the
dielectric is homogenous. Even Richard could not make or measure the
characteristics of a transmission line by comparing continuity between
every 1/1000 " of length for a the whole length of a transmission line
including straightness
when measured or the varience of proximetry effects or even the
angular movement of a S meter indicator when an imperfection is
encountered. Sometime S meters are there just to
make operators feel good.

286. Re: A reasoning on coaxial cables

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-06 22:05:04 UTC
From: Owen Duffy <none@no.where>
Message-ID: <Xns9C23523D5C488nonenowhere@61.9.191.5>
Source record: 14998

"Antonio Vernucci" <vernucci@tin.it> wrote in
news:4a2acaf8$0$844$4fafbaef@reader5.news.tin.it:

> Everyone knows that, when a coaxial cable is terminated on a pure
> resistance equal to the cable characteristic impedance, one will
> measure the same resistance value at the other end of the cable,
> independently of the operating frequency.

Zo is purely resistive *only* for distortionless lines, and lossless lines are a special case of distortionless lines.

We often make an assumption that practical lines are lossless, and hence for instance speak of them with Zo being purely resistive, and independent of frequency.

For a practical coax, Zo at very low frequencies contains a significant capacitive reactance (eg using homogenous conductors at 1MHz, Zo=75.6-j9.3).

The effective resistance of the conductors typically varies with frequency (eg skin effects, braiding effects), and the dielectric loss varies with frequency. These combine to make Zo frequency dependent.

A further complication with skin effect is where conductors (usually the inner conductor) are plated or clad with a different metal to the core.

So, the concept that the impedance looking into an abitrary length of uniform line terminated in Zo is Zo is sound, just Zo in not necessarily real (ie purely restive) nor frequency independent.

At extreme higher frequencies, depending on the dimensions of the coax, it may operate in a higher mode. The frequency at which that happens effectively limits the upper frequency for a line. If you like, coax components are usually used at frequency below the cut-off frequency of higher (TE, TM) modes to force it to operate only in TEM mode.

Owen

287. Re: A reasoning on coaxial cables

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-06 22:10:34 UTC
From: Owen Duffy <none@no.where>
Message-ID: <Xns9C23532C7AB2Cnonenowhere@61.9.191.5>
Source record: 15000

"Antonio Vernucci" <vernucci@tin.it> wrote in
news:4a2ae494$0$1112$4fafbaef@reader3.news.tin.it:

> Agreed, but then why the manufacturers describe the RG-179 (which has
> an ohmic loss of 0.8-ohm/meter neglecting the braid loss) as a
> "75-ohm coaxial cable"?

Because considering R, L, G, and C at the frequencies normally used for
this cable, the ratio of ((R+jWL)/(G+jWC)) is *approximately* 75+j0.

Your 0.8ohm/meter perspective focusses on only one of the four parameters
above, so little wonder you come to a different conclusion.

Owen

288. Re: A reasoning on coaxial cables

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-06 22:10:40 UTC
From: Antonio Vernucci <vernucci@tin.it>
Message-ID: <4a2ae95e$0$1105$4fafbaef@reader3.news.tin.it>
Source record: 14999

> So, the concept that the impedance looking into an abitrary length of
> uniform line terminated in Zo is Zo is sound, just Zo in not necessarily
> real (ie purely restive) nor frequency independent.
>

Thanks, but then let me make the same question to you.

Why the manufacturers describe the RG-179 (which has an ohmic
loss of 0.8-ohm/meter neglecting the braid loss) as a "75-ohm coaxial cable"?

73

Tony I0JX

289. Re: A reasoning on coaxial cables

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-06 22:17:41 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <6WBWI.34720$ZP4.25045@nlpi067.nbdc.sbc.com>
Source record: 14801

Antonio Vernucci wrote:
> Agreed, but then why the manufacturers describe the RG-179 (which has an
> ohmic loss of 0.8-ohm/meter neglecting the braid loss) as a "75-ohm
> coaxial cable"?

It is never Z0=75+j0 - it is only close unless specific
measures are taken in the manufacturing process. It may
be, e.g. 75-j0.5 ohms instead.
--
73, Cecil, IEEE, OOTC, http://www.w5dxp.com

290. Re: A reasoning on coaxial cables

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-06 22:32:17 UTC
From: Antonio Vernucci <vernucci@tin.it>
Message-ID: <4a2aee6f$0$1105$4fafbaef@reader3.news.tin.it>
Source record: 14802

> Because considering R, L, G, and C at the frequencies normally used for
> this cable, the ratio of ((R+jWL)/(G+jWC)) is *approximately* 75+j0.
>
> Your 0.8ohm/meter perspective focusses on only one of the four parameters
> above, so little wonder you come to a different conclusion.

Agreed, but I still missing the influence of cable length. I would tend to reason in this way:

- with a short cable run, as you say the RG-179 works well at the "frequencies normally used for that cable". But also well at the very low frequencies (including DC)

- with an long cable run , the RG-179 would continue to work well (*) at the "frequencies normally used for that cable", but would work less well at the very low frequencies (as hinted in my example)

(*) because of the high cable attenuation, continuing to increase the cable length beyond a certain amount would not yield any change in the impedance seen by the generator

73

Tony I0JX

291. Re: A reasoning on coaxial cables

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-06 22:35:52 UTC
From: Antonio Vernucci <vernucci@tin.it>
Message-ID: <4a2aef46$0$1117$4fafbaef@reader3.news.tin.it>
Source record: 14803

> It is never Z0=75+j0 - it is only close unless specific
> measures are taken in the manufacturing process. It may
> be, e.g. 75-j0.5 ohms instead.

Agreed. They even write that the R is 75 plus / minus 3 ohm.

Anyway, it would seem to me that the presence of X=-0.5 ohm does not change much with regard to whether my reasoning makes some sense.

73

Tony I0JX

292. Re: Sun Spots

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-06 23:01:19 UTC
From: Dave <noone@nowhere.com>
Message-ID: <3zCWl.653$tr5.204@nwrddc02.gnilink.net>
Source record: 14804

"Art Unwin" <ArthurUnwin@gmail.com> wrote in message
news:2e1d889f-3d25-4afc-8ed3-9b3e63060ba2@j18g2000yql.googlegroups.com...

<clip a bunch of worthless babbling>
> Here endeth the first lesson in Classical Physics which may or may
>not make it into the books of the ARRL

that rambling was so far from the truth that it could only be intentionally
obfuscated.

293. Re: A reasoning on coaxial cables

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-06 23:07:26 UTC
From: Owen Duffy <none@no.where>
Message-ID: <Xns9C235CD031C6Dnonenowhere@61.9.191.5>
Source record: 14805

"Antonio Vernucci" <vernucci@tin.it> wrote in
news:4a2aee6f$0$1105$4fafbaef@reader3.news.tin.it:

>> Because considering R, L, G, and C at the frequencies normally used
>> for this cable, the ratio of ((R+jWL)/(G+jWC)) is *approximately*
>> 75+j0.
>>
>> Your 0.8ohm/meter perspective focusses on only one of the four
>> parameters above, so little wonder you come to a different
>> conclusion.
>
> Agreed, but I still missing the influence of cable length. I would
> tend to reason in this way:
>
> - with a short cable run, as you say the RG-179 works well at the
> "frequencies normally used for that cable". But also well at the very
> low frequencies (including DC)

No, I didn't say that it "works well...", that is entirely your
construction.

Owen

294. Re: A reasoning on coaxial cables

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-06 23:11:11 UTC
From: Owen Duffy <none@no.where>
Message-ID: <Xns9C235D7391F3Dnonenowhere@61.9.191.5>
Source record: 14806

Owen Duffy <none@no.where> wrote in news:Xns9C23532C7AB2Cnonenowhere@61.9.191.5:

> ((R+jWL)/(G+jWC))

Should be ((R+jWL)/(G+jWC))^0.5

Owen

295. Re: A reasoning on coaxial cables

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-06 23:18:40 UTC
From: Antonio Vernucci <vernucci@tin.it>
Message-ID: <4a2af94e$0$1111$4fafbaef@reader3.news.tin.it>
Source record: 14807

> No, I didn't say that it "works well...", that is entirely your
> construction.

Sorry for my imprecise wording. Please try to re-read what I had written
replacing my sentence "works well" with your sentence "impedance is
approximately 75+j0"

73

Tony I0JX

296. Re: Sun Spots

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-06 23:20:49 UTC
From: Art Unwin <ArthurUnwin@gmail.com>
Message-ID: <74981a78-0e97-4677-ba40-a5d7b15794f6@z14g2000yqa.googlegroups.com>
Source record: 14808

On Jun 6, 6:01 pm, "Dave" <no...@nowhere.com> wrote:
> "Art Unwin" <ArthurUn...@gmail.com> wrote in message
>
> news:2e1d889f-3d25-4afc-8ed3-9b3e63060ba2@j18g2000yql.googlegroups.com...
>
> <clip a bunch of worthless babbling>
>
> > Here endeth the first lesson in Classical Physics which may or may
> >not make it into the books of the ARRL
>
> that rambling was so far from the truth that it could only be intentionally
> obfuscated.

Who was it who said "you can't handle the truth"
We have here a perfect example of that. Take a deep breath and exhale
slowly to stop embarassing your self. I hold no grudges so there is no
need to continue a useless fight
Get over it and be nice. When respect is regained it is a real heart
warmer and not only to the receiver. Giving is always best.

297. Re: A reasoning on coaxial cables

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-06 23:21:31 UTC
From: Owen Duffy <none@no.where>
Message-ID: <Xns9C235F336F9A4nonenowhere@61.9.191.5>
Source record: 14809

"Antonio Vernucci" <vernucci@tin.it> wrote in
news:4a2aef46$0$1117$4fafbaef@reader3.news.tin.it:

>> It is never Z0=75+j0 - it is only close unless specific
>> measures are taken in the manufacturing process. It may
>> be, e.g. 75-j0.5 ohms instead.
>
> Agreed. They even write that the R is 75 plus / minus 3 ohm.

Manufacturing tolerance are another issue, the line has a -j component to Z because it is *lossy* and that Z0=((R+jWL)/(G+jWC))^0.5 is not purely real.

I mentioned distortionless lines in an earlier post. They are lines where Zo is real. You can see that if R=0 and G=0, Zo is real, so a lossless line (R=0 and G=0) is one case of a distortionless line.

If you live in a world of lossless line approximation, Zo is real, loss is independent of frequency, and the conductors have zero resistance (not 0.8ohm/m).

Practical coax lines are *not* distortionless lines, R is significantly large and G is very small at frequencies below GHz, and so Zo is *not* real.

If you pretend Zo is real, you are calculating results for something else, and little wonder that they do not reconcile with your back of the envelope DC calcs.

>
> Anyway, it would seem to me that the presence of X=-0.5 ohm does not
> change much with regard to whether my reasoning makes some sense.

Your "it seems to me" is not obvious to me, but that is because I have done the calcs, and when you dive into the detail, it does make a difference in a mathematical model. Run the numbes and see if your intuition is born out.

One can validate an approximation by comparing it with the exact solution, and if the error is acceptable for the purpose the approximation is valid.

However, for most practical purposes, the tolerances of product will mask very small effects.

BTW, the DC solution and the RF solution as frequency approaches zero *must* reconcile if they are both valid. But, you are using a simplified DC solution (centre conductor DC resistance only) compared to a GHz RF

view (where Xo is very small).

Owen

298. Re: A reasoning on coaxial cables

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-06 23:42:07 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <8otl25pbmg81jm337eg81oenub83t1k0is@4ax.com>
Source record: 14810

On Sun, 7 Jun 2009 00:10:40 +0200, "Antonio Vernucci"
<vernucci@tin.it> wrote:

>Why the manufacturers describe the RG-179 (which has an ohmic
>loss of 0.8-ohm/meter neglecting the braid loss) as a "75-ohm coaxial cable"?

Hi Tony,

0.8 is a loss constant, not a loss per meter just as RG-35 has a 0.071
constant, RG-11 has a 0.203 constant, RG-6 has a 0.256 constant, RG-59
has a 0.32 constant, and RG-180 has a 0.615 constant.

73's
Richard Clark, KB7QHC

299. Re: A reasoning on coaxial cables

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-06 23:55:21 UTC
From: Owen Duffy <none@no.where>
Message-ID: <Xns9C2364F077F40nonenowhere@61.9.191.5>
Source record: 14811

"Antonio Vernucci" <vernucci@tin.it> wrote in news:4a2af94e$0$1111
$4fafbaef@reader3.news.tin.it:

>> No, I didn't say that it "works well...", that is entirely your
>> construction.
>
> Sorry for my imprecise wording. Please try to re-read what I had
written
> replacing my sentence "works well" with your sentence "impedance is
> *approximately* 75+j0"

Look at the expression Zo=((R+jWL)/(G+jWC))^0.5

L and C are relatively independent of frequency.

- As frequency (W) increases, the jWL and jWC terms increase
proportionately.

- R increases approximately proportionate to the square root of frequency
when skin effect if fully effective. R is significant.

- G increases proportionately to frequency, but it is a very small
magnitude, usually insignificant compared to WC below 1GHz.

It is the relationship between all these terms and frequency that
explains how a line "works" at different frequencies.

The real part of the propagation constant gamma=((R+jWL)*(G+jWC))^0.5
give the one-way attenuation characteristic, and again it is frequency
dependent.

The problem in applying this down to DC for RG179 is finding the
effective value of R at very low frequencies.

The model works, and long-line engineers have understood its application
to transmission lines down to hundreds of Hz, and they don't assume that
Zo is real. (Though 'everyone' talks about phone lines as 600 ohm lines,
they aren't!)

A lot of audio designers treat a coaxial line as having a capacitance per
unit length. This is an approximation that treats R, G, and L as zero, an
approximation that is reasonably valid at audio frequencies for a short
line when terminated in a resistive load that is much greater than Zo.

Designers calculating 12V power distribution in a vehicle might consider
(as you have) just the R term, ignoring all others as at W=0 WL and WC
are both zero and G is typically extremely small at DC, so a R only model
is a good approximation of a line at DC terminated in a very low

resistive load.

But, you cannot compare an approximation for one scenario with another scenario without considering whether the approximation is valid for both scenarios.

Your DC approximation is not valid for radio frequencies, and for that reason, you cannot compare its results at DC and at radio frequencies.

Owen

300. Re: Sun Spots

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-07 00:36:09 UTC
From: Dave <noone@nowhere.com>
Message-ID: <ZXDWI.1031$u86.1020@nwrddc01.gnilink.net>
Source record: 14812

"Art Unwin" <ArthurUnwin@gmail.com> wrote in message
news:74981a78-0e97-4677-ba40-a5d7b15794f6@z14g2000yqa.googlegroups.com...
On Jun 6, 6:01 pm, "Dave" <no...@nowhere.com> wrote:
>I hold no grudges so there is no
>need to continue a useless fight

there is no fight with an unarmed man... you are rambling on with gibberish
and technobabble, not a thread of useful information in the whole thing...
just a bit of humor and a good laugh while relaxing after installing another
large yagi built with maxwell's equations, without any magical levitating
anti-diamagnetic solar neutrinos.

301. Re: Sun Spots

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-07 01:59:08 UTC
From: Art Unwin <ArthurUnwin@gmail.com>
Message-ID: <c2345d23-0025-412d-a722-2e3f0d03fbf1@w40g2000yqd.googlegroups.com>
Source record: 14813

On Jun 6, 7:36 pm, "Dave" <no...@nowhere.com> wrote:
> "Art Unwin" <ArthurUn...@gmail.com> wrote in message
>
> news:74981a78-0e97-4677-ba40-a5d7b15794f6@z14g2000yqa.googlegroups.com...
> On Jun 6, 6:01 pm, "Dave" <no...@nowhere.com> wrote:
>
> >I hold no grudges so there is no
> >need to continue a useless fight
>
> there is no fight with an unarmed man... you are rambling on with gibberish
> and technobabble, not a thread of useful information in the whole thing...
> just a bit of humor and a good laugh while relaxing after installing another
> large yagi built with maxwell's equations, without any magical levitating
> anti-diamagnetic solar neutrinos.

OK David so it was to much for you and you have gone over the top.
If you had taken action like I suggested you would not have separated
logic from your brain. It is going to take a long time for you to
recover so be nice to your wife as you will now need her more than
ever. Sorry to see you succumb to this fall. He who laughs last laughs
alone but you knew that before this happened.
Take care
Art

302. Re: "Large" volume antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-07 03:30:23 UTC
From: tom <news4792@taring.org>
Message-ID: <4a2b344f$0$18871$8046368a@newsreader.iphouse.net>
Source record: 14814

Art Unwin wrote:
>
> Jimmie
> I hate to tell you but the antenna that you made was a result of
> various statements where it would seem that the main object was to
> proof me in error. So I gave a description of such an antenna to
> satisfy the desires of my critics in the hopes that they would be
> content.
> That antenna is not the one I use . Sorry you went to a lot of work
> for nothing.
> Art

And you expect people to respect what you say when you adnit to things
like that?

Shame shame shame on you.

Asshole!

tom
K0TAR

303. Re: Sun Spots

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-07 03:42:28 UTC
From: tom <news4792@taring.org>
Message-ID: <4a2b3724$0$18871$8046368a@newsreader.iphouse.net>
Source record: 14815

Dave wrote:
>
> "Art Unwin" <ArthurUnwin@gmail.com> wrote in message
> news:4d800b1e-550f-462d-9266-d07c8c23d26a@3g2000yqk.googlegroups.com...
>> You are correct, Am I allowed a senior moment?
>
> you have been having one big senior moment on here.
>
>> That is not strictly correct. Maxwell accounted for all forces to
>> determine maximum efficiency.
>
> no he didn't. show me where gravity, the weak nuclear force, or the
> strong nuclear force are accounted for in the equations. specific
> terms, no handwaving and don't fall back on the stupid tilted vertical
> argument, give the equations where those terms are included.
>
>

He is a bit silent.

As usual when it comes to specifics rather than handwaving and bafflegab.

tom
K0TAR

304. Re: Sun Spots

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-07 03:45:27 UTC
From: tom <news4792@taring.org>
Message-ID: <4a2b37d6$0$18871$8046368a@newsreader.iphouse.net>
Source record: 14816

Art Unwin wrote:
> On Jun 6, 7:36 pm, "Dave" <no...@nowhere.com> wrote:
>> "Art Unwin" <ArthurUn...@gmail.com> wrote in message
>>
>> news:74981a78-0e97-4677-ba40-a5d7b15794f6@z14g2000yqa.googlegroups.com...
>> On Jun 6, 6:01 pm, "Dave" <no...@nowhere.com> wrote:
>>
>>> I hold no grudges so there is no
>>> need to continue a useless fight
>> there is no fight with an unarmed man... you are rambling on with gibberish
>> and technobabble, not a thread of useful information in the whole thing...
>> just a bit of humor and a good laugh while relaxing after installing another
>> large yagi built with maxwell's equations, without any magical levitating
>> anti-diamagnetic solar neutrinos.
>
> OK David so it was to much for you and you have gone over the top.
> If you had taken action like I suggested you would not have separated
> logic from your brain. It is going to take a long time for you to
> recover so be nice to your wife as you will now need her more than
> ever. Sorry to see you succumb to this fall. He who laughs last laughs
> alone but you knew that before this happened.
> Take care
> Art

You bastard! You went and made an antenna that WORKS!

And it doesn't meet Art's Godly laws!

How DARE you!

tom
K0TAR

305. Re: "Large" volume antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-07 03:51:14 UTC
From: Art Unwin <ArthurUnwin@gmail.com>
Message-ID: <76369d0d-ce84-4f6c-9694-4e7b4060d24e@y17g2000yqn.googlegroups.com>
Source record: 14817

On Jun 6, 10:30 pm, tom <news4...@taring.org> wrote:
> Art Unwin wrote:
>
> > Jimmie
> > I hate to tell you but the antenna that you made was a result of
> > various statements where it would seem that the main object was to
> > proof me in error. So I gave a description of such an antenna to
> > satisfy the desires of my critics in the hopes that they would be
> > content.
> > That antenna is not the one I use . Sorry you went to a lot of work
> > for nothing.
> > Art
>
> And you expect people to respect what you say when you adnit to things
> like that?
>
> Shame shame shame on you.
>
> Asshole!
>
> tom
> K0TAR

If you show disrespect then you should not complain when you get what
compliments your own behavior

306. Re: "Large" volume antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-07 03:58:11 UTC
From: tom <news4792@taring.org>
Message-ID: <4a2b3ad2$0$18863$8046368a@newsreader.iphouse.net>
Source record: 14818

Art Unwin wrote:
>> And you expect people to respect what you say when you adnit to things
>> like that?
>>
>> Shame shame shame on you.
>>
>> Asshole!
>>
>> tom
>> K0TAR
>
> If you show disrespect then you should not complain when you get what
> compliments your own behavior

You do not deserve respect when you deceive, so don't expect it.

tom
K0TAR

307. Re: "Large" volume antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-07 04:14:01 UTC
From: tom <news4792@taring.org>
Message-ID: <4a2b3edb$0$92354$8046368a@newsreader.iphouse.net>
Source record: 14819

Art Unwin wrote:
> Jimmie
> I hate to tell you but the antenna that you made was a result of
> various statements where it would seem that the main object was to
> proof me in error. So I gave a description of such an antenna to
> satisfy the desires of my critics in the hopes that they would be
> content.
> That antenna is not the one I use . Sorry you went to a lot of work
> for nothing.
> Art

So you think it's fine that

1) You deceive those you are debating with.

2) The antenna you really are arguing about isn't the same as what you
have described.

3) You don't need to test said "real" antenna, because it works in your
own mind.

You are so full of S--T that it's absolutely amazing.

tom
K0TAR

308. Seeking New FAQ/Intro Maintainers for rec.radio.amateur.*

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-07 06:05:01 UTC
From: rram@panix.com
Message-ID: <radio/ham-radio/recruitment-1-1244354701@panix.com>
Source record: 14820
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.dx,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.policy,rec.radio.info

```
Posted-By: auto-faq 3.3.2 beta (PGPMoose V2.0, Perl 5.005)
Archive-name: radio/ham-radio/recruitment
Revision: 1.1 2007/09/29 18:42:47
Posting-Frequency: posted monthly
URL: http://www.faqs.org/faqs/radio/personal-intro/

Changes followed by "|".

The rec.radio.info newsgroup, first established in 1993, has been
recently revived by an active moderation team. We are currently seeking
suitable information, FAQ, and bulletin articles from the entire
rec.radio.* newsgroup hierarchy for simultaneous cross-posting to our
newsgroup.

We are seeking a replacement maintainer for the following information
bulletin formerly posted to rec.radio.amateur.* (and currently archived
at http://www.faqs.org/faqs/radio/personal-intro/ ):

radio/personal-intro
Subject: Guide to the rec.radio Newsgroups
Maintainer: jeffreyh@Hawaii.Edu (Jeffrey Herman)
Last Posted: 9 Nov 2001 06:18:17 GMT
Posting-Frequency: 15th of each month

We are willing to provide any technical support necessary to get this
article updated and automatically posted again at a regular interval.
This would include establishing contact with the original maintainer for
any necessary permissions. We would prefer to seek a new, dedicated
maintainer at this time, rather than start auto-posting the original
article ourselves.

For more information about our newsgroup, see:

http://www.panix.com/~rram/usenet/rri/index.html

Please direct any comments, questions, or criticisms to
rec-radio-info-request@panix.com.
```

309. Re: A reasoning on coaxial cables

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-07 07:35:15 UTC
From: Antonio Vernucci <vernucci@tin.it>
Message-ID: <4a2b6db2$0$838$4fafbaef@reader5.news.tin.it>
Source record: 14821

> Hi Tony,
>
> 0.8 is a loss constant, not a loss per meter just as RG-35 has a 0.071
> constant, RG-11 has a 0.203 constant, RG-6 has a 0.256 constant, RG-59
> has a 0.32 constant, and RG-180 has a 0.615 constant.

Hi Clark

the 0.8 ohm per meter figure was not taken a by a catalog. It simply comes from dividing the measured DC resistance of my RG-179 cable roll (which is 25 ohm) by its length (which is 30 meters).

73

Tony I0JX

310. Re: Polarized radiation

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-07 08:02:52 UTC
From: Szczepan Białek <sz.bialek@wp.pl>
Message-ID: <h0fisq$4su$1@node1.news.atman.pl>
Source record: 14822

<jimp@specsol.spam.sux.com> wrote news:cnmqf6-lee.ln1@mail.specsol.com...
> Szczepan BiaĹ□ek <sz.bialek@wp.pl> wrote:
>>
>> "Cecil Moore" <nospam@w5dxp.com> wrote
>> news:MVvWl.18251$jZ1.6066@flpi144.ffdc.sbc.com...
>>> Szczepan BiaĹ□ek wrote:
>>>> But what radiate 1/4 wave antenna (mast) with the one end only? Is the
>>>> radiation polarized?
>>>
>>> Why not download the free demo version of EZNEC from
>>> www.eznec.com which will tell you that the radiation
>>> from a 1/4WL vertical monopole is primarily vertically
>>> polarized.
>>
>> What means "primarily"?
>> Is in reality an antenna which radiate unpolarized radio waves?
>> S*
>
> That you would use the term "unpolarized radio waves" shows you haven't
> a clue what you are talking about.
>
> http://en.wikipedia.org/wiki/Polarization

```
Are you sure that radio waves are transversal?
We are trying to find how the dipole works. The are the two possibilities:
1. Dipol radiate the Maxwell's wave from the centre,
2. The two ends radiate the two pressure-like electric waves.

What do you prefer?
S*
```

311. Re: Polarized radiation

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-07 08:16:47 UTC
From: Szczepan Białek <sz.bialek@wp.pl>
Message-ID: <h0fjmt$4up$1@node1.news.atman.pl>
Source record: 14823

"Cecil Moore" <nospam@w5dxp.com> wrote
news:BQyWl.20804$8_3.1119@flpi147.ffdc.sbc.com...
> Szczepan Biaďż˝ek wrote:
>>
>> "Cecil Moore" <nospam@w5dxp.com> wrote
>>> ... a 1/4WL vertical monopole is primarily vertically
>>> polarized.
>>
>> What means "primarily"?
>
> There is a small amount of radiation off the ends
> of an unterminated antenna that has opposite
> polarization to most of the other radiation. I
> would call it a *secondary* radiation effect as
> opposed to the *primary* radiation effect.

Some antennas (emitting and receiving) must be parallel. Some not.
Which ones? (my knowledge about antennas is zero).
S*

312. Re: hi sos

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-07 08:43:28 UTC
From: Jeff <jeff@local.host>
Message-ID: <4a2b7e14$0$1340$834e42db@reader.greatnowhere.com>
Source record: 14824

>yes too difficult to construct such antenna
>us i said, it's a project for my post graduate thesis, the idea is to
>apply multidisciplinary robust design optimization algorithms to have
>a good antenna for earth sensing satellite satellite (800KM altitude),
>it will be a contribution for the algerian satellite alsat1-b, i'll
>study the antenna from EM, mechanecal to thermo-aerodynamic and the
>great problem is a structural adjusting of two QHA antennas on the
>pannel facing the earth.

It is certainly very possible to build QFHs for 2GHz there are several
designs available on the web for GPS receiving applications.
I have constructed one based on semi-rigid co-ax.

A quick search on Google will bring up plenty of info. Here are just a
couple:

http://home.iae.nl/users/plundahl/antenne/helical.htm
http://www.ien.it/~brida/LNAGPS.htm

Regards
Jeff

313. Re: hi sos

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-07 09:02:46 UTC
From: Jeff <jeff@local.host>
Message-ID: <4a2b829b$0$1342$834e42db@reader.greatnowhere.com>
Source record: 14825

> It is certainly very possible to build QFHs for 2GHz there are several
> designs available on the web for GPS receiving applications.

I should have added that it should be possible to scale those designs from
1.5 to 2Ghz.

> Regards
> Jeff
>

314. Re: Polarized radiation

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-07 10:43:28 UTC
From: Dave <noone@nowhere.com>
Message-ID: <kRMWl.1119$u86.213@nwrddc01.gnilink.net>
Source record: 14826

```
"Szczepan Bialek" <sz.bialek@wp.pl> wrote in message
news:h0fisq$4su$1@node1.news.atman.pl...
>
> <jimp@specsol.spam.sux.com> wrote news:cnmqf6-lee.ln1@mail.specsol.com...
>> Szczepan Biaï¿½,ek <sz.bialek@wp.pl> wrote:
>>>
>>> "Cecil Moore" <nospam@w5dxp.com> wrote
>>> news:MVvWl.18251$jZ1.6066@flpi144.ffdc.sbc.com...
>>>> Szczepan Biaï¿½,ek wrote:
>>>>> But what radiate 1/4 wave antenna (mast) with the one end only? Is the
>>>>> radiation polarized?
>>>>
>>>> Why not download the free demo version of EZNEC from
>>>> www.eznec.com which will tell you that the radiation
>>>> from a 1/4WL vertical monopole is primarily vertically
>>>> polarized.
>>>
>>> What means "primarily"?
>>> Is in reality an antenna which radiate unpolarized radio waves?
>>> S*
>>
>> That you would use the term "unpolarized radio waves" shows you haven't
>> a clue what you are talking about.
>>
>> http://en.wikipedia.org/wiki/Polarization
>
> Are you sure that radio waves are transversal?

yes

> We are trying to find how the dipole works. The are the two possibilities:
> 1. Dipol radiate the Maxwell's wave from the centre,
> 2. The two ends radiate the two pressure-like electric waves.

3. they radiate from their whole length.
```

315. Re: Polarized radiation

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-07 10:44:19 UTC
From: Dave <noone@nowhere.com>
Message-ID: <7SMWl.1120$u86.328@nwrddc01.gnilink.net>
Source record: 14827

"Szczepan Bialek" <sz.bialek@wp.pl> wrote in message
news:h0fjmt$4up$1@node1.news.atman.pl...
>(my knowledge about antennas is zero).

that is obvious

316. Re: "Large" volume antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-07 10:45:46 UTC
From: Dave <noone@nowhere.com>
Message-ID: <uTMWI.1121$u86.1018@nwrddc01.gnilink.net>
Source record: 14828

"tom" <news4792@taring.org> wrote in message
news:4a2b3edb$0$92354$8046368a@newsreader.iphouse.net...
> Art Unwin wrote:
>> Jimmie
>> I hate to tell you but the antenna that you made was a result of
>> various statements where it would seem that the main object was to
>> proof me in error. So I gave a description of such an antenna to
>> satisfy the desires of my critics in the hopes that they would be
>> content.
>> That antenna is not the one I use . Sorry you went to a lot of work
>> for nothing.
>> Art
>
> So you think it's fine that
>
> 1) You deceive those you are debating with.
>
> 2) The antenna you really are arguing about isn't the same as what you
> have described.
>
> 3) You don't need to test said "real" antenna, because it works in your
> own mind.
>
> You are so full of S--T that it's absolutely amazing.
>
> tom
> K0TAR

yes, but if you prod him just right you can get great laughs out of it.

317. Re: Sun Spots

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-07 10:47:23 UTC
From: Dave <noone@nowhere.com>
Message-ID: <%UMWl.1122$u86.779@nwrddc01.gnilink.net>
Source record: 14829

"Art Unwin" <ArthurUnwin@gmail.com> wrote in message
news:c2345d23-0025-412d-a722-2e3f0d03fbf1@w40g2000yqd.googlegroups.com...
> He who laughs last laughs
>alone but you knew that before this happened.

yes, and I'm laughing a lot recently reading your humorous posts. so keep deluding yourself and we'll all be laughing.

318. Re: Sun Spots

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-07 10:48:02 UTC
From: Dave <noone@nowhere.com>
Message-ID: <CVMWI.1123$u86.370@nwrddc01.gnilink.net>
Source record: 14830

```
"tom" <news4792@taring.org> wrote in message
news:4a2b37d6$0$18871$8046368a@newsreader.iphouse.net...
> Art Unwin wrote:
>> On Jun 6, 7:36 pm, "Dave" <no...@nowhere.com> wrote:
>>> "Art Unwin" <ArthurUn...@gmail.com> wrote in message
>>>
>>> news:74981a78-0e97-4677-ba40-a5d7b15794f6@z14g2000yqa.googlegroups.com...
>>> On Jun 6, 6:01 pm, "Dave" <no...@nowhere.com> wrote:
>>>
>>>> I hold no grudges so there is no
>>>> need to continue a useless fight
>>> there is no fight with an unarmed man... you are rambling on with
>>> gibberish
>>> and technobabble, not a thread of useful information in the whole
>>> thing...
>>> just a bit of humor and a good laugh while relaxing after installing
>>> another
>>> large yagi built with maxwell's equations, without any magical
>>> levitating
>>> anti-diamagnetic solar neutrinos.
>>
>> OK David so it was to much for you and you have gone over the top.
>> If you had taken action like I suggested you would not have separated
>> logic from your brain. It is going to take a long time for you to
>> recover so be nice to your wife as you will now need her more than
>> ever. Sorry to see you succumb to this fall. He who laughs last laughs
>> alone but you knew that before this happened.
>> Take care
>> Art
>
> You bastard! You went and made an antenna that WORKS!
>
> And it doesn't meet Art's Godly laws!
>
> How DARE you!
>
> tom
> K0TAR

i dare just fine, thank you.
```

319. Re: Sun Spots

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-07 10:48:23 UTC
From: Dave <noone@nowhere.com>
Message-ID: <XVMWI.1124$u86.798@nwrddc01.gnilink.net>
Source record: 14831

"tom" <news4792@taring.org> wrote in message
news:4a2b3724$0$18871$8046368a@newsreader.iphouse.net...
> Dave wrote:
>>
>> "Art Unwin" <ArthurUnwin@gmail.com> wrote in message
>> news:4d800b1e-550f-462d-9266-d07c8c23d26a@3g2000yqk.googlegroups.com...
>>> You are correct, Am I allowed a senior moment?
>>
>> you have been having one big senior moment on here.
>>
>>> That is not strictly correct. Maxwell accounted for all forces to
>>> determine maximum efficiency.
>>
>> no he didn't. show me where gravity, the weak nuclear force, or the
>> strong nuclear force are accounted for in the equations. specific terms,
>> no handwaving and don't fall back on the stupid tilted vertical argument,
>> give the equations where those terms are included.
>>
>>
>
> He is a bit silent.
>
> As usual when it comes to specifics rather than handwaving and bafflegab.
>
> tom
> K0TAR

of course.

320. Re: hi sos

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-07 13:52:51 UTC
From: Rich Griffiths <richgrif@one.net>
Message-ID: <Kd-dnS0oYtKuW7bXnZ2dnUVZ_tti4p2d@posted.nuvoxcommunications>
Source record: 14832

On Sat, 06 Jun 2009 20:15:19 +0000, Jerry wrote:

<snip>
> can you point me to a site where the
> multiturn Quad Helix is used for satellite application?
>
> Thanks
> Jerry KD6JDJ

I don't have any links for that, Jerry. I stopped doing LEO WXSAT stuff a few years ago, and even then I only had photocopies of stuff -- nothing online.

As I recall, much of the early work was done by a fellow named Kilgus. The papers I had presented analyses (predicted radiation patterns, etc.) of a wide range of quad helixes, and some had pictures of cute little multigigahertz jobs that had to have been made by a good machinist.

An Internet search for Kilgus may pop something up. But since the work was done well before the dawn of the Internet, you'll probably find mostly references to Kilgus instead of copies of his work.

... Rich W2RG

321. Re: hi sos

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-07 14:19:03 UTC
From: discretman16@gmail.com
Message-ID: <c5db5b3a-b1f3-4083-be24-f5520966a4d9@f19g2000yqh.googlegroups.com>
Source record: 14833

On 6 juin, 22:15, "Jerry" <jerrymar...@verizon.net> wrote:
> "Rich Griffiths" <richg...@one.net> wrote in message
>
> news:E42dnbkdXPTsJbfXnZ2dnUVZ_oCdnZ2d@posted.nuvoxcommunications...
>
>
>
>
>
> > <snip>
>
> >> hi "jerry"
>
> >> i want QHA models and i try to adapt them for 2GHZ it's for
> >> heliosynchron
> >> satellite for earth sensing
> >> thank u
>
> >> Hi "disc"
>
> >> Wow, thats a small Quad Helix. Tell me the dimensions. I'll try to
> >> model
> >> it for you using EZNEC.
> >> Is this a real project? That is, do you have the antenna, or are you
> >> planning to build one? If you have a "store bought" 2 GHz Quad helix,
> >> there are certainly some patterns available from the mnanufacturer. If
> >> you plan to build the Quad helix, are you able to make any impedance
> >> measurements of the model?
> >> As you know, the fundamental plan in the Quad Helix design is to make
> >> one
> >> loop radiate 90 degrees later than the other due to the impedance
> >> difference between the two loops.
>
> >>   Jerry KD6JDJ
>
> > Remember that gigahertz-level quad helixes used on satellites are usually
> > multiturn devices. Model results for a 137-MHz, half-turn antenna scaled
> > up to 2 GHz may not be appropriate.
>
> > ... Rich   W2RG
>
> Hi Rich
>
> Your comment helps. I wasnt aware that multiturn Quad Helix antennas

> were used on satellites.   can you point me to a site where the multiturn
> Quad Helix is used for satellite application?
>
>   Thanks
>   Jerry   KD6JDJ- Masquer le texte des messages précédents -
>
> - Afficher le texte des messages précédents -

hi jerry

follow this links please :

http://www.sstl.org/assets/Downloads/Quadrifilar%20Helix%20Antenna.pdf
http://linkinghub.elsevier.com/retrieve/pii/S1434841105001755

discretman16

322. Re: Using Tuner to Determine Line Input Impedance

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-07 14:31:00 UTC
From: dykesc <cupstidd@bellsouth.net>
Message-ID: <0eccead5-4881-47c5-8881-2f9c9bd10af5@3g2000yqk.googlegroups.com>
Source record: 14834

I am trying to validate impedance values I am measuring with my
MFJ-259B. I attempted this by using my MFJ-993B auto tuner. The tuner
uses a simple L network to create the conjugate match. I took
the final inductance, capacitance values from the auto tuner
digital display after achieving a 1.0 swr match and back calculated
the transmission line
input impedance that the tuner is seeing. I used the RevLoad load
program (link supplied
by Roger in an earlier post) to determine Tuner Z.

For what it is worth, here is some data.

Frequency MFJ-259B Z Tuner Z (calculated)

3.5Mhz 15-j36 27-j42
3.98Mhz 34+j42 32+j28
7.15Mhz 48-j18 46+j2
14.175 Mhz 87+j0 53+j7
28.350Mhz 28-j19 65-j16

323. Re: hi sos

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-07 15:24:00 UTC
From: Jerry <jerrymartes@verizon.net>
Message-ID: <kYQWl.1158$u86.737@nwrddc01.gnilink.net>
Source record: 14835

"Rich Griffiths" <richgrif@one.net> wrote in message
news:Kd-dnS0oYtKuW7bXnZ2dnUVZ_tti4p2d@posted.nuvoxcommunications...
> On Sat, 06 Jun 2009 20:15:19 +0000, Jerry wrote:
>
> <snip>
>> can you point me to a site where the
>> multiturn Quad Helix is used for satellite application?
>>
>> Thanks
>> Jerry KD6JDJ
>
> I don't have any links for that, Jerry. I stopped doing LEO WXSAT stuff
> a few years ago, and even then I only had photocopies of stuff -- nothing
> online.
>
> As I recall, much of the early work was done by a fellow named Kilgus.
> The papers I had presented analyses (predicted radiation patterns, etc.)
> of a wide range of quad helixes, and some had pictures of cute little
> multigigahertz jobs that had to have been made by a good machinist.
>
> An Internet search for Kilgus may pop something up. But since the work
> was done well before the dawn of the Internet, you'll probably find
> mostly references to Kilgus instead of copies of his work.
>
> ... Rich W2RG

Hi Rich

Yeah, Kilgus presented papers to describe the Quad Helix to "the masses"
back in the 1968 (I think). His papers were published in profesional
fashion, and very well detailed. My understanding of the Quad Helix is far
more simple than Kilgus's.
I see the Quad Helix as two oblong loops, each twisted 180 degrees. One
loop os fed to radiate 90 degrees later than the other. The objective of the
design of a Quad Helix is to acheive a Hemispheric radiation pattern with
Circular Polarization. It would seem that "multiturn" of the Quad Helix
would defete the Hemispheric objective.

The problem many Quad Helix antenna builders have is related to the way
the 90 degree delay is acheived. Kilgus acheives the delay by controling
the feed point impedance of each "loop". That gets quite intricate for
microwave devices, as you know. A small change in configuration of the
antenna can seriously effect the impedances and therefore, the phasing. In
short, the Quad Helix is a great antenna for a satellite installation when
significant time and equipment is available for developing the antenna

design.

Jerry KD6JDJ

324. Re: hi sos

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-07 15:45:44 UTC
From: Jerry <jerrymartes@verizon.net>
Message-ID: <lgRWl.1162$u86.321@nwrddc01.gnilink.net>
Source record: 14836

<discretman16@gmail.com> wrote in message
news:c5db5b3a-b1f3-4083-be24-f5520966a4d9@f19g2000yqh.googlegroups.com...
On 6 juin, 22:15, "Jerry" <jerrymar...@verizon.net> wrote:
> "Rich Griffiths" <richg...@one.net> wrote in message
>
> news:E42dnbkdXPTsJbfXnZ2dnUVZ_oCdnZ2d@posted.nuvoxcommunications...
>
>
>
>
>
> > <snip>
>
> >> hi "jerry"
>
> >> i want QHA models and i try to adapt them for 2GHZ it's for
> >> heliosynchron
> >> satellite for earth sensing
> >> thank u
>
> >> Hi "disc"
>
> >> Wow, thats a small Quad Helix. Tell me the dimensions. I'll try to
> >> model
> >> it for you using EZNEC.
> >> Is this a real project? That is, do you have the antenna, or are you
> >> planning to build one? If you have a "store bought" 2 GHz Quad helix,
> >> there are certainly some patterns available from the mnanufacturer. If
> >> you plan to build the Quad helix, are you able to make any impedance
> >> measurements of the model?
> >> As you know, the fundamental plan in the Quad Helix design is to make
> >> one
> >> loop radiate 90 degrees later than the other due to the impedance
> >> difference between the two loops.
>
> >> Jerry KD6JDJ
>
> > Remember that gigahertz-level quad helixes used on satellites are
> > usually
> > multiturn devices. Model results for a 137-MHz, half-turn antenna scaled
> > up to 2 GHz may not be appropriate.
>
> > ... Rich W2RG

>
> Hi Rich
>
> Your comment helps. I wasnt aware that multiturn Quad Helix antennas
> were used on satellites. can you point me to a site where the multiturn
> Quad Helix is used for satellite application?
>
> Thanks
> Jerry KD6JDJ- Masquer le texte des messages pr&#65533;c&#65533;dents -
>
> - Afficher le texte des messages pr&#65533;c&#65533;dents -

hi jerry

follow this links please :

http://www.sstl.org/assets/Downloads/Quadrifilar%20Helix%20Antenna.pdf
http://linkinghub.elsevier.com/retrieve/pii/S1434841105001755

discretman16

Hi discreteman16

I couldnt figure out how to see the referenced sites without paying
$31.50. But, that looks like a site where extensive computer modeling has
been documented. It becomes quite obvious that I am at a far too low level
in my math and theoritical capability to assist you. I dont even know what
ANSOFT and matlab are. But, I use EZNEC to describe Quad Helix antennas
of my design. It takes me less than 10 minutes to describe a Quad Helix
in EZNEC. I strongly recommend EZNEC to any young person who has *any*
interest in designing or understanding antennas. It is a great tool for
anyone who is interested in antennas. If I can be of any help to you by
trying to model a Quad Helix for you, you are welcome to contact me.

Jerry KD6JDJ

325. Re: Using Tuner to Determine Line Input Impedance

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-07 15:56:39 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <uoon25tb6eji96adnc1pbomjqrfq33gipe@4ax.com>
Source record: 14837

On Sun, 7 Jun 2009 07:31:00 -0700 (PDT), dykesc
<cupstidd@bellsouth.net> wrote:

>For what it is worth, here is some data.

Do you use the MFJ-259B at the load, or through the line?

73's
Richard Clark, KB7QHC

326. Re: Polarized radiation

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-07 16:16:00 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <s6pn25p3c6v1fqvnd7vrk7lfkfhummpbgc@4ax.com>
Source record: 14838

On Sun, 07 Jun 2009 10:44:19 GMT, "Dave" <noone@nowhere.com> wrote:
>"Szczepan Bialek" <sz.bialek@wp.pl> wrote in message
>news:h0fjmt$4up$1@node1.news.atman.pl...
>>(my knowledge about antennas is zero).
>
>that is obvious

Watch it Dave, that last statement is Gaussian and lacks the "t"
variable making it static. Getting the jump on Art and adding "t", it
becomes:
>(my knowledge about antennas will always be zero at this rate)

This added time dimension cannot be in dispute, can it? It brings
equilibrium, was proven by Newton, and thoroughly demolishes
Einstein's work in the same stroke. (Patent Pending, so it must be
true).

73's
Richard Clark, KB7QHC

327. Re: A reasoning on coaxial cables

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-07 16:31:49 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <kdqn25dcq6b2i09r75joaqk80clohusk03@4ax.com>
Source record: 14839

On Sun, 7 Jun 2009 09:35:15 +0200, "Antonio Vernucci"
<vernucci@tin.it> wrote:

>the 0.8 ohm per meter figure was not taken a by a catalog. It simply comes from
>dividing the measured DC resistance of my RG-179 cable roll (which is 25 ohm)
>by its length (which is 30 meters).

Hi Tony,

Then you are suffering from one of two problems:
1. Your measurement is seriously in error, or
2. Your cable is from a very poor vendor, or
3. You have reported the wrong type of coax.

All that aside, the reason why it is specified as any specific Z has
been well described. If you take issue with any "one" measurement of
R that seems to confound those descriptions, then "any" measurement of
R would do so, likewise.

In other words, ALL cables exhibit the loss of R. There are coaxial
cables that are very much smaller than yours that are employed in
transducer probes for doing ultrasound scans of patients. You would
need a microscope to measure their dimensions. And they have enormous
loss.

73's
Richard Clark, KB7QHC

328. Re: Polarized radiation

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-07 17:00:01 UTC
From: jimp@specsol.spam.sux.com
Message-ID: <tg7tf6-t17.ln1@mail.specsol.com>
Source record: 14840

```
Szczepan Białek <sz.bialek@wp.pl> wrote:
>
> <jimp@specsol.spam.sux.com> wrote news:cnmqf6-lee.ln1@mail.specsol.com...
>> Szczepan BiaĹ?ek <sz.bialek@wp.pl> wrote:
>>>
>>> "Cecil Moore" <nospam@w5dxp.com> wrote
>>> news:MVvWl.18251$jZ1.6066@flpi144.ffdc.sbc.com...
>>>> Szczepan BiaĹ?ek wrote:
>>>>> But what radiate 1/4 wave antenna (mast) with the one end only? Is the
>>>>> radiation polarized?
>>>>
>>>> Why not download the free demo version of EZNEC from
>>>> www.eznec.com which will tell you that the radiation
>>>> from a 1/4WL vertical monopole is primarily vertically
>>>> polarized.
>>>
>>> What means "primarily"?
>>> Is in reality an antenna which radiate unpolarized radio waves?
>>> S*
>>
>> That you would use the term "unpolarized radio waves" shows you haven't
>> a clue what you are talking about.
>>
>> http://en.wikipedia.org/wiki/Polarization
>
> Are you sure that radio waves are transversal?
> We are trying to find how the dipole works. The are the two possibilities:
> 1. Dipol radiate the Maxwell's wave from the centre,
> 2. The two ends radiate the two pressure-like electric waves.
>
> What do you prefer?

That you not post your babbling crap here.

Read the link I provided, then read the links it provides.

There are about 100 years of experimental measurements that say how a
dipole works, which is the entire dipole radiates.

--
Jim Pennino

Remove .spam.sux to reply.
```

329. Re: Polarized radiation

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-07 17:00:01 UTC
From: jimp@specsol.spam.sux.com
Message-ID: <bk7tf6-t17.ln1@mail.specsol.com>
Source record: 14841

```
Szczepan Białek <sz.bialek@wp.pl> wrote:
>
> "Cecil Moore" <nospam@w5dxp.com> wrote
> news:BQyWl.20804$8_3.1119@flpi147.ffdc.sbc.com...
>> Szczepan Białek wrote:
>>>
>>> "Cecil Moore" <nospam@w5dxp.com> wrote
>>>> ... a 1/4WL vertical monopole is primarily vertically
>>>> polarized.
>>>
>>> What means "primarily"?
>>
>> There is a small amount of radiation off the ends
>> of an unterminated antenna that has opposite
>> polarization to most of the other radiation. I
>> would call it a *secondary* radiation effect as
>> opposed to the *primary* radiation effect.
>
> Some antennas (emitting and receiving) must be parallel. Some not.
> Which ones? ( my knowledge about antennas is zero).

Obviously since your statement is babbling nonsense.

--
Jim Pennino

Remove .spam.sux to reply.
```

330. Re: Using Tuner to Determine Line Input Impedance

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-07 17:54:46 UTC
From: dykesc <cupstidd@bellsouth.net>
Message-ID: <1d49cb25-0b84-4a62-99cd-3bc98cec5c9b@b9g2000yqm.googlegroups.com>
Source record: 14842

On Jun 7, 10:56 am, Richard Clark <kb7...@comcast.net> wrote:

> Do you use the MFJ-259B at the load, or through the line?

Through the line Richard. The way I take the measurements is by
replacing my transceiver with the 259B with the tuner in "bypass"
mode.

73
Dykes AD5VS

331. Re: Using Tuner to Determine Line Input Impedance

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-07 18:15:47 UTC
From: Dave <noone@nowhere.com>
Message-ID: <ntTWl.780$tr5.604@nwrddc02.gnilink.net>
Source record: 14843

"dykesc" <cupstidd@bellsouth.net> wrote in message
news:1d49cb25-0b84-4a62-99cd-3bc98cec5c9b@b9g2000yqm.googlegroups.com...
On Jun 7, 10:56 am, Richard Clark <kb7...@comcast.net> wrote:

>> Do you use the MFJ-259B at the load, or through the line?
>
>Through the line Richard. The way I take the measurements is by
>replacing my transceiver with the 259B with the tuner in "bypass"
>mode.

you might want to try the mfj reading again at the coax going into the
tuner. the length of the line and the impedance lumps from the relays in
the tuner will transform the impedance going through the tuner even in
bypass mode. while the difference may be small on the low bands it could be
significant on the higher bands.

332. Re: Using Tuner to Determine Line Input Impedance

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-07 18:59:06 UTC
From: Owen Duffy <none@no.where>
Message-ID: <Xns9C2432B638A49nonenowhere@61.9.191.5>
Source record: 14844

dykesc <cupstidd@bellsouth.net> wrote in news:0eccead5-4881-47c5-8881-2f9c9bd10af5@3g2000yqk.googlegroups.com:

> I am trying to validate impedance values I am measuring with my
> MFJ-259B. I attempted this by using my MFJ-993B auto tuner. The tuner
> uses a simple L network to create the conjugate match. I took

You may or may not be creating a *conjugate match*, probably not, it is unimportant. What you are doing with the tuner is adjusting it so that the network *input* impedance is 50+j0 or VSWR(50)=1.

Think about it.

> the final inductance, capacitance values from the auto tuner
> digital display after achieving a 1.0 swr match and back calculated
> the transmission line
> input impedance that the tuner is seeing. I used the RevLoad load
> program (link supplied
> by Roger in an earlier post) to determine Tuner Z.
>
> For what it is worth, here is some data.
>
>
> Frequency MFJ-259B Z Tuner Z (calculated)
>
> 3.5Mhz 15-j36 27-j42
> 3.98Mhz 34+j42 32+j28
> 7.15Mhz 48-j18 46+j2
> 14.175 Mhz 87+j0 53+j7
> 28.350Mhz 28-j19 65-j16

I am not surprised, in fact, I would have been surprised if you got good agreement.

You have two many unknowns. Do you have something that is known, like a good dummy load, a good VSWR meter? Check that the VSWR meter reads 1:1 n the 50 ohm load. Then, if you adjust the tuner with a known 50 ohm load and a known 50 ohm VSWR meter, do the tuner settings reconcile with your expectations?

This experiment might give you some feeling for the scope of error using the method.

Owen

333. Re: Using Tuner to Determine Line Input Impedance

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-07 20:32:47 UTC
From: dykesc <cupstidd@bellsouth.net>
Message-ID: <c8031465-0f69-4110-9dfa-cdffcf344a15@z5g2000vba.googlegroups.com>
Source record: 14845

On Jun 7, 1:15 pm, "Dave" <no...@nowhere.com> wrote:

> you might want to try the mfj reading again at the coax going into the
> tuner. the length of the line and the impedance lumps from the relays in
> the tuner will transform the impedance going through the tuner even in
> bypass mode. while the difference may be small on the low bands it could be
> significant on the higher bands.

Thanks Dave. I completely missed that. New data set follows with
transmission line directly connected to MFJ-259B. Maybe a little
better agreement, but still too many variables and uncertainties in
the instruments I have to expect much better. Owen, Cecil, Richard et.
al. pointed this out when I started down this trail. Still, it was a
good exercise and I learned some things along the way

Frequency(Mhz) MFJ-259B ZL Tuner ZL (calculated)

3.50 16-j52 27-j42
3.98 25+j31 32+j28
7.15 39+j11 46+j2
14.17 42-j22 53+j7
28.35 68-j37 65-
j16

334. Re: A reasoning on coaxial cables

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-07 21:17:19 UTC
From: Antonio Vernucci <vernucci@tin.it>
Message-ID: <4a2c2e5e$0$1114$4fafbaef@reader3.news.tin.it>
Source record: 14846

> Hi Tony,
>
> Then you are suffering from one of two problems:
> 1. Your measurement is seriously in error, or
> 2. Your cable is from a very poor vendor, or
> 3. You have reported the wrong type of coax.

Look at http://hongsencables.hisupplier.com/product-190292-PTFE-Cable.html and you will see that the RG-179 cable has a Direct Current Resistance (DCR) of 800 ohm / kilometer, that is 0.8 ohm per meter, exactly what I measured. That is the normal resistance value for a 7-wire stranded copperclad conductor, each wire having a 0.1 mm diameter.

Should you think that the Chinese firms are poor vendors, then read the characteristics of the US-made RG-179 built by Belden on http://us.100y.com.tw/pdf_file/Belden%2083264.pdf, where they report a resistance of 244 ohm per 1000 feet, that again corresponds to 0.8 ohm meter.

Regards

Tony

335. FT-857, FC-40 and the AM Broadcast Band

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-07 22:32:35 UTC
From: "Bob D." <bobbyd849@comcast.net>
Message-ID: <VOWdnVpO7tZForHXnZ2dnUVZ_jGdnZ2d@giganews.com>
Source record: 14847

I just installed a Yaesu FT-857 with the FC-40 tuner and a 102 inch whip in my car. The system is working well but there are two "annoyances":

1) I like to listen to AM broadcast occasionally. Although the transceiver will tune the broadcast band, the whip is too short for this band. AM reception is very poor. Is there any way to get the FC-40 tuner to help? If the tuner would just kick in some inductance, it might help. (I imagine shortwave broadcasts have the same problem.)

2) The FC-40 seems to default to "straight-through" when you tune to a frequency segment it has never tuned before. When tuning through the 60, 40 or 20 meter bands the receiver "falls off the cliff" when leaving a previously-tuned segment and entering a new segment. The S-meter drops to S zero, and I have to push the ANT button to get reception back. This is annoying to say the least. Why doesn't the tuner retain it's match, at least during receive mode?

--
Bob D. ND9B

336. Re: FT-857, FC-40 and the AM Broadcast Band

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-07 23:25:56 UTC
From: Jerry <jerrymartes@verizon.net>
Message-ID: <80YWl.849$tr5.32@nwrddc02.gnilink.net>
Source record: 14848

"Bob D." <bobbyd849@comcast.net> wrote in message
news:VOWdnVpO7tZForHXnZ2dnUVZ_jGdnZ2d@giganews.com...
>I just installed a Yaesu FT-857 with the FC-40 tuner and a 102 inch whip in
>my car. The system is working well but there are two "annoyances":
>
> 1) I like to listen to AM broadcast occasionally. Although the
> transceiver will tune the broadcast band, the whip is too short for this
> band. AM reception is very poor. Is there any way to get the FC-40 tuner
> to help? If the tuner would just kick in some inductance, it might help.
> (I imagine shortwave broadcasts have the same problem.)
>
> 2) The FC-40 seems to default to "straight-through" when you tune to a
> frequency segment it has never tuned before. When tuning through the 60,
> 40 or 20 meter bands the receiver "falls off the cliff" when leaving a
> previously-tuned segment and entering a new segment. The S-meter drops to
> S zero, and I have to push the ANT button to get reception back. This is
> annoying to say the least. Why doesn't the tuner retain it's match, at
> least during receive mode?
>
> --
> Bob D. ND9B

Hi Bob

If you want an interesting project, I'd suggest that you build an AM
Loop antenna.

Jerry KD6JDJ
>

337. Re: A reasoning on coaxial cables

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-07 23:51:07 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <eiko25tca7hh3t9kpimj96ludcre4dj10s@4ax.com>
Source record: 14849

On Sun, 7 Jun 2009 23:17:19 +0200, "Antonio Vernucci"
<vernucci@tin.it> wrote:

>copperclad conductor, each wire
>having a 0.1 mm diameter.

Ah! Steel.

Nevermind.

73's
Richard Clark, KB7QHC

338. Re: Using Tuner to Determine Line Input Impedance

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-07 23:57:27 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <6oko259ffc6pqbegjbhjpa4hsrhk76slln@4ax.com>
Source record: 14850

On Sun, 7 Jun 2009 10:54:46 -0700 (PDT), dykesc
<cupstidd@bellsouth.net> wrote:

>> Do you use the MFJ-259B at the load, or through the line?
>
>Through the line Richard.

OK. Then you need to consider that the line is transforming the load Z to the Z measured (by both methods) at the line input. I realize you already appreciate this. However, the length of the line in wavelengths also casts more exaggerated results into your computation when that length is not a multiple of odd eighth wavelengths. This suggestion comes from Walt Maxwell's own work and sidenotes to his measurements as published in any of his several releases of "Reflections." Read his commentary on this for more detail.

73's
Richard Clark, KB7QHC

339. test 123

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-08 01:40:40 UTC
From: Rick <pissousky@yahoo.ca>
Message-ID: <h0hq6s$1fdt$1@adenine.netfront.net>
Source record: 14751

test 456

340. Re: Using Tuner to Determine Line Input Impedance

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-08 02:31:34 UTC
From: dykesc <cupstidd@bellsouth.net>
Message-ID: <1d10f0a9-b9a6-4223-9d75-0c28a28e8ffa@l32g2000vba.googlegroups.com>
Source record: 14752

On Jun 7, 6:57 pm, Richard Clark <kb7...@comcast.net> wrote:
> On Sun, 7 Jun 2009 10:54:46 -0700 (PDT), dykesc
>
> <cupst...@bellsouth.net> wrote:
> >> Do you use the MFJ-259B at the load, or through the line?
>
> >Through the line Richard.
>
> OK. Then you need to consider that the line is transforming the load
> Z to the Z measured (by both methods) at the line input. I realize
> you already appreciate this. However, the length of the line in
> wavelengths also casts more exaggerated results into your computation
> when that length is not a multiple of odd eighth wavelengths. This
> suggestion comes from Walt Maxwell's own work and sidenotes to his
> measurements as published in any of his several releases of
> "Reflections." Read his commentary on this for more detail.
>
> 73's
> Richard Clark, KB7QHC

When you said "At the load" I thought you meant at the antenna. When you said "through the line" I thought you meant at the line input (source end). I am measuring at the line input (source end) with both methods. Are you saying that line length could be a factor in the quality of the line input impedance measurements?

Thanks. Still learning here.

Dykes AD5VS

341. Using Oscilloscope to Detect Common Mode Current

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-08 02:49:17 UTC
From: dykesc <cupstidd@bellsouth.net>
Message-ID: <db3e01e5-1866-4e43-a795-ae59adc97681@k8g2000yqn.googlegroups.com>
Source record: 14753

First thanks for the many replies to posts I make here. I enjoy the dialogue and am fortunate to have access to the knowledge and experience here.

Other than my MFJ-259B and my DMM, the only other piece of test equipment I have is an oscilloscope. Would it be possible to wrap several turns of light gauge enameled wire around the jacket of the coax at my operating position, attach the oscope probes and detect and possibly measure the amplitude of any common mode currents?

342. Re: Using Oscilloscope to Detect Common Mode Current

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-08 03:12:23 UTC
From: Owen Duffy <none@no.where>
Message-ID: <Xns9C248657C4339nonenowhere@61.9.191.5>
Source record: 14754

dykesc <cupstidd@bellsouth.net> wrote in news:db3e01e5-1866-4e43-a795-ae59adc97681@k8g2000yqn.googlegroups.com:

...
> equipment I have is an oscilloscope. Would it be possible to wrap
> several turns of light gauge enameled wire around the jacket of the
> coax at my operating position, attach the oscope probes and detect and

Do you understand that the common mode current is a standing wave. What if you measured it at only one location, and that happened to be a deep minimum... what would that tell you?

Owen

343. Re: Using Oscilloscope to Detect Common Mode Current

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-08 04:21:13 UTC
From: dykesc <cupstidd@bellsouth.net>
Message-ID: <3b19616d-4d3f-413a-abf1-4b2fb4defcf3@n21g2000vba.googlegroups.com>
Source record: 14755

On Jun 7, 10:12 pm, Owen Duffy <n...@no.where> wrote:

> Do you understand that the common mode current is a standing wave. What if
> you measured it at only one location, and that happened to be a deep
> minimum... what would that tell you?
>
> Owen

Yes, but I am specifically interested in what's going on near my
operating position. Have had some problems with computer peripherals
when transmitting on 80m.

This may be a better way of going about it:

http://techdoc.kvindesland.no/radio/ymse1/20061216153319205.pdf

I know I could just wind chokes to try and eliminate any common mode
rf at my operating position. I just like the idea of measuring first
to see how effective the chokes are.

344. Re: Using Oscilloscope to Detect Common Mode Current

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-08 04:39:18 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <N4KdnT5WE5tnCLHXnZ2dnUVZ_jCdnZ2d@giganews.com>
Source record: 14756

dykesc wrote:
> First thanks for the many replies to posts I make here. I enjoy the
> dialogue and am fortunate to have access to the knowledge and
> experience here.
>
> Other than my MFJ-259B and my DMM, the only other piece of test
> equipment I have is an oscilloscope. Would it be possible to wrap
> several turns of light gauge enameled wire around the jacket of the
> coax at my operating position, attach the oscope probes and detect and
> possibly measure the amplitude of any common mode currents?
>

That will work, but here's a way to make an actual quantitative measurement, assuming the bandwidth of your 'scope is at least a few times the highest frequency you want to measure:

1. Find a ferrite core large enough to fit over the coax and connector. Common type 43 is fine, or any of the lower frequency ferrites (e.g., Fair-Rite/Amidon 70 series) if you're measuring at HF.
2. Wind 10 turns (10 passes through the core) of enameled wire on the core. Connect a 100 ohm resistor across the winding with leads as short as possible.
3. Slide the core over the coax. Measure the voltage across the resistor with the 'scope. The common mode current in amperes = 10 * the 'scope voltage(*).

(*) The current through the resistor is 1/10 the common mode current due to the 1:10 turns ratio. The voltage across the resistor is i * R = 1/10 the common mode current * 100 = 10 * the common mode current. The transformer will look like a one ohm series resistance (R / N^2, where N is the turns ratio of 10) to the common mode current.

Roy Lewallen, W7EL

345. Re: Using Oscilloscope to Detect Common Mode Current

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-08 04:49:31 UTC
From: Owen Duffy <none@no.where>
Message-ID: <Xns9C2496CFE8915nonenowhere@61.9.191.5>
Source record: 14757

dykesc <cupstidd@bellsouth.net> wrote in
news:3b19616d-4d3f-413a-abf1-4b2fb4defcf3@n21g2000vba.googlegroups.com:

...
> Yes, but I am specifically interested in what's going on near my
> operating position. Have had some problems with computer peripherals
> when transmitting on 80m.

Well, doing is learning.

My own view is that common mode current meters are seen as a magic
bullet. It is true that if you make a single measurement and you observe
substantial current (meaning you have some absolute calibration), then
you know there is a problem.

The problem is that if you don't observe current in that single
measurement, you cannot infer that there is not a common mode current
problem.

Some things that you might do may just move the standing wave pattern.
Again, measurements at a single point are a very limited perspective.

The best countermeasure is design of antenna *systems* for low common
mode current.

Nevertheless, we need to make some compromises on suburban blocks and
physical symmetry can be one of the sacrifices.

Take a leaf from the books of lightning protection. They usually firstly
try to shunt the undesired current to ground rather than trying to impede
its flow through the equipment room.

If that isn't enough, then impede its flow into the equipment room so
that more of it is shunted via the ground path.

Owen

346. Re: Using Tuner to Determine Line Input Impedance

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-08 06:11:48 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <cq9p25pe8394m9uog0hgs0g253toljhtsr@4ax.com>
Source record: 14758

On Sun, 7 Jun 2009 19:31:34 -0700 (PDT), dykesc
<cupstidd@bellsouth.net> wrote:

>When you said "At the load" I thought you meant at the antenna.

Hi OM,

Quite so, that is the convention.

>When
>you said "through the line" I thought you meant at the line input
>(source end).

Quite so again.

>I am measuring at the line input (source end) with both
>methods.

I anticipated that.

>Are you saying that line length could be a factor in the
>quality of the line input impedance measurements?

Very much.

>Thanks. Still learning here.

If you were to observe your line distance from the measurement out to the load, and plot that, you want the line distance to the load to be some odd-eighth interval of a wavelength long (1/8ths, 3/8ths, 5/8ths, 7/8ths, ... and so on). The reason being that your load Z will be transformed through that odd eighth to a region on the Smith Chart that has a milder shift in reactances and resistances for a slight change in frequency. This means errors of line-length contribution have a reduced impact on that transform. If you were in quarter wavelength relationships, those chart lines of reactance and resistance would change far faster for the same errors in line-length determination.

This topic is covered at:
http://www.w2du.com/r2ch15.pdf
under the section at:
Sec 15.3 Antenna Impedances From Measured Line-Input Impedances

73's
Richard Clark, KB7QHC

347. Re: Using Tuner to Determine Line Input Impedance

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-08 07:22:55 UTC
From: Owen Duffy <none@no.where>
Message-ID: <Xns9C24B0D1B4044nonenowhere@61.9.191.5>
Source record: 14759

Richard Clark <kb7qhc@comcast.net> wrote in
news:cq9p25pe8394m9uog0hgs0g253toljhtsr@4ax.com:

...
> This topic is covered at:
> http://www.w2du.com/r2ch15.pdf
> under the section at:
> Sec 15.3 Antenna Impedances From Measured Line-Input Impedances

In S15.3, Walt lays out a method of characterising a length of line used for measurement, and then using the characterisation, to refer measurments of a load at the line input to the load end of the line.

TLLC at http://www.vk1od.net/calc/tl/tllc.php will perform the second part of that using published line characteristics.

A quick check shows that TLLC produces very similar results when the VSWR is low, and less so at the end of the data range where the VSWR is 10. Reasons for that include that Walt used a characterisation of the cable used for measurement, and those characteristics are not exactly the same as published spec, and Walt's calculation engine makes some approximations that are not made in TLLC.

The discussion highlights that the method is only as good as knowledge of the coax characteristics, and the accuracy of the measurement instrument. Errors will be worst when the line operates at high VSWR.

I would argue that if you use an MFJ259B, for measured values that are not near the limits of the instrument, and |arg(Z)|<70°, you will get relatively good results from TLLC. Validating the length and loss of the measurement coax to ensure it complies with spec is a precursor to using TLLC with best accuracy.

Owen

348. Re: Polarized radiation

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-08 07:26:01 UTC
From: Szczepan Białek <sz.bialek@wp.pl>
Message-ID: <h0i533fai1@node1.news.atman.pl>
Source record: 14760

<jimp@specsol.spam.sux.com> wrote news:tg7tf6-t17.ln1@mail.specsol.com...
> Szczepan BiaĹ□ek <sz.bialek@wp.pl> wrote:
>>
>> <jimp@specsol.spam.sux.com> wrote news:cnmqf6-lee.ln1@mail.specsol.com...
>>> Szczepan BiaÄš?ek <sz.bialek@wp.pl> wrote:
>>>>
>>>> "Cecil Moore" <nospam@w5dxp.com> wrote
>>>> news:MVvWl.18251$jZ1.6066@flpi144.ffdc.sbc.com...
>>>>> Szczepan BiaÄš?ek wrote:
>>>>>> But what radiate 1/4 wave antenna (mast) with the one end only? Is
>>>>>> the
>>>>>> radiation polarized?
>>>>>
>>>>> Why not download the free demo version of EZNEC from
>>>>> www.eznec.com which will tell you that the radiation
>>>>> from a 1/4WL vertical monopole is primarily vertically
>>>>> polarized.
>>>>
>>>> What means "primarily"?
>>>> Is in reality an antenna which radiate unpolarized radio waves?
>>>> S*
>>>
>>> That you would use the term "unpolarized radio waves" shows you haven't
>>> a clue what you are talking about.
>>>
>>> http://en.wikipedia.org/wiki/Polarization
>>
>> Are you sure that radio waves are transversal?
>> We are trying to find how the dipole works. The are the two
>> possibilities:
>> 1. Dipol radiate the Maxwell's wave from the centre,
>> 2. The two ends radiate the two pressure-like electric waves.
>>
>> What do you prefer?
>
> That you not post your babbling crap here.
>
> Read the link I provided, then read the links it provides.

I am not interesting in theoretical physics.
>
> There are about 100 years of experimental measurements that say how a
> dipole works, which is the entire dipole radiates.

In the last 100 years the experimental measurements show that the feed line (the two wires where something oscillate) do not radiate and that the two bended ends radiate. This ends you call "entire dipole". Todays dipoles are simply the two coupled monopoles.

The only one really dipole was the original Hertz apparatus. There no feed line. There is the discharging of capacitor which is charged from tiet to time. Se:
http://people.seas.harvard.edu/~jones/cscie129/nu_lectures/lecture6/hertz/Hertz_exp.html

There is wrote: "According to theory, if electromagnetic waves were spreading from the oscillator sparks..."
The oscillator sparks are in the centre. At the ends are the capacitor plates. What radiates? The sparks or the plates?

Experiments show that radiation from the original Hertz dipole and from todays two coupled monopoles are polarized. (in sense that the receiver antennas work better if are parallel to the dipole).

Now portable radios and many others aplications work in each orientations.
My question is simple: What type of emmiting antennas are used in such applications?
Are they monopoles?
S*

349. Re: Polarized radiation

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-08 07:55:13 UTC
From: Szczepan Białek <sz.bialek@wp.pl>
Message-ID: <h0i6pqfiu1@node1.news.atman.pl>
Source record: 14761

<jimp@specsol.spam.sux.com> wrote news:bk7tf6-t17.ln1@mail.specsol.com...
> Szczepan BiaĹ□ek <sz.bialek@wp.pl> wrote:
>>
>> Some antennas (emitting and receiving) must be parallel. Some not.
>> Which ones? (my knowledge about antennas is zero).
>
> Obviously since your statement is babbling nonsense.

So I do the next approach:
Some antennas (emitting and receiving) work better if they are parallel.
Sometimes "the polarization is not that important. Your
cell phone and indoor WIFI are examples." (Wim).
What emitting antennas are used in the applications where "the polarization
is not that important"?
S*

350. Re: Polarized radiation

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-08 08:10:40 UTC
From: Szczepan Białek <sz.bialek@wp.pl>
Message-ID: <h0i7mpflb1@node1.news.atman.pl>
Source record: 14762

"Richard Clark" <kb7qhc@comcast.net> wrote
news:s6pn25p3c6v1fqvnd7vrk7lfkfhummpbgc@4ax.com...
> On Sun, 07 Jun 2009 10:44:19 GMT, "Dave" <noone@nowhere.com> wrote:
>>"Szczepan Bialek" <sz.bialek@wp.pl> wrote in message
>>news:h0fjmt$4up$1@node1.news.atman.pl...
>>>(my knowledge about antennas is zero).
>>
>>that is obvious
>
> Watch it Dave, that last statement is Gaussian and lacks the "t"
> variable making it static. Getting the jump on Art and adding "t", it
> becomes:
>>(my knowledge about antennas will always be zero at this rate)
>
> This added time dimension cannot be in dispute, can it? It brings
> equilibrium, was proven by Newton, and thoroughly demolishes
> Einstein's work in the same stroke. (Patent Pending, so it must be
> true).

Thanks for the free English lesson.

My knowledge increases a little after yours:

"Actually you have mixed up two different characteristics. Polarity
and polarization are NOT the same thing. With RF radiation, the wave
is constantly changing polarity (that is why the source of RF is
called alternating current), but within the "line of sight" of the
antenna, the polarization for a dipole is defined by its angle to the
earth as viewed by the observer.

If you see an horizontal dipole, it produces alternating polarities of
waves with horizontal polarization. If you see a vertical dipole, it
produces alternating polarities of waves with vertical polarization.

RF energy is ALWAYS changing polarity."

My knowledge will be full if you write something about the monopoles.
S*

351. The End is Near...

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-08 15:46:20 UTC
From: Ed Cregger <ecregger@bellsouff.net>
Message-ID: <ocaXl.52889$19.16378@bignews2.bellsouth.net>
Source record: 14763

I've been using usenet for about 15 years with various names. I just read the announcement from AT&T that they are ending usenet services very soon. That sucks. But so does growing old in general. Still, quite often it beats the alternative.

To all of those that I have chatted with over the years and whom I may never chat again, thanks. It's been fun.

Ed Cregger

352. Re: Using Oscilloscope to Detect Common Mode Current

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-08 15:47:22 UTC
From: dykesc <cupstidd@bellsouth.net>
Message-ID: <3f26b4a1-1f1e-4515-a063-b71bbd89aad7@l32g2000vba.googlegroups.com>
Source record: 14764

On Jun 7, 11:39 pm, Roy Lewallen <w...@eznec.com> wrote:

>
> That will work, but here's a way to make an actual quantitative
> measurement, assuming the bandwidth of your 'scope is at least a few
> times the highest frequency you want to measure:

> Roy Lewallen, W7EL

Thanks very much Roy. This is something I can implement quite easily.

73

Dykes AD5VS

353. Mag Mount lesson

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-08 15:48:41 UTC
From: Michael Coslo <mjc5@psu.edu>
Message-ID: <h0jbsp$jo30$1@tr22n12.aset.psu.edu>
Source record: 14765

Maybe some people can take something away from my unfortunate experience.

Wanting something to use on occasions where I don't want to install my Bugcatcher, but would still like to do a little HF, I went to a Hamfest Sunday and picked up a 20 meter Hamstick and a big honkin' mag mount for it.

Installation was pretty straightforward. I installed it in the parking lot, tuned it up and set off home. Most of the way it was just FB. It wasn't the bugcatcher, but I knew that going in.

Traveling over the Alleghenies, there is an area where there are some fair sized gusts of wind. I hit this on the downhill side of the last mountain rage heading into the valley near home.

I was traveling about 65 mph, when a gust of wind came along, ripped the antenna and mount off the roof. The exit for the coax is on the back door. As the antenna and mount traveled backwards, the cable held it in position, so it swung in an arc and hit the rear window of my Vitara.

Ouch.

The glass of rear windows is different than that of front windows. It is designed to granulate instead of hold together. It looks pretty cool in fact. The sudden opacity of the glass radiating from the spot of impact, then everything disintegrating and falling into the back of the vehicle.

But the visual interest does not make up for the fact that now I have an expensive mess to clean up.

NO more frickin' magnets! PTUI!

- 73 de Mike N3LI -

354. Re: Polarized radiation

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-08 16:00:00 UTC
From: jimp@specsol.spam.sux.com
Message-ID: <miovf6-69q.ln1@mail.specsol.com>
Source record: 14767

```
Szczepan Białek <sz.bialek@wp.pl> wrote:
>
> <jimp@specsol.spam.sux.com> wrote news:tg7tf6-t17.ln1@mail.specsol.com...
>> Szczepan BiaĹ?ek <sz.bialek@wp.pl> wrote:
>>>
>>> <jimp@specsol.spam.sux.com> wrote news:cnmqf6-lee.ln1@mail.specsol.com...
>>>> Szczepan BiaÄš?ek <sz.bialek@wp.pl> wrote:
>>>>>
>>>>> "Cecil Moore" <nospam@w5dxp.com> wrote
>>>>> news:MVvWl.18251$jZ1.6066@flpi144.ffdc.sbc.com...
>>>>>> Szczepan BiaÄš?ek wrote:
>>>>>>> But what radiate 1/4 wave antenna (mast) with the one end only? Is
>>>>>>> the
>>>>>>> radiation polarized?
>>>>>>
>>>>>> Why not download the free demo version of EZNEC from
>>>>>> www.eznec.com which will tell you that the radiation
>>>>>> from a 1/4WL vertical monopole is primarily vertically
>>>>>> polarized.
>>>>>
>>>>> What means "primarily"?
>>>>> Is in reality an antenna which radiate unpolarized radio waves?
>>>>> S*
>>>>
>>>> That you would use the term "unpolarized radio waves" shows you haven't
>>>> a clue what you are talking about.
>>>>
>>>> http://en.wikipedia.org/wiki/Polarization
>>>
>>> Are you sure that radio waves are transversal?
>>> We are trying to find how the dipole works. The are the two
>>> possibilities:
>>> 1. Dipol radiate the Maxwell's wave from the centre,
>>> 2. The two ends radiate the two pressure-like electric waves.
>>>
>>> What do you prefer?
>>
>> That you not post your babbling crap here.
>>
>> Read the link I provided, then read the links it provides.
>
> I am not interesting in theoretical physics.
```

Nor in actually learning anything which means either your are just
another babbling kook or a troll.

<snip babbling nonsense>

--
Jim Pennino

Remove .spam.sux to reply.

355. Re: Polarized radiation

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-08 16:00:01 UTC
From: jimp@specsol.spam.sux.com
Message-ID: <hqovf6-69q.ln1@mail.specsol.com>
Source record: 14766

Szczepan Białek <sz.bialek@wp.pl> wrote:
>
> <jimp@specsol.spam.sux.com> wrote news:bk7tf6-t17.ln1@mail.specsol.com...
>> Szczepan BiaĹ?ek <sz.bialek@wp.pl> wrote:
>>>
>>> Some antennas (emitting and receiving) must be parallel. Some not.
>>> Which ones? (my knowledge about antennas is zero).
>>
>> Obviously since your statement is babbling nonsense.
>
> So I do the next approach:
> Some antennas (emitting and receiving) work better if they are parallel.

Given that the Earth is a sphere, that can only be approximately true
for short distances.

> Sometimes "the polarization is not that important. Your
> cell phone and indoor WIFI are examples." (Wim).

Neither are examples.

> What emitting antennas are used in the applications where "the polarization
> is not that important"?
> S*

http://en.wikipedia.org/wiki/Antenna_(radio)

--
Jim Pennino

Remove .spam.sux to reply.

356. Re: The End is Near...

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-08 16:01:04 UTC
From: JB <nospam@goofball.net>
Message-ID: <4BaXI.1393$u86.1024@nwrddc01.gnilink.net>
Source record: 14768

"Ed Cregger" <ecregger@bellsouff.net> wrote in message
news:ocaXl.52889$19.16378@bignews2.bellsouth.net...
> I've been using usenet for about 15 years with various names. I just read
> the announcement from AT&T that they are ending usenet services very soon.
> That sucks. But so does growing old in general. Still, quite often it
beats
> the alternative.
>
> To all of those that I have chatted with over the years and whom I may
never
> chat again, thanks. It's been fun.
>
> Ed Cregger
>
Just use web access. I use it even now when I see a broken thread and find
my ISP has somehow lost posts.

http://newsgroups.derkeiler.com/Archive/Rec/rec.radio.amateur.antenna/2009-06/

357. Re: The End is Near...

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-08 16:48:46 UTC
From: Bert Hyman <bert@iphouse.com>
Message-ID: <Xns9C24782A9696BVeebleFetzer@216.250.184.7>
Source record: 14769

In news:ocaXl.52889$19.16378@bignews2.bellsouth.net "Ed Cregger"
<ecregger@bellsouff.net> wrote:

> To all of those that I have chatted with over the years and whom I may
> never chat again, thanks. It's been fun.

There are lots of alternate sources for USENET, some free.

Here's a nice free one:

http://www.motzarella.org/

news.motzarella.org is a private project providing free access
to text-only Usenet News. The server has a 100MBit connection to
several Internet backbones and is integrated into the Usenet via
more than 60 peers.

--
Bert Hyman St. Paul, MN bert@iphouse.com

358. Re: Mag Mount lesson

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-08 17:20:33 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <AIOdnZTRkq_41bDXnZ2dnUVZ_gadnZ2d@giganews.com>
Source record: 14770

As bad as that experience was, it could have been worse. If the coax had come loose, it could have broken the windshield of or caused other damage to a following car.

I had a 5/8 wave 2 meter whip come loose once. It stayed connected and bounced along behind the car for a while -- luckily no damage except to the whip. I've used only 1/4 wave 2 meter whips since.

Roy Lewallen

Michael Coslo wrote:
> Maybe some people can take something away from my unfortunate experience.
>
>
> Wanting something to use on occasions where I don't want to install my
> Bugcatcher, but would still like to do a little HF, I went to a Hamfest
> Sunday and picked up a 20 meter Hamstick and a big honkin' mag mount for
> it.
>
> Installation was pretty straightforward. I installed it in the parking
> lot, tuned it up and set off home. Most of the way it was just FB. It
> wasn't the bugcatcher, but I knew that going in.
>
> Traveling over the Alleghenies, there is an area where there are some
> fair sized gusts of wind. I hit this on the downhill side of the last
> mountain rage heading into the valley near home.
>
> I was traveling about 65 mph, when a gust of wind came along, ripped the
> antenna and mount off the roof. The exit for the coax is on the back
> door. As the antenna and mount traveled backwards, the cable held it in
> position, so it swung in an arc and hit the rear window of my Vitara.
>
> Ouch.
>
> The glass of rear windows is different than that of front windows. It is
> designed to granulate instead of hold together. It looks pretty cool in
> fact. The sudden opacity of the glass radiating from the spot of impact,
> then everything disintegrating and falling into the back of the vehicle.
>
> But the visual interest does not make up for the fact that now I have an
> expensive mess to clean up.
>
> NO more frickin' magnets! PTUI!
>
>

> - 73 de Mike N3LI -
>

359. Re: The End is Near...

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-08 17:32:26 UTC
From: "Bob D." <bobbyd849@comcast.net>
Message-ID: <24udnfkRk46U1rDXnZ2dnUVZ_gWdnZ2d@giganews.com>
Source record: 14771

My provider, Comcast, also dropped the Usenet service a while back. I signed up with Giganews.com to continue the service. There are many companies that offer Usenet at a nominal fee.

Internet service providers are claiming that the Usenet is no longer popular. (Notice that their fees do not drop when they drop Usenet.) Sure, there are lots of Web based forums. But, there is no central location to find a forum. Also, they all work differently and make you jump through sign-up hoops (sometimes demanding too much personal information!).

--
Bob D. ND9B

"Ed Cregger" <ecregger@bellsouff.net> wrote in message
news:ocaXl.52889$19.16378@bignews2.bellsouth.net...
> I've been using usenet for about 15 years with various names. I just read
> the announcement from AT&T that they are ending usenet services very soon.
> That sucks. But so does growing old in general. Still, quite often it
> beats
> the alternative.
>
> To all of those that I have chatted with over the years and whom I may
> never
> chat again, thanks. It's been fun.
>
> Ed Cregger
>

360. Re: Mag Mount lesson

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-08 18:00:24 UTC
From: "J. B. Wood" <john.wood@nrl.navy.mil>
Message-ID: <h0jjj9skm1@ra.nrl.navy.mil>
Source record: 14772

Michael Coslo wrote:
> Maybe some people can take something away from my unfortunate experience.
>
>
> Wanting something to use on occasions where I don't want to install my
> Bugcatcher, but would still like to do a little HF, I went to a Hamfest
> Sunday and picked up a 20 meter Hamstick and a big honkin' mag mount for
> it.
>
> Installation was pretty straightforward. I installed it in the parking
> lot, tuned it up and set off home. Most of the way it was just FB. It
> wasn't the bugcatcher, but I knew that going in.
>
> Traveling over the Alleghenies, there is an area where there are some
> fair sized gusts of wind. I hit this on the downhill side of the last
> mountain rage heading into the valley near home.
>
> I was traveling about 65 mph, when a gust of wind came along, ripped the
> antenna and mount off the roof. The exit for the coax is on the back
> door. As the antenna and mount traveled backwards, the cable held it in
> position, so it swung in an arc and hit the rear window of my Vitara.
>
> Ouch.
>
> The glass of rear windows is different than that of front windows. It is
> designed to granulate instead of hold together. It looks pretty cool in
> fact. The sudden opacity of the glass radiating from the spot of impact,
> then everything disintegrating and falling into the back of the vehicle.
>
> But the visual interest does not make up for the fact that now I have an
> expensive mess to clean up.
>
> NO more frickin' magnets! PTUI!
>
>
> - 73 de Mike N3LI -
>
Hello, and I'll also state from experience that mag-mounted whip
antennas are not for vehicles in motion at any speed. Sincerely and 73s
from N4GGO,

361. Re: Mag Mount lesson

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-08 18:03:32 UTC
From: nm5k@wt.net
Message-ID: <85d82cf3-577a-4e0c-93af-d14fcff20d16@q14g2000vbn.googlegroups.com>
Source record: 14773

On Jun 8, 10:48 am, Michael Coslo <m...@psu.edu> wrote:

>
> I was traveling about 65 mph, when a gust of wind came along, ripped the
> antenna and mount off the roof. The exit for the coax is on the back
> door. As the antenna and mount traveled backwards, the cable held it in
> position, so it swung in an arc and hit the rear window of my Vitara.
>
> Ouch.
>
> The glass of rear windows is different than that of front windows. It is
> designed to granulate instead of hold together. It looks pretty cool in
> fact. The sudden opacity of the glass radiating from the spot of impact,
> then everything disintegrating and falling into the back of the vehicle.
>
> But the visual interest does not make up for the fact that now I have an
> expensive mess to clean up.
>
> NO more frickin' magnets! PTUI!
>
>   - 73 de Mike N3LI -

Your experience is exactly why I've been afraid to mount an
antenna on my newest car. It never fails.. @#$% happens!!!
And when it does, it's often ugly.
I've also been afraid of mag mounts even though that is a
possible way to get on HF from a small car.
But they can get knocked off, and I'm also afraid that I
could cause sheet metal damage just pulling some of
the larger ones off the car.
So anyway, I've had that car over two years now, and I
still don't have a radio in it.
That is very unusual for me, but I hate dents, scratches, etc
on a car that doesn't have any yet..
I still have two radioactive trucks if I really feel the need to
talk. :/

362. Re: Hexbeam Antenna Modeling

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-08 18:06:29 UTC
From: Jim Lux <james.p.lux@jpl.nasa.gov>
Message-ID: <h0jjv5qlf1@news.jpl.nasa.gov>
Source record: 14775

Roy Lewallen wrote:
> J.B. Wood wrote:
>>
>> Thanks for the reply, Steve. As for exaggerated claims, I'd have to
>> give the award to the designers of (and explainers of the "theory"
>> behind) the Crossed-Field Antenna (CFA). (Of course the CFA has been
>> the subject of numerous antenneX articles but I'm not placing yours in
>> that group!) 73s,
>
> Here's my candidate for the award, embodied in a U.S. patent:
> http://tinyurl.com/h546u
>
> Roy Lewallen, W7EL

This particular antenna has the useful property of enhancing plant
growth too..

"
It has been observed by the inventor and witnesses that accelerated
plant growth can occur using the present invention.
"

I think David Strom knew what we was writing about. He deserves a beer.

363. Re: Hexbeam Antenna Modeling

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-08 18:11:44 UTC
From: Jim Lux <james.p.lux@jpl.nasa.gov>
Message-ID: <h0jk8vthb1@news.jpl.nasa.gov>
Source record: 14776

Jeff Liebermann wrote:
> On Thu, 04 Jun 2009 19:30:29 -0700, Roy Lewallen <w7el@eznec.com>
> wrote:
>
>> Here's my candidate for the award, embodied in a U.S. patent:
>> http://tinyurl.com/h546u
>> Roy Lewallen, W7EL
>
> The link first returned:
> crt0: ERROR couldn't open /usr/lib/dld.sl errno:000000023
> Error #1010
> Error: Filter Process terminated abnormally. Document may be
> truncated.
>
> A few minutes later, it was:
> Error #1006
> Error!
> BRS was unable to process your request. A diagnostic message was
> mailed to the appropriate personnel.
>
> I hate days like this.... Eventually the patent appeared, but no
> illustrations on that page. Instead, see:
> <http://www.google.com/patents/about?id=csYDAAAAEBAJ&dq=6,025,810>
> for the schematics, illustrations and a parts list. Hmmm.... only
> works above 1000F temperature. Googling a bit deeper, I find that the
> patent holder, David L. Strom, is currently a real estate agent in
> Colorado.
> <http://www.homethinking.com/180340-David-L-Strom-Coldwell-Banker-Strom--Associates-Inc.
html>

patent # 6025810 if you use the http://www.uspto.gov/ site..

Some day, we'll all be talking about the famous '810 Strom patent, just
like folks in the semiconductor industry talk about the '275 Kilby patent

>
> Here's my favorite:
> <http://www.google.com/patents/about?id=N_sEAAAAEBAJ&dq=5,982,276>
> Not exactly an antenna. It uses a MASER to (somehow) magnetically
> couple Gigabit data to the power lines. The company is still around:
> <http://www.mediafusionllc.net>
>
>
>

And reforming:
"The Media Fusion Team is now re-forming. Mr. William "Luke" Stewart will act a temporary President and Chief Executive as well as Chief Scientist. As other key resources are identified and recruited they will become part of the Media Fusion, LLC Team. A recruiting committee has been formed and recommendations are now being considered."

perhaps because of
15 dec 2006.. Preliminary settlement agreement signed by the honorable Judge Ann Ashby, presiding Judge, 134th District Court, Dallas, Texas.

364. Re: Sun Spots

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-08 18:54:27 UTC
From: Jim Kelley <jwkelley@uci.edu>
Message-ID: <h0jn1q$272$1@news.service.uci.edu>
Source record: 14774

Cecil Moore wrote:

> Are you going
> to bad-mouth me for this poor choice of words five years
> hence?

Are you going to stop beating your wife?

>>> Photons are
>>> emitted by decelerating electrons.
>>
>> True, but Bremsstrahlung (synchrotron) radiation has nothing to do
>> with antennas.
>
> Exactly true, but Bremsstrahlung radiation also has
> nothing to do with free electrons in a conductor which
> are the source of the radiation from the antenna. You
> might as well have said "Exactly true, but tomorrow is
> June 6".

Also true, unlike "Photons are emitted by decelerating electrons"
otherwise known as Bremsstrahlung.

ac6xg

365. Re: Mag Mount lesson

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-08 19:18:10 UTC
From: Ian Jackson <ianREMOVETHISjackson@g3ohx.demon.co.uk>
Message-ID: <8nr$KILyPWLKFwOH@g3ohx.demon.co.uk>
Source record: 14778

In message <h0jjj9skm1@ra.nrl.navy.mil>, J. B. Wood
<john.wood@nrl.navy.mil> writes
>>
>Hello, and I'll also state from experience that mag-mounted whip
>antennas are not for vehicles in motion at any speed. Sincerely and
>73s from N4GGO,

A whippy stainless steel 'base loaded' 2m 5/8 on a 7" magmount is almost
impossible to remove. It's probably good for 200 or 300 mph at least. I
believe 'like shit to a blanket' is appropriate.
--
Ian

366. Re: Mag Mount lesson

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-08 20:41:53 UTC
From: dave <dave@dave.dave>
Message-ID: <4a2d7799$0$8659$bd467cd0@news.dslextreme.com>
Source record: 14777

nm5k@wt.net wrote:
> On Jun 8, 10:48 am, Michael Coslo <m...@psu.edu> wrote:
>
>> I was traveling about 65 mph, when a gust of wind came along, ripped the
>> antenna and mount off the roof. The exit for the coax is on the back
>> door. As the antenna and mount traveled backwards, the cable held it in
>> position, so it swung in an arc and hit the rear window of my Vitara.
>>
>> Ouch.
>>
>> The glass of rear windows is different than that of front windows. It is
>> designed to granulate instead of hold together. It looks pretty cool in
>> fact. The sudden opacity of the glass radiating from the spot of impact,
>> then everything disintegrating and falling into the back of the vehicle.
>>
>> But the visual interest does not make up for the fact that now I have an
>> expensive mess to clean up.
>>
>> NO more frickin' magnets! PTUI!
>>
>> - 73 de Mike N3LI -
>
> Your experience is exactly why I've been afraid to mount an
> antenna on my newest car. It never fails.. @#$% happens!!!
> And when it does, it's often ugly.
> I've also been afraid of mag mounts even though that is a
> possible way to get on HF from a small car.
> But they can get knocked off, and I'm also afraid that I
> could cause sheet metal damage just pulling some of
> the larger ones off the car.
> So anyway, I've had that car over two years now, and I
> still don't have a radio in it.
> That is very unusual for me, but I hate dents, scratches, etc
> on a car that doesn't have any yet..
> I still have two radioactive trucks if I really feel the need to
> talk. :/

Have a receiver type trailer hitch installed.

367. Re: Mag Mount lesson

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-08 21:28:25 UTC
From: nm5k@wt.net
Message-ID: <94e9ce91-c1c3-4275-a4f5-693775ef92b2@v4g2000vba.googlegroups.com>
Source record: 14779

On Jun 8, 3:41 pm, dave <d...@dave.dave> wrote:

>
> Have a receiver type trailer hitch installed.

Nothing to attach one to unless you installed
some kind of frame underneath the rear of the car.
There is nothing underneath except the bottom
of the trunk floor if I remember right.
But even if I could mount a hitch mount, I'm not
sure how happy I would be with it.
Generally, that's about as bad a place to mount
an antenna as you can find.
The one method I might consider would be a trunk
lip mount. And even that makes me paranoid as
I'm worried the stress of the antenna whipping
back and forth will warp the trunk lid after a
period of time. The metal is pretty thin on that car.
"Toyota Corolla".
I've just been taking my radio with me, and using
the antenna's I have at the site.
But now even more great news.. :(My 706mk2g
has been acting squirrely. 440 went out on it,
and I think the band switching diodes or transisters
blew up. I used it a while with no 440 and was
ok, but now it's acting weird, locking up, etc..
So it's sick and is gonna have to visit the radio doc.
I don't think I want to mess with it. I've fixed most
my own rigs in the past, but I don't think I want to
mess with that thing. So I'm gonna send it off.
I need to find me another HF mobile backup rig...
The 706 is the only 12v HF rig I've got right now.
Well.. I do have an old IC 730, but the display
board is out.

368. Re: The End is Near...

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-08 22:27:14 UTC
From: Richard Knoppow <dickburk@ix.netcom.com>
Message-ID: <1Y6dndA9xtXQDbDXnZ2dnUVZ_gWdnZ2d@earthlink.com>
Source record: 14780

"Bob D." <bobbyd849@comcast.net> wrote in message
news:24udnfkRk46U1rDXnZ2dnUVZ_gWdnZ2d@giganews.com...
> My provider, Comcast, also dropped the Usenet service a
> while back. I signed up with Giganews.com to continue the
> service. There are many companies that offer Usenet at a
> nominal fee.
>
> Internet service providers are claiming that the Usenet is
> no longer popular. (Notice that their fees do not drop
> when they drop Usenet.) Sure, there are lots of Web based
> forums. But, there is no central location to find a forum.
> Also, they all work differently and make you jump through
> sign-up hoops (sometimes demanding too much personal
> information!).
>
> --
> Bob D. ND9B
>
> "Ed Cregger" <ecregger@bellsouff.net> wrote in message
> news:ocaXl.52889$19.16378@bignews2.bellsouth.net...
>> I've been using usenet for about 15 years with various
>> names. I just read
>> the announcement from AT&T that they are ending usenet
>> services very soon.
>> That sucks. But so does growing old in general. Still,
>> quite often it beats
>> the alternative.
>>
>> To all of those that I have chatted with over the years
>> and whom I may never
>> chat again, thanks. It's been fun.
>>
>> Ed Cregger
>>
>
Google Groups works without any sign-up, at least for
reading. I use it when I am away from home. I think it works
only for text.
Earthlink/Netcom, my ISP, farmed out Usenet to Demonews
some time ago resulting in very much improved news group
performance.

--
Richard Knoppow

Los Angeles
WB6KBL
dickburk@ix.netcom.com

369. Re: Mag Mount lesson

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-09 00:32:20 UTC
From: Jim Lux <james.p.lux@jpl.nasa.gov>
Message-ID: <h0kaiktsb1@news.jpl.nasa.gov>
Source record: 14781

nm5k@wt.net wrote:
> On Jun 8, 3:41 pm, dave <d...@dave.dave> wrote:
>
>> Have a receiver type trailer hitch installed.
>
> Nothing to attach one to unless you installed
> some kind of frame underneath the rear of the car.
> There is nothing underneath except the bottom
> of the trunk floor if I remember right.

You can get a "light duty" receiver for almost any car (used to hold bike racks and the like). I was going to go that route for my BMW 325, but after looking at the design, I built my own.. A piece of 1x1 square tubing bolted to the bottom of the spare tire well (this is what the trailer hitch bolted to). Drilled two 3/8" holes in the bottom of the well to bolt it on.

Then, the antenna mounts on bracket made of the nesting square tubing (e.g. 3/4") and there's a 1/4" pin that holds it in. I just slid the 3/4" tubing in and drilled both together (guaranteed registration of the holes!)..

The 3/4" tube (which is roughly horizontal) is joined to another vertical piece of tubing, to which a SGC tuner and the 9-10 ft whip is attached.

http://home.earthlink.net/~w6rmk/mobile.htm

Why not use the trailer hitch? Because when I called around to buy one, nobody local had one in stock, and I was motivated to "get it done today"..

> But even if I could mount a hitch mount, I'm not
> sure how happy I would be with it.
> Generally, that's about as bad a place to mount
> an antenna as you can find.
> The one method I might consider would be a trunk
> lip mount. And even that makes me paranoid as
> I'm worried the stress of the antenna whipping
> back and forth will warp the trunk lid after a
> period of time. The metal is pretty thin on that car.
> "Toyota Corolla".

I use a Comet trunklip mount for the VHF/UHF whip. If you adjust the angle right, it clears the roof of the car when you open the trunk.
CP-5NMO

http://www.cometantenna.com/products.php?CatID=1&famID=9&childID=14

> I've just been taking my radio with me, and using
> the antenna's I have at the site.
> B

370. Re: SWR variation with feedline length

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-09 01:28:39 UTC
From: Walter Maxwell <walt@w2du.com>
Message-ID: <jfer259od3mmlm9v7rn48ouhju4j2iutan@4ax.com>
Source record: 14782

On Tue, 02 Jun 2009 01:59:43 -0700, Roy Lewallen <w7el@eznec.com>
wrote:

>Again, the typical SWR meters we use do *not* measure the SWR on any
>transmission line, except (indirectly) the SWR on the short line within
>the instrument -- if it even contains such a line, which some don't. I
>don't know of any way to directly measure the SWR on an intact coaxial
>line, only on a slotted line.
>
>The SWR on a coax line can readily be calculated, however, from
>measurements it is possible to make.
>
>Roy Lewallen, W7EL

The possibility of common-mode current on the outside of the braid has
been mentioned, but nothing has been mentioned concerning whether a
balun is used if the feedline-antenna connections is unbal to bal. If
there is no balun where should be one, seems to me it's a no-brainer
that the problem is common-mode current causing the different SWR
readings with different lengths of feedline.

Walt, W2DU

371. Re: Mag Mount lesson

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-09 01:39:56 UTC
From: KC0YCS <brharper34@yahoo.com>
Message-ID: <2c7838d7-8a7c-45dd-8d7e-ede1e1bdc93f@f19g2000yqh.googlegroups.com>
Source record: 14783

On Jun 8, 4:28 pm, n...@wt.net wrote:
> On Jun 8, 3:41 pm, dave <d...@dave.dave> wrote:
>
>
>
> > Have a receiver type trailer hitch installed.
>
> Nothing to attach one to unless you installed
> some kind of frame underneath the rear of the car.
> There is nothing underneath except the bottom
> of the trunk floor if I remember right.
> But even if I could mount a hitch mount, I'm not
> sure how happy I would be with it.
> Generally, that's about as bad a place to mount
> an antenna as you can find.
> The one method I might consider would be a trunk
> lip mount. And even that makes me paranoid as
> I'm worried the stress of the antenna whipping
> back and forth will warp the trunk lid after a
> period of time. The metal is pretty thin on that car.
> "Toyota Corolla".
> I've just been taking my radio with me, and using
> the antenna's I have at the site.
> But now even more great news.. :(My 706mk2g
> has been acting squirrely. 440 went out on it,
> and I think the band switching diodes or transisters
> blew up. I used it a while with no 440 and was
> ok, but now it's acting weird, locking up, etc..
> So it's sick and is gonna have to visit the radio doc.
> I don't think I want to mess with it. I've fixed most
> my own rigs in the past, but I don't think I want to
> mess with that thing. So I'm gonna send it off.
> I need to find me another HF mobile backup rig...
> The 706 is the only 12v HF rig I've got right now.
> Well.. I do have an old IC 730, but the display
> board is out.

Is this common 706 problem? i have heard it before

372. Re: Mag Mount lesson

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-09 01:59:58 UTC
From: tom <news4792@taring.org>
Message-ID: <4a2dc213$0$18863$8046368a@newsreader.iphouse.net>
Source record: 14784

Michael Coslo wrote:
> Maybe some people can take something away from my unfortunate experience.
<snip>
> - 73 de Mike N3LI -
>

I have had a couple negative experiences with single magnets, and one with a 6 meter halo on a triple magnet. I would say the triple or quad with a hamstick is practically impossible to knock off, however. At least at any speed less than 30 over the interstate limit including normal wind gusts. Or so I've heard.

One other thing you need to consider about magnet mounts is that a layer of water will end up underneath the magnet due to imperfections in it and the roof. You _will_ damage the paint if you leave it on for more than a few days at a time. You _will_ damage your paint if you put it on and remove it regularly to get rid of the water. It's a Catch-22.

tom
K0TAR

373. Decibel tutorial

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-09 03:00:34 UTC
From: bulegoge@columbus.rr.com
Message-ID: <05e99bab-ffef-49f4-91f9-a4a9b3e3bf1d@x6g2000vbg.googlegroups.com>
Source record: 14785

I have created a tutorial to explain decibels. It is located here:

http://www.fourier-series.com/rf-concepts/decibels.html

It consists of a flash program that allows user interaction and also
contains a fair amount of embedded audio explanations. The flash
tutorial is about 7M , most of which is the embedded audio.

374. Re: Polarized radiation

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-09 04:22:45 UTC
From: "Sal M. Onella" <salmonella@food.poisoning.org>
Message-ID: <qslXl.2161$wY3.439@newsfe05.iad>
Source record: 14786

"Szczepan Bia&#65533;ek" <sz.bialek@wp.pl> wrote in message
news:h0i533fai1@node1.news.atman.pl...

< snip >

> I am not interesting in theoretical physics.

Then perhaps this
http://www.mrdowling.com/images/701zeus.gif
is more what you're after.

(No, that's not Maxwell.)

375. Re: Decibel tutorial

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-09 04:56:39 UTC
From: "Helmut Wabnig"
Message-ID: <krqr2515g7qbo11ojp0fddetgno341g9o1@4ax.com>
Source record: 14787

On Mon, 8 Jun 2009 20:00:34 -0700 (PDT), bulegoge@columbus.rr.com
wrote:

>I have created a tutorial to explain decibels. It is located here:
>
>http://www.fourier-series.com/rf-concepts/decibels.html
>
>It consists of a flash program that allows user interaction and also
>contains a fair amount of embedded audio explanations. The flash
>tutorial is about 7M , most of which is the embedded audio.

I do not have audio on my PC.

w.

376. Re: Polarized radiation

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-09 07:34:38 UTC
From: Szczepan Białek <sz.bialek@wp.pl>
Message-ID: <h0kpumrsa1@node1.news.atman.pl>
Source record: 14788

"Sal M. Onella" <salmonella@food.poisoning.org> wrote
news:qslXl.2161$wY3.439@newsfe05.iad...
>
> "Szczepan Biaďż˝ek" <sz.bialek@wp.pl> wrote in message
> news:h0i533fai1@node1.news.atman.pl...
>
> < snip >
>
>> I am not interesting in theoretical physics.
>
> Then perhaps this
> http://www.mrdowling.com/images/701zeus.gif
> is more what you're after.
>
> (No, that's not Maxwell.)

If you like the theoretical physics try this:
http://www.df.lth.se/~snorkelf/Longitudinal/node4.html
S*

377. Electromagnetic wave question

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-09 09:01:43 UTC
From: Peter <colleenpeter@westnet.com.au>
Message-ID: <C4udnQrCK6JkubPXnZ2dnUVZ8vqdnZ2d@westnet.com.au>
Source record: 14789

In the electric power industry there is increasing public concern regarding fields around power lines. The general public often refers to these fields as electromagnetic radiation, which it is not. We generally are concerned with magnetic fields and less often with the electric charge fields. The two are treated as separate issues.

I believe the same is true of antennas, that is the electric and magnetic fields are separate when you are close in to the antenna in terms of wave-length.

Question:

If this assumption is correct at what point or distance do the two relatively independent fields become the one all important electromagnetic wave?

Peter VK6YSF

http://members.optushome.com.au/vk6ysf/vk6ysf/main.htm

378. Re: hi sos

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-09 09:34:57 UTC
From: discretman16@gmail.com
Message-ID: <48882469-740c-4ca9-9db0-aebcea0c0b3d@z14g2000yqa.googlegroups.com>
Source record: 14790

On 7 juin, 16:45, "Jerry" <jerrymar...@verizon.net> wrote:
> <discretma...@gmail.com> wrote in message
>
> news:c5db5b3a-b1f3-4083-be24-f5520966a4d9@f19g2000yqh.googlegroups.com...
> On 6 juin, 22:15, "Jerry" <jerrymar...@verizon.net> wrote:
>
>
>
>
>
> > "Rich Griffiths" <richg...@one.net> wrote in message
>
> >news:E42dnbkdXPTsJbfXnZ2dnUVZ_oCdnZ2d@posted.nuvoxcommunications...
>
> > > <snip>
>
> > >> hi "jerry"
>
> > >> i want QHA models and i try to adapt them for 2GHZ it's for
> > >> heliosynchron
> > >> satellite for earth sensing
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> > >> one
> > >> loop radiate 90 degrees later than the other due to the impedance
> > >> difference between the two loops.
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> > >> Jerry KD6JDJ
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> > > Remember that gigahertz-level quad helixes used on satellites are
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> > Hi Rich
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> > Jerry KD6JDJ- Masquer le texte des messages précédents -
>
> > - Afficher le texte des messages précédents -
>
> hi jerry
>
> follow this links please :
>
> http://www.sstl.org/assets/Downloads/Quadrifilar%20Helix%20Antenna.pdfhttp://linkinghub.
elsevier.com/retrieve/pii/S1434841105001755
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> in EZNEC.   I strongly recommend EZNEC to any young person who has *any*
> interest in designing or understanding antennas.   It is a great tool for
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hi jerry
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matlab !!!!!!!!!!!!!!, www.mathworks.com
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takes me several days to learn hiw i use it,
if u give some tutorials it will be good, i downloaded the demo
version and i found it good and difficul to use!!!!!!!!!

thank u

379. Re: Electromagnetic wave question

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-09 10:00:30 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <4K-dnbMFJ_Vfr7PXnZ2dnUVZ_g5i4p2d@giganews.com>
Source record: 14791

Peter wrote:
> In the electric power industry there is increasing public concern regarding
> fields around power lines. The general public often refers to these fields
> as electromagnetic radiation, which it is not. We generally are concerned
> with magnetic fields and less often with the electric charge fields. The two
> are treated as separate issues.
>
> I believe the same is true of antennas, that is the electric and magnetic
> fields are separate when you are close in to the antenna in terms of
> wave-length.
>
>
>
> Question:
>
> If this assumption is correct at what point or distance do the two
> relatively independent fields become the one all important electromagnetic
> wave?
>
>
>
> Peter VK6YSF
>
> http://members.optushome.com.au/vk6ysf/vk6ysf/main.htm

The assumption is not correct.

Roy Lewallen, W7EL

380. Re: Electromagnetic wave question

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-09 10:11:18 UTC
From: Wimpie <wimabctel@tetech.nl>
Message-ID: <542b933d-99c6-49e5-9514-e10b7abd854f@y9g2000yqg.googlegroups.com>
Source record: 14792

On 9 jun, 11:01, "Peter" <colleenpe...@westnet.com.au> wrote:
> In the electric power industry there is increasing public concern regarding
> fields around power lines. The general public often refers to these fields
> as electromagnetic radiation, which it is not. We generally are concerned
> with magnetic fields and less often with the electric charge fields. The two
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> relatively independent fields become the one all important electromagnetic
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> Peter VK6YSF
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> http://members.optushome.com.au/vk6ysf/vk6ysf/main.htm

Hello Peter,

The point where the fields merge to the EM wave depends on various
things.

There are three field zones used within the antenna community:

1. The far field zone (Fraunhofer region), where there is a true
spherical wave behavior, and the radiation pattern of the antenna is
independent of the distance to the antenna. The antenna can be treated
as a true point source emitting EM waves. The far field zone is mostly
taken r > 2*b^2/lambda, where b is the largest size of the antenna.
This formula is very conservative. Depending on the current or
aperture distribution, the far field can start from r > 0.5*b^2/
lambda. E- and H- field is proportional with 1/r (r=distance).

2. The transition field zone (Fresnel region), where the fields have a
reasonable wave character, but are not spherical. The radiation
pattern of the antenna depends on the measuring distance. This one is
tricky. An antenna with a null in the far field pattern may show
significant radiation (in same direction) in the transition field. So
within the transition field, you cannot for sure assess field strength
levels based on the far field radiation pattern. Also the main lobe
in the far field pattern may not be the main lobe in the radiation
pattern measured at distance far below the far field distance. You can

compare that with coherent light passing through a round aperture, you get an onion shaped ring pattern on the wall (airy disk). You can even get a black hole in the center at certain distance. So here field is not proportional with 1/r.

3. The reactive field zone. This is the region where you can calculate the fields using electrostatics and induction. In many cases, fields are 90 degrees out of (time) phase. r<0.16*lambda is used frequently. Of course, there is no hard distance where the reactive field zone stops and the transition field starts. The decay of the H and E field are different depending on the antenna and the orientation of the antenna.

For small loop antennas, r > diameter AND r<0.16*lambda, H field decay is proportional with 1/r^3.

Another example is a HW dipole. It does not radiate on the axis of the dipole. But when you are at (for example) 0.5*lambda from the ends (but on the axis), you will sure measure an E-field (because of the reactive fields that decay with r^3 to r^2).

Another example is the field between a wide parallel strip transmission line that is well terminated (strips face each other)…. Both E and H are virtually homogenous between the strips, are in time phase and are spatially 90 degrees out of phase. So there is a plane EM wave traveling between the strips (no reactive issues).

The situation becomes more complicated when interaction with other materials is present also (for example reflection on metal sheet). You can have points where you have only E, but no H, and vice versa. This is comparable with reflection in a transmission line.

Sorry for the long text, but I hope it is useful.

Best regards,

Wim
PA3DJS
www.tetech.nl
please remove the obvious three letters in the PM

381. Re: Decibel tutorial

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-09 10:34:33 UTC
From: bulegoge@columbus.rr.com
Message-ID: <4b9fadb1-67c4-401f-a9bb-31b89daa549e@q14g2000vbn.googlegroups.com>
Source record: 14793

On Jun 9, 12:56 am, Helmut Wabnig <hwabnig@ .- --- -. dotat> wrote:
> On Mon, 8 Jun 2009 20:00:34 -0700 (PDT), buleg...@columbus.rr.com
> wrote:
>
> >I have created a tutorial to explain decibels. It is located here:
>
> >http://www.fourier-series.com/rf-concepts/decibels.html
>
> >It consists of a flash program that allows user interaction and also
> >contains a fair amount of embedded audio explanations. The flash
> >tutorial is about 7M , most of which is the embedded audio.
>
> I do not have audio on my PC.
>
> w.

bummer

382. Re: Electromagnetic wave question

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-09 10:45:48 UTC
From: Richard Fry <rfry@adams.net>
Message-ID: <b7aa8393-227f-4860-be23-d474af6c3fbc@j12g2000vbl.googlegroups.com>
Source record: 14794

Kraus has a graphic about this in ANTENNAS, 3rd edition...

http://i62.photobucket.com/albums/h85/rfry-100/KrausGraphicFields-.jpg

RF

383. Re: The End is Near...

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-09 12:04:33 UTC
From: MTV <volztexas@comcast.net>
Message-ID: <GdsXl.143798$4p1.5994@en-nntp-03.dc1.easynews.com>
Source record: 14795

Ed Cregger wrote:
> I've been using usenet for about 15 years with various names. I just read
> the announcement from AT&T that they are ending usenet services very soon.
> That sucks. But so does growing old in general. Still, quite often it beats
> the alternative.
>
> To all of those that I have chatted with over the years and whom I may never
> chat again, thanks. It's been fun.
>
> Ed Cregger
>
>

I'm now a happy member of forte.

MTV

384. Re: Mag Mount lesson

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-09 14:17:29 UTC
From: Michael Coslo <mjc5@psu.edu>
Message-ID: <h0lqtq$m466$1@tr22n12.aset.psu.edu>
Source record: 14796

Roy Lewallen wrote:
> As bad as that experience was, it could have been worse. If the coax had
> come loose, it could have broken the windshield of or caused other
> damage to a following car.
>
> I had a 5/8 wave 2 meter whip come loose once. It stayed connected and
> bounced along behind the car for a while -- luckily no damage except to
> the whip. I've used only 1/4 wave 2 meter whips since.

I have a 5/8th also. There is a bridge on the local interstate where a lot of pigeons live. They seem to like to play "chicken" with the cars. One day a couple flew really close while I was driving by. One of them swooped up, missing the windshield, but unfortunately finding my 2 meter antenna. All I could see in the rear view was a lot of feathers. The antenna stayed put. Bent it a little though.

- 73 de Mike N3LI -

385. Re: hi sos

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-09 14:18:04 UTC
From: Jerry <jerrymartes@verizon.net>
Message-ID: <wauXI.1593$u86.924@nwrddc01.gnilink.net>
Source record: 14797

<discretman16@gmail.com> wrote in message
news:48882469-740c-4ca9-9db0-aebcea0c0b3d@z14g2000yqa.googlegroups.com...
On 7 juin, 16:45, "Jerry" <jerrymar...@verizon.net> wrote:
> <discretma...@gmail.com> wrote in message
>
> news:c5db5b3a-b1f3-4083-be24-f5520966a4d9@f19g2000yqh.googlegroups.com...
> On 6 juin, 22:15, "Jerry" <jerrymar...@verizon.net> wrote:
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> > "Rich Griffiths" <richg...@one.net> wrote in message
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> >news:E42dnbkdXPTsJbfXnZ2dnUVZ_oCdnZ2d@posted.nuvoxcommunications...
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> > > <snip>
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> hi jerry
>
> follow this links please :
>
> http://www.sstl.org/assets/Downloads/Quadrifilar%20Helix%20Antenna.pdfhttp://linkinghub.elsevier.com/retrieve/pii/S1434841105001755
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i know that the NEC is the most used in antennas modeling, but it

takes me several days to learn hiw i use it,
if u give some tutorials it will be good, i downloaded the demo
version and i found it good and difficul to use!!!!!!!!!

thank u

Hi discreteman16

I appreciate the fact that you could be surprized about my ignoirance.
But, I am an old "handyman" kind of guy who likes to play with antennas.
The last time I worked as an antenna design engineer was in 1969.

I'd be happy to assist you with simple antenna modeling with EZNEC.
There are very few EZNEC users who know less about antenna modeling than I
do. It is my belief that 'if I can learn EZNEC, anyone can'.

If you intend to model a Quad Helix with EZNEC, it is necessary to
purchase the version that configures a helix with a "stroke of the
keyboard".

Send me the dimensions and frequency of your Quad Helix and I'll model it
for you. I'll try to keep a record of the time required.

Jerry KD6JDJ

386. Re: Mag Mount lesson

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-09 14:49:26 UTC
From: Michael Coslo <mjc5@psu.edu>
Message-ID: <h0lspm$o43g$1@tr22n12.aset.psu.edu>
Source record: 14798

tom wrote:
> Michael Coslo wrote:
>> Maybe some people can take something away from my unfortunate experience.
> <snip>
>> - 73 de Mike N3LI -
>>
>
> I have had a couple negative experiences with single magnets, and one
> with a 6 meter halo on a triple magnet. I would say the triple or quad
> with a hamstick is practically impossible to knock off, however. At
> least at any speed less than 30 over the interstate limit including
> normal wind gusts. Or so I've heard.

It is perhaps that "normal" business that is where the problem lies.
This road (speciifically, it is route 22 over Cresson mountain near
Altoona PA, is notorious for high and gusty winds. They have wind
warning signs, and even a tower mounted sensor that will trip electronic
signs. Trailers have flipped over in that area. Who knows what exact
wind hit me.

- 73 de Mike N3LI -

387. Re: hi sos

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-09 15:13:12 UTC
From: discretman16@gmail.com
Message-ID: <ed5f755b-3273-49d5-a1a7-5336d7102407@k38g2000yqh.googlegroups.com>
Source record: 14799

```
On 9 juin, 15:18, "Jerry" <jerrymar...@verizon.net> wrote:
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>
> Send me the dimensions and frequency of your Quad Helix and I'll model it
> for you. I'll try to keep a record of the time required.
>
> Jerry KD6JDJ- Masquer le texte des messages
précédents -
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hi jerry

frequency = 2025-2110 MHz uplink or 2200 -2290 MHz downlink
number of turns = usually 2
radius = 1 to 3 inch

good luck for therecord and thank u

388. Re: Decibel tutorial

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-09 15:27:37 UTC
From: google@karinya.net
Message-ID: <aca78723-aa51-476d-9e53-70541ba7e69e@j32g2000yqh.googlegroups.com>
Source record: 14800

Actually we don't even have to remember 1.6 to get the numbers in Step 4, we can derive it from previous steps:

Step 2 gave us 9dBm=8mW and Step 3 gave us 7dBm=5mW. So 2dB (9-7) must be a power ratio of 8/5=1.6

73,
Steve G3TXQ

389. Re: AT&T Usenet Netnews Service Shutting Down

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-09 15:40:01 UTC
From: TOM BLACKWELL <n5gar@sbcglobal.net>
Message-ID: <TnvXl.12895$im1.83@nlpi061.nbdc.sbc.com>
Source record: 14701

If this means a disconnection for me, I may need to find a new ISP. It seems I pay a lot for services like this. What are the rest of you doing?

The following message was apparently posted locally to those of us who pay sbcglobal.net - -

news-support@sbcglobal.net wrote:

> Please note that on or around July 15, 2009, AT&T will no longer be
> offering access to the Usenet netnews service. If you wish to continue
> reading Usenet newsgroups, access is available through third-party
> vendors.
>
> Posted only internally to AT&T Usenet Servers.
>

--

Regards, TOM BLACKWELL

390. Re: Decibel tutorial

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-09 16:20:06 UTC
From: bulegoge@columbus.rr.com
Message-ID: <521d7bc3-d305-4379-abed-3a929f8285d9@d31g2000vbm.googlegroups.com>
Source record: 14702

On Jun 9, 11:27 am, goo...@karinya.net wrote:
> Actually we don't even have to remember 1.6 to get the numbers in Step
> 4, we can derive it from previous steps:
>
> Step 2 gave us 9dBm=8mW and Step 3 gave us 7dBm=5mW. So 2dB (9-7) must
> be a power ratio of 8/5=1.6
>
> 73,
> Steve G3TXQ

That is a great thought. Thanks for the insight. I'll stick with the
1.6 number in the tutorial though.

391. Re: hi sos

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-09 16:27:10 UTC
From: Jerry <jerrymartes@verizon.net>
Message-ID: <y3wXl.1197$tr5.894@nwrddc02.gnilink.net>
Source record: 14703

<discretman16@gmail.com> wrote in message
news:ed5f755b-3273-49d5-a1a7-5336d7102407@k38g2000yqh.googlegroups.com...
On 9 juin, 15:18, "Jerry" <jerrymar...@verizon.net> wrote:
> <discretma...@gmail.com> wrote in message
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hi jerry

frequency = 2025-2110 MHz uplink or 2200 -2290 MHz downlink
number of turns = usually 2
radius = 1 to 3 inch

good luck for therecord and thank u

Hi disc

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2.274 GHz Quad Helix. It is about 40 mm tall and 20 mm wide. It took me

about 45 minutes mainly because I chased a few mistakes.

Contact me again via my E-mail for any additional info. Tell me what wire diameter you prefer.

I had difficulty trying to open the file you sent. My computer skills are really poor.

Jerry

392. Re: hi sos

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-09 16:37:24 UTC
From: discretman16@gmail.com
Message-ID: <ad2e404a-b405-4118-b9d3-981133c6449a@a36g2000yqc.googlegroups.com>
Source record: 14704

```
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ok jerry, i try to find more information about the antenna

393. Re: hi sos

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-09 16:41:59 UTC
From: discretman16@gmail.com
Message-ID: <091676a5-c3c9-473c-bde5-405075d91214@x5g2000yqk.googlegroups.com>
Source record: 14705

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hi jerry
u have to use the acrobat reader www.adobe.com/fr/products/reader/

394. Re: Electromagnetic wave question

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-09 17:02:34 UTC
From: Jim Lux <james.p.lux@jpl.nasa.gov>
Message-ID: <h0m4ja$43j$1@news.jpl.nasa.gov>
Source record: 14707

Peter wrote:
> In the electric power industry there is increasing public concern regarding
> fields around power lines. The general public often refers to these fields
> as electromagnetic radiation, which it is not. We generally are concerned
> with magnetic fields and less often with the electric charge fields. The two
> are treated as separate issues.
>
> I believe the same is true of antennas, that is the electric and magnetic
> fields are separate when you are close in to the antenna in terms of
> wave-length.
>
>
>
> Question:
>
> If this assumption is correct at what point or distance do the two
> relatively independent fields become the one all important electromagnetic
> wave?
>

by "electromagnetic wave" you really mean freely propagating wave... and
by definition it's at the point where the ratio of E/H = 377 ohms, aka
"the far field".

Closer in, the ratio between E and H may not be 377 ohms, and energy is
moving back and forth between the fields and the antenna (or between the
E and H fields, depending on your conceptual model).. a region also
called the "reactive near field" or "near field"..

Lots of folks also talk about a "transition zone" where there's both
significant propagating wave and stored energy.

None of these boundaries are hard and fast.. there's some conventions
used in connection with things like antenna ranges. The conventions are
derived from an underlying assumption that the real behavior isn't
significantly different (in a measurement sense) from what you measure.

e.g. the "far field" assumption for antenna range distance
(2*D^2/lambda) is where the deviation of the spherical wavefront from
the assumed perfectly flat is small enough that the error in the
boresight gain measurement is "small" compared to other effects. (It's
comparable to the Rayleigh criterion for optical reflectors)

>
>
> Peter VK6YSF

>
> http://members.optushome.com.au/vk6ysf/vk6ysf/main.htm
>
>

395. Re: Hexbeam Antenna Modeling

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-09 17:40:16 UTC
From: Jeff Liebermann <jeffl@cruzio.com>
Message-ID: <pv5t251vrfpnft9kmht3hrjbme6g5hu0oc@4ax.com>
Source record: 14706

On Mon, 08 Jun 2009 11:11:44 -0700, Jim Lux <james.p.lux@jpl.nasa.gov>
wrote:

>> Here's my favorite:
>> <http://www.google.com/patents/about?id=N_sEAAAAEBAJ&dq=5,982,276>
>> Not exactly an antenna. It uses a MASER to (somehow) magnetically
>> couple Gigabit data to the power lines. The company is still around:
>> <http://www.mediafusionllc.net>

>And reforming:
>"The Media Fusion Team is now re-forming. Mr. William "Luke" Stewart
>will act a temporary President and Chief Executive as well as Chief
>Scientist. As other key resources are identified and recruited they
>will become part of the Media Fusion, LLC Team. A recruiting committee
>has been formed and recommendations are now being considered."
>
>perhaps because of
>15 dec 2006.. Preliminary settlement agreement signed by the honorable
>Judge Ann Ashby, presiding Judge, 134th District Court, Dallas, Texas.

The old web sites are rather interesting:
<http://web.archive.org/web/*/http://www.mediafusionllc.net>

My favorite is the photos of the interface controller built into a
wall outlet box:
<http://web.archive.org/web/20000229124801/www.mediafusionllc.net/northamerica/main/tech/interface.html>
I showed it to a friend in the power industry who had some interesting
things to say about sharing a power outlet box with phone and cable.
However, the 14 flashing lights are kinda cool.

The problem with such patents is that if someone actually invents a
decent way to couple, distribute, and switch gigabit data on the power
lines, they'll end up in court fighting this patent. This is also
known as a "blocking patent".

It's sometimes fun to see where they spend their money. In 1999, they
burned $120K on lobbying. In 2000, they only wasted $70K.
<https://www.opensecrets.org/lobby/clientsum.php?lname=Media+Fusion+LLC&id=Y00000338320&year=1999>

Also, I dunno about the FTL (faster than light) antenna design. That
implies that the acknowledgements will arrive before the
transmissions, which will surely confuse a T/R switch. Perhaps a
predictive T/R switch will help (one that switches before one intends
to switch it).

--
Jeff Liebermann jeffl@cruzio.com
150 Felker St #D http://www.LearnByDestroying.com
Santa Cruz CA 95060 http://802.11junk.com
Skype: JeffLiebermann AE6KS 831-336-2558

396. Re: Mag Mount lesson

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-09 19:09:03 UTC
From: nm5k@wt.net
Message-ID: <88d5ef89-3e43-4f35-b710-62c174e9cfe9@q37g2000vbi.googlegroups.com>
Source record: 14708

On Jun 8, 8:39 pm, KC0YCS <brharpe...@yahoo.com> wrote:

>
> Is this common 706 problem? i have heard it before

Dunno.. I know a lot of 706's are flaking out these days.
I bet the tiny caps in the circuits have a limited lifespan..
I know several personally that run 706's, and many of them
have flaked out recently and have had to go to the shop.
It's almost like they all decided to die at the same time.. :/
I bought mine new in 2001, so it's over 8 years old.

397. Re: Mag Mount lesson

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-09 19:11:33 UTC
From: nm5k@wt.net
Message-ID: <b54be034-eb0b-478b-b627-344f0412bd98@o30g2000vbc.googlegroups.com>
Source record: 14709

On Jun 8, 7:32 pm, Jim Lux <james.p....@jpl.nasa.gov> wrote:

> I use a Comet trunklip mount for the VHF/UHF whip. If you adjust the
> angle right, it clears the roof of the car when you open the trunk.
>   CP-5NMO
>
> http://www.cometantenna.com/products.php?CatID=1&famID=9&childID=14

Yep, a friend of mine used a CP-5 on his Lincoln town car. Seemed to
work ok so far. That's probably what I will use if I ever get brave
enough
to try one.

398. Re: The End is Near...

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-09 20:08:53 UTC
From: Ed Cregger <ecregger@bellsouff.net>
Message-ID: <1bzXl.8871$Xl4.8246@bignews5.bellsouth.net>
Source record: 14710

"MTV" <volztexas@comcast.net> wrote in message
news:GdsXl.143798$4p1.5994@en-nntp-03.dc1.easynews.com...
> Ed Cregger wrote:
>> I've been using usenet for about 15 years with various names. I just read
>> the announcement from AT&T that they are ending usenet services very
>> soon.
>> That sucks. But so does growing old in general. Still, quite often it
>> beats
>> the alternative.
>>
>> To all of those that I have chatted with over the years and whom I may
>> never
>> chat again, thanks. It's been fun.
>>
>> Ed Cregger
>
> I'm now a happy member of forte.
>
> MTV

I forgot about forte. Thanks for jogging the old memory.

Ed Cregger, AJ4PJ

399. Re: SWR variation with feedline length

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-09 20:37:24 UTC
From: Antonio Vernucci <vernucci@tin.it>
Message-ID: <4a2ec802$0$47550$4fafbaef@reader1.news.tin.it>
Source record: 14711

> The possibility of common-mode current on the outside of the braid has
> been mentioned, but nothing has been mentioned concerning whether a
> balun is used if the feedline-antenna connections is unbal to bal. If
> there is no balun where should be one, seems to me it's a no-brainer
> that the problem is common-mode current causing the different SWR
> readings with different lengths of feedline.
>
> Walt, W2DU

Hi Walt,

I have always used a good balun on all my antennas, and therefore I am not too convinced that, in my case, the SWR change I observe when adding (or removing) a piece of coax in my station could be due to RF presence on the coax braid.

Anyway, I have not yet read a clear and convincing explanation of why the presence of RF on the coax braid would cause the SWR meter to give a different reading when moving it along the line.

I appreciate that, with a hot braid, the coax cable becomes part of the antenna and then radiates, but I cannot clearly focus why this can cause the SWR meter to see different impedances at different points of the line. Impedance is the ratio between RF voltage (between center conductor and braid) and (differential mode) RF current. So, I do not well visualize how the presence of a common mode RF current can influence the meter reading.

73

Tony I0JX

400. Re: The End is Near...

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-09 20:50:55 UTC
From: "David G. Nagel" <nagel.david@sbcglobal.net>
Message-ID: <RWzXl.34949$ZP4.7109@nlpi067.nbdc.sbc.com>
Source record: 14712

Ed Cregger wrote:
> "MTV" <volztexas@comcast.net> wrote in message
> news:GdsXl.143798$4p1.5994@en-nntp-03.dc1.easynews.com...
>> Ed Cregger wrote:
>>> I've been using usenet for about 15 years with various names. I just read
>>> the announcement from AT&T that they are ending usenet services very
>>> soon.
>>> That sucks. But so does growing old in general. Still, quite often it
>>> beats
>>> the alternative.
>>>
>>> To all of those that I have chatted with over the years and whom I may
>>> never
>>> chat again, thanks. It's been fun.
>>>
>>> Ed Cregger
>> I'm now a happy member of forte.
>>
>> MTV
>
>
> I forgot about forte. Thanks for jogging the old memory.
>
> Ed Cregger, AJ4PJ
>
>
Has anyone actually received notice from AT&T? All I have seen has been
on the various usenet groups. I googled AT&T and did not find anything.

Dave WD9BDZ

401. 6m and 10m inv V calc

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-09 21:22:57 UTC
From: Pete <pete13245@inet.net>
Message-ID: <h0mjrh$97l$1@news.albasani.net>
Source record: 14713

I question my calculations for a inverted-V dipole length for 50150 and 28400 into a 4:1 balun. I think they came out too short for 200ohms center Z

Can someone confirm my two calculations?

Thank you!

402. Re: 6m and 10m inv V calc

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-09 22:00:01 UTC
From: jimp@specsol.spam.sux.com
Message-ID: <bb23g6-e2.ln1@mail.specsol.com>
Source record: 14714

Pete <pete13245@inet.net> wrote:
> I question my calculations for a inverted-V dipole length for 50150 and
> 28400 into a 4:1 balun. I think they came out too short for 200ohms
> center Z
>
> Can someone confirm my two calculations?
>
> Thank you!

Why don't you download the free EZNEC demo, which will do an inverted-V,
and see what it says?

http://www.eznec.com/demoinfo.htm

--
Jim Pennino

Remove .spam.sux to reply.

403. Re: 6m and 10m inv V calc

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-09 23:00:14 UTC
From: Jim Lux <james.p.lux@jpl.nasa.gov>
Message-ID: <h0mphumoi1@news.jpl.nasa.gov>
Source record: 14716

Ralph Mowery wrote:
> Why are you using a 4:1 balun with a dipole ? If it is a simple dipole with
> only one wire in each direction instead of a folded dipole the impedance is
> around 70 ohms. If you decide on a balun it should be a 1:1.
> When adjusted for the lowest swr you may find that 1.4 to 1 is about as low
> as it will go if you use a 50 ohm coax.
>
> "Pete" <pete13245@inet.net> wrote in message
> news:h0mjrh$97l$1@news.albasani.net...
>> I question my calculations for a inverted-V dipole length for 50150 and
>> 28400 into a 4:1 balun. I think they came out too short for 200ohms
>> center Z
>>
>> Can someone confirm my two calculations?
>>
>> Thank you!
>>
>
>

With a V, you can get the feedpoint impedance right to 50 ohms..
somewhere around 120 degrees included angle

404. Re: 6m and 10m inv V calc

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-09 23:06:53 UTC
From: Ralph Mowery <rmowery28146@earthlink.net>
Message-ID: <l4-dnUA7orMtQbPXnZ2dnUVZ_q-dnZ2d@earthlink.com>
Source record: 14715

Why are you using a 4:1 balun with a dipole ? If it is a simple dipole with only one wire in each direction instead of a folded dipole the impedance is around 70 ohms. If you decide on a balun it should be a 1:1.
When adjusted for the lowest swr you may find that 1.4 to 1 is about as low as it will go if you use a 50 ohm coax.

"Pete" <pete13245@inet.net> wrote in message
news:h0mjrh$97l$1@news.albasani.net...
>I question my calculations for a inverted-V dipole length for 50150 and
> 28400 into a 4:1 balun. I think they came out too short for 200ohms
> center Z
>
> Can someone confirm my two calculations?
>
> Thank you!
>

405. Re: The End is Near...

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-09 23:19:41 UTC
From: Tom Donaly <dtdonaly@sbcglobal.net>
Message-ID: <j6CXl.33403$YU2.23169@nlpi066.nbdc.sbc.com>
Source record: 14717

David G. Nagel wrote:
> Ed Cregger wrote:
>> "MTV" <volztexas@comcast.net> wrote in message
>> news:GdsXl.143798$4p1.5994@en-nntp-03.dc1.easynews.com...
>>> Ed Cregger wrote:
>>>> I've been using usenet for about 15 years with various names. I just
>>>> read
>>>> the announcement from AT&T that they are ending usenet services very
>>>> soon.
>>>> That sucks. But so does growing old in general. Still, quite often
>>>> it beats
>>>> the alternative.
>>>>
>>>> To all of those that I have chatted with over the years and whom I
>>>> may never
>>>> chat again, thanks. It's been fun.
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>>>> Ed Cregger
>>> I'm now a happy member of forte.
>>>
>>> MTV
>>
>>
>> I forgot about forte. Thanks for jogging the old memory.
>>
>> Ed Cregger, AJ4PJ
>>
> Has anyone actually received notice from AT&T? All I have seen has been
> on the various usenet groups. I googled AT&T and did not find anything.
>
> Dave WD9BDZ

I did.
73,
Tom Donaly, KA6RUH

406. Re: "Panel" style UHF DTV antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-10 01:21:07 UTC
From: amdx <amdx@knology.net>
Message-ID: <c8740$4a2f0a87$18d6b40c$28826@KNOLOGY.NET>
Source record: 14718
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew,alt.tv.tech.hdtv

>>A mismatch can cause ghosting in an analog TV.
>>What does ghosting do to a digital TV signal?

Just as a point of interest (to me at least) I grew up within 3 blocks of an airport, it
was a several times a day occurance to have the picture flutter as an airplane flew by.
Mike

407. Re: Hexbeam Antenna Modeling

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-10 01:24:43 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <gNOdnYDYI7vGlrLXnZ2dnUVZ_v2dnZ2d@giganews.com>
Source record: 14719

Jeff Liebermann wrote:
> . . .
> Also, I dunno about the FTL (faster than light) antenna design. That
> implies that the acknowledgements will arrive before the
> transmissions, which will surely confuse a T/R switch. Perhaps a
> predictive T/R switch will help (one that switches before one intends
> to switch it).

The cool thing is that you'll get the QSL card before you have the QSO.
If no QSL comes, don't bother with the QSO.

Roy Lewallen, W7EL

408. Re: SWR variation with feedline length

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-10 01:29:00 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <oOednWoFA93DkbLXnZ2dnUVZ_vGdnZ2d@giganews.com>
Source record: 14720

Antonio Vernucci wrote:
>
> Hi Walt,
>
> I have always used a good balun on all my antennas, and therefore I am
> not too convinced that, in my case, the SWR change I observe when adding
> (or removing) a piece of coax in my station could be due to RF presence
> on the coax braid.
>
> Anyway, I have not yet read a clear and convincing explanation of why
> the presence of RF on the coax braid would cause the SWR meter to give a
> different reading when moving it along the line.
>
> I appreciate that, with a hot braid, the coax cable becomes part of the
> antenna and then radiates, but I cannot clearly focus why this can cause
> the SWR meter to see different impedances at different points of the
> line. Impedance is the ratio between RF voltage (between center
> conductor and braid) and (differential mode) RF current. So, I do not
> well visualize how the presence of a common mode RF current can
> influence the meter reading.
>
> 73
>
> Tony I0JX

If you keep the same total line length and move your meter to different points along the line, current on the outside of the line won't change the indicated SWR except to the extent that the SWR meter is poorly shielded and affected by the current. However, I believe the problem was stated in such a way that the SWR was seen to change as line was added or removed, that is, as the line length changed. And that could change the actual line SWR for the reason you described.

Roy Lewallen, W7EL

409. Re: SWR variation with feedline length

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-10 02:17:27 UTC
From: Owen Duffy <none@no.where>
Message-ID: <Xns9C267D07B3D0Anonenowhere@61.9.191.5>
Source record: 14721

"Antonio Vernucci" <vernucci@tin.it> wrote in
news:4a2ec802$0$47550$4fafbaef@reader1.news.tin.it:

...
> I have always used a good balun on all my antennas, and therefore I am
> not too convinced that, in my case, the SWR change I observe when
> adding (or removing) a piece of coax in my station could be due to RF
> presence on the coax braid.

Perhaps you should set aside your confidence that there is no common mode current, and do some experiments with shielded loads and coax lines.

For example, you could parallel two 50 ohm loads at a T piece, and measure the VSWR into the branch line at different lengths and locations. Try it also with some sections of 75 ohm line if you have some available.

Come back and describe the experiments and results if they do not behave as expected.

If you get info fine detail about the effect of a VSWR meter calibrated for 50+j0 on a line that is not exactly 50+j0 (eg practical lines), my notes at http://www.vk1od.net/transmissionline/VSWR/displacement.htm might help you to understand what may be happening.

When you have convinced yourself about the soundness of the broad statement that for most practical cases, VSWR decreases smoothly from the load to the source, and the decrease is accounted for exactly by the line loss.

>
> Anyway, I have not yet read a clear and convincing explanation of why
> the presence of RF on the coax braid would cause the SWR meter to give
> a different reading when moving it along the line.

If you maintain the common mode current path exactly, and move the SWR meter to a different location, the VSWR should be seen to decrease smoothly from the load to the source, and the decrease is accounted for exactly by the line loss.

If you change the common mode current path in any way, you may cause a different load impedance at the far end of the coax, and that will affect the VSWR.

>
> I appreciate that, with a hot braid, the coax cable becomes part of
> the antenna and then radiates, but I cannot clearly focus why this can
> cause the SWR meter to see different impedances at different points of

> the line. Impedance is the ratio between RF voltage (between center

If the VSWR>1, then the impedance varies all along the line.

The VSWR meter doesn't directly read the impedance, but it shows the VSWR, and although the impedance may vary radically, the VSWR decreases smoothly from the load to the source, and the decrease is accounted for exactly by the line loss. (I think I have said that before.)

> conductor and braid) and (differential mode) RF current. So, I do not
> well visualize how the presence of a common mode RF current can
> influence the meter reading.

See above and my notes.

But, while you are fixated on the belief that you have zero common mode current, what you report cannot be explained by conventional transmission line theory.

Owen

PS: "most practical cases" means the VSWR as indicated on an instrument calibrated for 50+j0 and used on low loss nominal 50 ohm line at HF or above.

410. Re: Electromagnetic wave question

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-10 07:51:05 UTC
From: Szczepan Białek <sz.bialek@wp.pl>
Message-ID: <h0nf8u$8eh$1@node1.news.atman.pl>
Source record: 14722

"Peter" <colleenpeter@westnet.com.au> wrote
news:C4udnQrCK6JkubPXnZ2dnUVZ8vqdnZ2d@westnet.com.au...
> In the electric power industry there is increasing public concern
> regarding fields around power lines. The general public often refers to
> these fields as electromagnetic radiation, which it is not.

Yes. Radiation is proportional to f^4. So at 50Hz practically no radiation.

> We generally are concerned with magnetic fields and less often with the
> electric charge fields. The two are treated as separate issues.

The two were seperate in ancient ages and now in the textbooks. It is the
necessary simplification.
But the adults have the two ways:
1. The way (EM theory) by Biot-Savart and Maxwell where the current create
the magnetic whirl,
2. The way by Ampere and many others where the moving charge create also
electric field. Here the magnetism is an illusion.
>
> I believe the same is true of antennas, that is the electric and magnetic
> fields are separate when you are close in to the antenna in terms of
> wave-length.
>
> Question:
>
> If this assumption is correct at what point or distance do the two
> relatively independent fields become the one all important electromagnetic
> wave?

You have the answers for the way 1.
For the way 2 we have only the one electric wave. But would be easy to you
to check which way is right.

In the way 1 EM waves are radiated by the AC (current create magnetic whirl
and this create electric whirl and so on). Radiate this part of antenna
where the current is max.

In the way 2 the electric waves are radiated by the two ends of Hertz
dipole. So the dipole radiate the two coupled electric waves. The receiving
antena should detect the doubled frequency (on monopoles no such effect).
You must distinguish it from the harmonics.
S*
>
> Peter VK6YSF
>
> http://members.optushome.com.au/vk6ysf/vk6ysf/main.htm

411. Re: SWR variation with feedline length

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-10 08:16:19 UTC
From: Wimpie <wimabctel@tetech.nl>
Message-ID: <e027b064-9fec-4a93-8fd5-9723d6782391@m19g2000yqk.googlegroups.com>
Source record: 14723

On 9 jun, 22:37, "Antonio Vernucci" <vernu...@tin.it> wrote:
> > The possibility of common-mode current on the outside of the braid has
> > been mentioned, but nothing has been mentioned concerning whether a
> > balun is used if the feedline-antenna connections is unbal to bal. If
> > there is no balun where should be one, seems to me it's a no-brainer
> > that the problem is common-mode current causing the different SWR
> > readings with different lengths of feedline.
>
> > Walt, W2DU
>
> Hi Walt,
>
> I have always used a good balun on all my antennas, and therefore I am not too
> convinced that, in my case, the SWR change I observe when adding (or removing) a
> piece of coax in my station could be due to RF presence on the coax braid.
>
> Anyway, I have not yet read a clear and convincing explanation of why the
> presence of RF on the coax braid would cause the SWR meter to give a different
> reading when moving it along the line.
>
> I appreciate that, with a hot braid, the coax cable becomes part of the antenna
> and then radiates, but I cannot clearly focus why this can cause the SWR meter
> to see different impedances at different points of the line. Impedance is the
> ratio between RF voltage (between center conductor and braid) and (differential
> mode) RF current. So, I do not well visualize how the presence of a common mode
> RF current can influence the meter reading.
>
> 73
>
> Tony I0JX

Hello Antonio,

Do you have access to a 2m or 70cm set? If so, take a piece of 50 Ohms coaxial cable (of about 1m). Plug it onto your set (or a separate VSWR meter) and add a quarter wave to the other end. Do nothing with the braid at the other end.

Now select low power setting. Measure the VSWR while you move you hand along the cable. You will notice change in VSWR for sure.

The reason for this is that the QW antenna requires a good image. The image impedance is in series with the radiator impedance (simple point of view). This image is the cable, VSWR meter and set. When you change this, you will notice change in VSWR. The easiest way to change the

image/ground/counterpoise is capacitively with your hand.

Of course you may assume that you don't have common mode current (because of a balun), but best is to turn such an assumption into a fact.

Best regards,

Wim
PA3DJS
www.tetech.nl
please remove the obvious letters in the PM

412. Re: radio antenna designed to pick up a specific station

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-10 08:20:13 UTC
From: Chuck Forsberg WA7KGX N2469R <caf@omen.com>
Message-ID: <huGdnQJbo7cg8bLXnZ2dnUVZ_vWdnZ2d@giganews.com>
Source record: 14724

On Wed, 03 Jun 2009 20:04:28 +0000, Jerry wrote:

> "TefJlives" <gmarkowsky@gmail.com> wrote in message
> news:df56874a-8a2d-430f-90c1-f51aeb2f4f07@g1g2000yqh.googlegroups.com...
> On Jun 3, 12:30 pm, j...@specsol.spam.sux.com wrote:
>> TefJlives <gmarkow...@gmail.com> wrote:
>> > On Jun 3, 10:45 am, j...@specsol.spam.sux.com wrote:
>> >> TefJlives <gmarkow...@gmail.com> wrote:
>> >> > Hello all,
>>
>> >> > There is a particular station in my area, 105.1, that I really
>> >> > like. Unfortunately, it barely comes in, and sometimes doesn't at
>> >> > all. I would like to build an antenna which is designed
>> >> > specifically for this
>> >> > station and which can somehow plug into my normal radio. I know
>> >> > nothing about this subject. Could someone please point me in the
>> >> > right
>> >> > direction?
>>
>> >> > Greg
>>
>> >> What do you have for an antenna now and what is your "normal radio".
>>
>> >> --
>> >> Jim Pennino
>>
>> >> Remove .spam.sux to reply.
>>
>> > A piece of junk boombox. Emerson Model PD6607. The antenna is the
>> > antenna sticking out the top of it.
>>
>> Just about any antenna will be better than that if you mount up in the
>> air.
>>
>> The trick will be connecting it to the radio if there isn't an existing
>> connector for an external antenna.
>>
>> --
>> Jim Pennino
>>
>> Remove .spam.sux to reply.
>
> How can you connect a better antenna to a radio like this? I don't mind
> taking it apart a bit.

>
> Hi Greg
>
> If you are willing to construct the Yagii, it would be possible you
> can
> couple it to your BoomBox by looping the "twisted pair" from the yagii
> around the case of the radio. Maybe you could experiment with twisting
> the twisted pair around the antenna you now pull out for the VHF range.
> It is possible that you will see some improvement by making a circular
> loop with the wires in the twisted pair and position the loop near the
> present (pull out) antenna.
>
> Jerry KD6JDJ

In the late 60s I built a 40-50 foot Yagi in the attic tuned to WFMT.
I used twinlead for the driven element and wires or metal tape suspended
by string anchored to handy rafters. Over a very narrow frequency range
it had enough gain over a regular FM Yagi I could listen in stereo instead
of mono. I used the information in Orr's VHF Antenna book to get the
element lengths and spacing.

I wonder if that thing is still up in that attic - if the apartment
building is still there.

--
Chuck Forsberg caf@omen.com www.omen.com 503-614-0430
Developer of Industrial ZMODEM(Tm) for Embedded Applications
Omen Technology Inc "The High Reliability Software"
10255 NW Old Cornelius Pass Portland OR 97231 FAX 629-0665

413. Re: Hexbeam Antenna Modeling

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-10 10:35:39 UTC
From: wood@itd.nrl.navy.mil
Message-ID: <wood-1006090635390001@jbw-mac.itd.nrl.navy.mil>
Source record: 14725

In article <gNOdnYDYI7vGlrLXnZ2dnUVZ_v2dnZ2d@giganews.com>, w7el@eznec.com
wrote:

> Jeff Liebermann wrote:
> > . . .
> > Also, I dunno about the FTL (faster than light) antenna design. That
> > implies that the acknowledgements will arrive before the
> > transmissions, which will surely confuse a T/R switch. Perhaps a
> > predictive T/R switch will help (one that switches before one intends
> > to switch it).
>
> The cool thing is that you'll get the QSL card before you have the QSO.
> If no QSL comes, don't bother with the QSO.
>
> Roy Lewallen, W7EL

Hey! I thought one had to await for auroras in NJ for that to happen ;_)
73s from N4GGO,

John Wood (Code 5550) e-mail: wood@itd.nrl.navy.mil
Naval Research Laboratory
4555 Overlook Avenue, SW
Washington, DC 20375-5337

414. Re: The End is Near...

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-10 10:40:24 UTC
From: wood@itd.nrl.navy.mil
Message-ID: <wood-1006090640240001@jbw-mac.itd.nrl.navy.mil>
Source record: 14726

In article <ocaXl.52889$19.16378@bignews2.bellsouth.net>, "Ed Cregger"
<ecregger@bellsouff.net> wrote:

> I've been using usenet for about 15 years with various names. I just read
> the announcement from AT&T that they are ending usenet services very soon.
> That sucks. But so does growing old in general. Still, quite often it beats
> the alternative.
>
> To all of those that I have chatted with over the years and whom I may never
> chat again, thanks. It's been fun.
>
> Ed Cregger

Hello, and if that's so can't you find another ISP? Even if you don't
have access to usenet, there are other non-usenet ham radio forums and
discussion groups. For a long time usenet/nntp was the only game in town
but there are plenty of alternativies out there now. Sincerely, and 73s
from N4GGO,

John Wood (Code 5550) e-mail: wood@itd.nrl.navy.mil
Naval Research Laboratory
4555 Overlook Avenue, SW
Washington, DC 20375-5337

415. Re: The End is Near...

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-10 11:46:27 UTC
From: Ed Cregger <ecregger@bellsouff.net>
Message-ID: <h0o6em$b67$1@news.eternal-september.org>
Source record: 14727

"J. B. Wood" <wood@itd.nrl.navy.mil> wrote in message
news:wood-1006090640240001@jbw-mac.itd.nrl.navy.mil...
> In article <ocaXl.52889$19.16378@bignews2.bellsouth.net>, "Ed Cregger"
> <ecregger@bellsouff.net> wrote:
>
>> I've been using usenet for about 15 years with various names. I just read
>> the announcement from AT&T that they are ending usenet services very
>> soon.
>> That sucks. But so does growing old in general. Still, quite often it
>> beats
>> the alternative.
>>
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>> never
>> chat again, thanks. It's been fun.
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>> Ed Cregger
>
> Hello, and if that's so can't you find another ISP? Even if you don't
> have access to usenet, there are other non-usenet ham radio forums and
> discussion groups. For a long time usenet/nntp was the only game in town
> but there are plenty of alternativies out there now. Sincerely, and 73s
> from N4GGO,
>
> John Wood (Code 5550) e-mail: wood@itd.nrl.navy.mil
> Naval Research Laboratory
> 4555 Overlook Avenue, SW
> Washington, DC 20375-5337

I guess I was thinking that if AT&T withdrew their support of usenet, it
wouldn't be long until its lack of validation (usenet) by such a famous
leader in communications would encourage more and mother smaller companies
to follow suit, eventually leading to a lack of use and accreditation,
socially.

Ed, AJ4PJ

416. Re: 6m and 10m inv V calc

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-10 13:38:58 UTC
From: JB <nospam@goofball.net>
Message-ID: <SHOXl.194$P5.180@nwrddc02.gnilink.net>
Source record: 14728

"Jim Lux" <james.p.lux@jpl.nasa.gov> wrote in message
news:h0mphumoi1@news.jpl.nasa.gov...
> Ralph Mowery wrote:
> > Why are you using a 4:1 balun with a dipole ? If it is a simple dipole
with
> > only one wire in each direction instead of a folded dipole the impedance
is
> > around 70 ohms. If you decide on a balun it should be a 1:1.
> > When adjusted for the lowest swr you may find that 1.4 to 1 is about as
low
> > as it will go if you use a 50 ohm coax.
> >
> > "Pete" <pete13245@inet.net> wrote in message
> > news:h0mjrh$97l$1@news.albasani.net...
> >> I question my calculations for a inverted-V dipole length for 50150 and
> >> 28400 into a 4:1 balun. I think they came out too short for 200ohms
> >> center Z
> >>
> >> Can someone confirm my two calculations?
> >>
> >> Thank you!
> >>
> >
> >
>
>
> With a V, you can get the feedpoint impedance right to 50 ohms..
> somewhere around 120 degrees included angle

Dittos. Radiates equally poorly in all directions though A rotatable
dipole or 2 el beam would be a simple project.

417. Re: The End is Near...

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-10 14:01:17 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <mtev25tb9oh92r9toh0fkvfgu34dqha23t@4ax.com>
Source record: 14729

On Wed, 10 Jun 2009 07:46:27 -0400, "Ed Cregger"
<ecregger@bellsouff.net> wrote:

>AT&T ... such a famous leader in communications

This is like worrying about the auto industry failing if Packard
doesn't make it through the bail-out this summer.

73's
Richard Clark, KB7QHC

418. Re: 6m and 10m inv V calc

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-10 15:15:01 UTC
From: jimp@specsol.spam.sux.com
Message-ID: <vcu4g6-m7n.ln1@mail.specsol.com>
Source record: 14730

JB <nospam@goofball.net> wrote:
> "Jim Lux" <james.p.lux@jpl.nasa.gov> wrote in message
> news:h0mphumoi1@news.jpl.nasa.gov...
>> Ralph Mowery wrote:
>> > Why are you using a 4:1 balun with a dipole ? If it is a simple dipole
> with
>> > only one wire in each direction instead of a folded dipole the impedance
> is
>> > around 70 ohms. If you decide on a balun it should be a 1:1.
>> > When adjusted for the lowest swr you may find that 1.4 to 1 is about as
> low
>> > as it will go if you use a 50 ohm coax.
>> >
>> > "Pete" <pete13245@inet.net> wrote in message
>> > news:h0mjrh$97l$1@news.albasani.net...
>> >> I question my calculations for a inverted-V dipole length for 50150 and
>> >> 28400 into a 4:1 balun. I think they came out too short for 200ohms
>> >> center Z
>> >>
>> >> Can someone confirm my two calculations?
>> >>
>> >> Thank you!
>> >>
>> >
>> >
>>
>>
>> With a V, you can get the feedpoint impedance right to 50 ohms..
>> somewhere around 120 degrees included angle
>
> Dittos. Radiates equally poorly in all directions though A rotatable
> dipole or 2 el beam would be a simple project.

Nonsense.

The difference in broadside gain between a dipole and an inverted V is
about 0.5 db.

--
Jim Pennino

Remove .spam.sux to reply.

419. FOR GAMERS ONLY

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-10 15:37:34 UTC
From: Bruteman <rexurbiztondo@gmail.com>
Message-ID: <e40d4a02-e8bd-4fde-912c-a6f5295fb07f@n21g2000vba.googlegroups.com>
Source record: 14731

---

http://gpoi.mybrute.com/

Let's get it on!

Insert a name to create your own Brute.

You will be able to fight against other Brutes in the arena.

Gain experience and fight tough in the ranking to become...
THE BRUTE!

420. Re: 6m and 10m inv V calc

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-10 16:15:51 UTC
From: Jim Lux <james.p.lux@jpl.nasa.gov>
Message-ID: <h0om7nnel1@news.jpl.nasa.gov>
Source record: 14732

JB wrote:
> "Jim Lux" <james.p.lux@jpl.nasa.gov> wrote in message
> news:h0mphumoi1@news.jpl.nasa.gov...
>> Ralph Mowery wrote:
>>> Why are you using a 4:1 balun with a dipole ? If it is a simple dipole
> with
>>> only one wire in each direction instead of a folded dipole the impedance
> is
>>> around 70 ohms. If you decide on a balun it should be a 1:1.
>>> When adjusted for the lowest swr you may find that 1.4 to 1 is about as
> low
>>> as it will go if you use a 50 ohm coax.
>>>
>>> "Pete" <pete13245@inet.net> wrote in message
>>> news:h0mjrh$97l$1@news.albasani.net...
>>>> I question my calculations for a inverted-V dipole length for 50150 and
>>>> 28400 into a 4:1 balun. I think they came out too short for 200ohms
>>>> center Z
>>>>
>>>> Can someone confirm my two calculations?
>>>>
>>>> Thank you!
>>>>
>>>
>>
>> With a V, you can get the feedpoint impedance right to 50 ohms..
>> somewhere around 120 degrees included angle
>
> Dittos. Radiates equally poorly in all directions though

The pattern from a inverted V with 120 degree included angle (30 degree droop from horizontal) is almost the same as a horizontal dipole at the same height. If the apex of the V is about 1/3 of the droop distance higher than the dipole, the "ground reflection" component is about the same.

For the 10m example here, the dipole is 5m long, roughly. A 30 degree droop is about a meter on the 2.5 meter leg on the dipole. (e.g. sin 30 is 0.5), so putting the dipole a foot higher (30cm) will give you almost the same pattern as a horizontal dipole.

A rotatable
> dipole or 2 el beam would be a simple project.

given the complexity of rotators in general, rigging up two crossed dipoles and a switch might be a better solution.

>

421. Re: Hexbeam Antenna Modeling

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-10 19:39:42 UTC
From: dplatt@radagast.org
Message-ID: <uoe5g6-j8u.ln1@radagast.org>
Source record: 14734

In article <gNOdnYDYI7vGlrLXnZ2dnUVZ_v2dnZ2d@giganews.com>,
Roy Lewallen <w7el@eznec.com> wrote:

>> Also, I dunno about the FTL (faster than light) antenna design. That
>> implies that the acknowledgements will arrive before the
>> transmissions, which will surely confuse a T/R switch. Perhaps a
>> predictive T/R switch will help (one that switches before one intends
>> to switch it).
>
>The cool thing is that you'll get the QSL card before you have the QSO.
>If no QSL comes, don't bother with the QSO.

But, if you *do* get the QSL card, you *must* make the QSO. No
excuses allowed. If you don't, you rupture the space-time continuum,
cause the entire Universe to end, and are cited by the Causality
Police and must pay a stiff fine.

--
Dave Platt <dplatt@radagast.org> AE6EO
Friends of Jade Warrior home page: http://www.radagast.org/jade-warrior
I do _not_ wish to receive unsolicited commercial email, and I will
boycott any company which has the gall to send me such ads!

422. Re: AT&T Usenet Netnews Service Shutting Down

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-10 19:42:34 UTC
From: Bob <rmiller47@satx.rr.com>
Message-ID: <4n20355ue1ttoti6kf3mu8qk9arodd42rq@4ax.com>
Source record: 14733

On Tue, 09 Jun 2009 10:40:01 -0500, TOM BLACKWELL
<n5gar@sbcglobal.net> wrote:

>If this means a disconnection for me, I may need to find a new ISP. It
>seems I pay a lot for services like this. What are the rest of you doing?

When Time Warner/Roadrunner discontinued their UseNet hookup, I went
with Forte's APN newsgroup service...

http://www.forteinc.com/apn/index.php

It runs $2.95 monthly for me, and their minimum plan is plenty for my
needs.

bob
k5qwg

>
>The following message was apparently posted locally to those of us who
>pay sbcglobal.net - -
>
>
>
>news-support@sbcglobal.net wrote:
>
>> Please note that on or around July 15, 2009, AT&T will no longer be
>> offering access to the Usenet netnews service. If you wish to continue
>> reading Usenet newsgroups, access is available through third-party
>> vendors.
>>
>> Posted only internally to AT&T Usenet Servers.
>>

423. Re: The End is Near...

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-10 20:23:34 UTC
From: nm5k@wt.net
Message-ID: <77c3a98b-8637-4811-b31b-8fb6a1c74f7e@r34g2000vba.googlegroups.com>
Source record: 14735

On Jun 10, 6:46 am, "Ed Cregger" <ecreg...@bellsouff.net> wrote:

>
> I guess I was thinking that if AT&T withdrew their support of usenet, it
> wouldn't be long until its lack of validation (usenet) by such a famous
> leader in communications would encourage more and mother smaller companies
> to follow suit, eventually leading to a lack of use and accreditation,
> socially.
>
> Ed, AJ4PJ

I've seen various ISP's chunk my usenet for quite a while.
First it was the old dial up I used to use.. Same ole story..
Not many people use it they claim..
The latest was Comcast.. They dumped usenet about a
year ago I think..
The number of ISP's carrying usenet is dwindling fast.
I've been using Google groups since the time that my
dial up shut it down..
Many think I've probably lost my mind, but I've grown to
actually prefer it over the usual usenet readers.
I see the whole thread at once, and don't have to click
each message to read em.. Also.. it's the archive..
So say someone started a thread in 1997 titled
"my tower fell over and crushed my car", and then
someone else came along in 2009 with the same
title, I'll see both of them.
If Google dumps usenet, I'll probably just quit using
it if I can't find any other free web sites. Most of the
others I see have been fairly lousy.. IE: take days
to refresh, etc..
Google has been fairly instant refresh for quite a while
unless something is broke.

424. Re: 6m and 10m inv V calc

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-10 20:29:22 UTC
From: nm5k@wt.net
Message-ID: <14d9756e-c231-4cd5-92bf-7e650a5449c6@t11g2000vbc.googlegroups.com>
Source record: 14736

On Jun 10, 11:15 am, Jim Lux <james.p....@jpl.nasa.gov> wrote:

>
> given the complexity of rotators in general, rigging up two crossed
> dipoles and a switch might be a better solution.
>
>
Don't even need the switch.. Just feed the crossed dipoles
with a single coax line and off to the races. :)

425. Coax + Ladder Line

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-10 20:36:44 UTC
From: "Kash J. Rangan" <kjrangan@yahoo.com>
Message-ID: <4a301b31@usenet.ugs.com>
Source record: 14737

Is it advisable to use a combination of Coax and a ladder line to feed a simple horizontal multiband dipole antenna?

In my new QTH it would be very easy for me to get a short run of coax out of my shack window but I would like to use a low loss ladder line for the main run up to the antenna feed point. Is it OK to place a 4:1 balun just outside of the window for the transition?

Kash, AG4EL

426. Making Serious Money Online

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-10 21:06:15 UTC
From: lizzy <lizmisa1@aol.com>
Message-ID: <ddb9a0a1-1763-453a-853e-36f529108827@e24g2000vbe.googlegroups.com>
Source record: 14738

From: Ocie Lewis <olewis10550@yahoo.com>
Subject: Re: Making Serious Money Online
Date: Wednesday,June 10, 2009, 4:45 PM

~~~~, I Want To Personally Introduce You To An Internet Millionaire!

Hi ~~~,
{Ocie} here with an major
announcement...
http://www.MyPartnersInProfit.com/bootcamp/?id=10286

For 25 people, this will be the most important
e-mail you ever receive. (I hope you're one of them!)

Because my new partner and I are looking for 25 people who are ready
to take part in the greatest Internet marketing joint venture of all
time.

This joint venture is open to anyone. Even if
you have a business already.

Here's the story: http://www.MyPartnersInProfit.com/bootcamp/?id=10286

But here's the catch: In order to make this happen,
We need to be sure that we choose the 25 people most
driven to succeed and responsible people. So if you're
looking for someone to hand you vacations and cars on a
silver platter, then you can stop reading right now.

However, if you have a sincere interest in building
a REAL home business based on something that you
can get passionate about... something you can truly
dedicate yourself to (at least 10 hours per week)
for the next twelve months, then we want to hear from you.

Because to be one of the 25 people accepted, you don't need an
existing online business (but you can). You don't need a technical
background. You don't even need to have any experience. Remember you
are just going to be sending out movies! (we'll work with you on ALL
of these things!)

What you *do* need is a burning desire to succeed
and the ability to be coachable and believe it's possible.

If you want to make an extra $100,000 a year working
part time, so that you or your spouse can stay home
~~~~

with the kids, let's make it happen! If you want to
increase the profits of an existing online business,
so that you make an extra $50,000 - $100,000 per year,
we can help you get there, too!

But please note that because of the huge time
commitment this kind of one-on-one mentoring will
take from me, I can only accept 25 people
at this time and I'm expecting to get literally hundreds
of applications.

So if this sounds like something that might interest
you, we highly recommend that you go to the link below
and watch the short video of my new partner as
he explain everything right away! Then just complete the
application form on the next page.

...We are going to be taking applications first come,
first served as they get accepted.

Don't wait click below or just copy and paste the link into
your browser....

http://www.MyPartnersInProfit.com/bootcamp/?id-10286

To Your Success & A New Partnership,

{From Ocie }

P.S. Keep in mind, we expect these 25 new spots to be
filled extremely fast... Likely in the next few days.
So if you would like to participate, we highly recommend
that you go right now and watch our video, then fill out
the form to get a copy of the movie for yourself, this
will notify us that you would like us to call you and start
working together.

http://www.MyPartnersInProfit.com/bootcamp/?id=10286

427. Re: Coax + Ladder Line

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-10 22:07:21 UTC
From: Dave <noone@nowhere.com>
Message-ID: <t8WXl.310$P5.7@nwrddc02.gnilink.net>
Source record: 14739

"Kash J. Rangan" <kjrangan@yahoo.com> wrote in message
news:4a301b31@usenet.ugs.com...
> Is it advisable to use a combination of Coax and a ladder line to feed a
> simple horizontal multiband dipole antenna?
>
> In my new QTH it would be very easy for me to get a short run of coax out
> of my shack window but I would like to use a low loss ladder line for the
> main run up to the antenna feed point. Is it OK to place a 4:1 balun just
> outside of the window for the transition?
>
> Kash, AG4EL
>
>
you can, but how long of a run will it be from the shack to the antenna??
unless it is a very long distance just go with the coax... the added loss
and complexity of the balun and then the mismatch of the ladder line to the
dipole at the far end is probably going to be more than just going with coax
all the way.

428. Re: Coax + Ladder Line

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-10 22:47:53 UTC
From: jgboyles@aol.com
Message-ID: <911fcd5c-d256-4498-983e-e2c21dc32871@z7g2000vbh.googlegroups.com>
Source record: 14740

On Jun 10, 3:36 pm, "Kash J. Rangan" <kjran...@yahoo.com> wrote:
> Is it advisable to use a combination of Coax and a ladder line to feed a
> simple horizontal multiband dipole antenna?
>
> In my new QTH it would be very easy for me to get a short run of coax out of
> my shack window but I would like to use a low loss ladder line for the main
> run up to the antenna feed point. Is it OK to place a 4:1 balun just outside
> of the window for the transition?
>
> Kash, AG4EL

The G5RV antenna uses a combination of coax and ladder line, so this type of antenna is in use by 1000's of Hams.

The 4:1 balun is a bad idea for a multiband antenna, due to the impedances involved at the various operating frequencies. Just transistion from the ladder line to the coax and use a 1:1 choke balun at the antenna input of your tuner. You did not mention an antenna tuner, but you will need one for multiband operation.

In general keep the coax length as short as possible.

Gary N4AST

429. Re: Cassegrain Antenna Development

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-11 00:58:57 UTC
From: "J. Mc Laughlin" <jcm@power-net.net>
Message-ID: <CbqdnTBNnrRNy63XnZ2dnUVZ_gSdnZ2d@bright.net>
Source record: 14741

Dear Emanuele and Group:

I have been mentioned. The other responders have well indicated the key factors of a Cassegrain antenna. They include having the active devices (transmitting or receiving components) at a convenient location and potentially a somewhat better antenna temperature than with a typical parabolic antenna.

At Ohio State, working with John D. Kraus, we actually used a form of a Cassegrain antenna - the Big Ear. The Big Ear used a (E-W) wide, vertical parabolic surface to concentrate the radiation from a (E-W) tilting flat reflector that was north of the parabolic surface into a feed that was at ground level. The cost effectiveness was outstanding! I could work below the feed in an underground room accessed through a tunnel under the ground screen.

You are commended for initiative in wishing to have a radio telescope. Crafting such an instrument can be an end into itself. However, having an observational goal seems to be desirable if this is more than a construction project. I recommend that you read the ample literature that is available to help you design an observational goal.

Note that you need a large size if you are to achieve resolution, which might not be an objective. I worked on the receiving system for a system at NRAO at Green Bank, W.Va. that used a fixed, high gain antenna to observe (once a day) the strength of one source. The antenna used had a predictable gain and, with calibration, the system was able to provide flux measurements (with an attendant uncertainty, of course). Note that the first real radio telescope by Reber was a parabolic dish - it still exists. (He was a really bright, innovative guy.)

The presence of antennas used to receive satellite broadcasts that use offset feeds should be considered. Such antennas can have desirable antenna temperatures because of the placement of the feed while not having feed-blockage.

Most important is the avoidance of re-inventing the wheel that can be effected by serious study of the literature. That is where I recommend that you start. Kraus' books on antennas and radio-astronomy could be a good place to start. It would be wonderful to be young and have so much learning to look forward to! After over 50 years of studying radio related subjects, I am still excited.

The delay in responding is due to the high noise level in this valuable news-group. Ignore, as I do, the theological debates. Pay close attention to those on this group who are knowledgeable.

Enjoy the greatest pleasure - that of learning. Mac N8TT

--
J. McLaughlin; Michigan, USA
Home: JCM@power-net.net
"Richard Clark" <kb7qhc@comcast.net> wrote in message
news:f71vt4ti7hjftd6n7v9drc4vua27niv939@4ax.com...
> On Fri, 10 Apr 2009 12:34:34 +0200, Emanuele Colucci
> <emack@gameprog.it> wrote:
>
>>Hi to everyone and thanks for answering to my message.
>>
>>Richard Clark ha scritto:
>>> Hi Emanuele,
>>>
>>> This is probably due to the way the question was offered. You want a
>>> complete solution to an unknown problem.
>>
>>You and Dave were right. I originally posted the message in the homebrew
>>newsgroup because I was looking for a complete guide to design a cas in
>>order to build a little radiometer working in the "water hole" (1420 ~
>>1640 MHz) for an hobbystic aim.
>>The book I used at university to study antennas - Antennas and Radiowave
>> Propagation [by Robert E. Collin] - simply doesn't cover in depth this
>>argument. It just cites the Cassegrain feed system as an alternative to
>>prime focus paraboloidal reflector antennas, because the cassegrain feed
>>does't receive the thermal noise from the ground.
>
> Hi Emanuele,
>
> I have that book and I can see your source material. If it is your
> choice, that is fine. Other correspondents here can respond to your
> desire to eliminate thermal noise from the ground in alternative
> designs. You may have to repeat your query to get their attention as
> this is not a topic that many have experience with (repetition is for
> the occasion when they check in on an irregular basis). An
> alternative is to search this group, specifically, at
> groups.google.com.
>>
>>I was looking for a complete resource to study the system, and this is
>>why I wrote here: to find someone with good advices.
>>
>>Now, the thing I have now understood is that I haven't to be so
>>synthetic while writing a message.
>>
>>So, I would like to study (and eventually build) a radiometer who
>>listens to 1420 ~ 1640 MHz, with a passing bandwidth of 8 MHz, in order
>>to receive a minumum density flux of 240-260 Jy (a Jansky is 10^-26 W /
>>[m^2 * Hz]). I need low antenna temperature (but not as cryogenics
>>ones!).
>

> You can get a lot of practical ideas here (construction materials and
> feed issues); and you can use Collin for the math to simply scale the
> structure to your frequency band. The design is rather more simple
> than building it.
>
>>> 5. Budget (time and/or money);
>>
>>I can't answer this question yet. Surely, I haven't more than 5-600
>>euros to spend in the building/buying of the antenna.
>
> That is plenty of money. Do you have any time constraints?
>
>>> 7. Application issues (EME?).
>>
>>Amateur radioastronomy.
>
> We have a contributor who has been teaching that for 40 years at a
> major university, and he studied under the pioneers of that specialty.
> Search groups.google.com for posts by "Mac N8TT" or use "J.
> McLaughlin; Michigan, USA" as search terms.
>
>>Well, that's all by the moment.
>>
>>Greetings,
>>
>>Emanuele Colucci
>>emack@gameprog.it
>
> 73's
> Richard Clark, KB7QHC

430. Re: Mag Mount lesson

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-11 05:02:16 UTC
From: Erich <n6fd@mchsi.com>
Message-ID: <sd0Yl.737234$yE1.392740@attbi_s21>
Source record: 14742

Michael Coslo wrote:
> tom wrote:
>> Michael Coslo wrote:
>>> Maybe some people can take something away from my unfortunate
>>> experience.
>> <snip>
>>> - 73 de Mike N3LI -
>>>
>>
>> I have had a couple negative experiences with single magnets, and one
>> with a 6 meter halo on a triple magnet. I would say the triple or
>> quad with a hamstick is practically impossible to knock off, however.
>> At least at any speed less than 30 over the interstate limit including
>> normal wind gusts. Or so I've heard.
>
> It is perhaps that "normal" business that is where the problem lies.
> This road (speciifically, it is route 22 over Cresson mountain near
> Altoona PA, is notorious for high and gusty winds. They have wind
> warning signs, and even a tower mounted sensor that will trip electronic
> signs. Trailers have flipped over in that area. Who knows what exact
> wind hit me.
>
>
> - 73 de Mike N3LI -
I have a triple magnet and hamstick that has survived 70MPH and 50MPH
wind gusts with no problem. We get a lot of wind out here and it has
handled it all for the last 3 years.

Erich, N6FD DM15

431. Re: Coax + Ladder Line

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-11 09:43:38 UTC
From: Ian Jackson <ianREMOVETHISjackson@g3ohx.demon.co.uk>
Message-ID: <d8yHcuJKHNMKFwDx@g3ohx.demon.co.uk>
Source record: 14743

In message
<911fcd5c-d256-4498-983e-e2c21dc32871@z7g2000vbh.googlegroups.com>,
jgboyles@aol.com writes
>On Jun 10, 3:360 >> Is it advisable to use a combination of Coax and a ladder line to feed
a
>> simple horizontal multiband dipole antenna?
>>
>> In my new QTH it would be very easy for me to get a short run of coax out of
>> my shack window but I would like to use a low loss ladder line for the main
>> run up to the antenna feed point. Is it OK to place a 4:1 balun just outside
>> of the window 0 >>
>> Kash, AG4EL
>
>The G5RV antenna uses a combination of coax and ladder line, so this
>type of antenna is in use by 1000's of Hams.
>
>The 4:1 balun is a bad idea for a multiband antenna, due to the
>impedances involved at the various operating frequencies. Just
>transistion from the ladder line to the coax and use a 1:1 choke balun
>at the antenna input of your tuner. You did not mention an antenna
>tuner, but you will need one for multiband operation.
>
>In general keep the coax length as short as possible.
>
If I remember correctly, the original design of the G5RV does NOT use
coax. [If interested, check it out on Google.]
--
Ian

432. Re: Coax + Ladder Line

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-11 11:24:03 UTC
From: Gary <jgboyles@aol.com>
Message-ID: <d2fc65c5-2826-4b04-9f19-895ad6d6cfbe@n19g2000vba.googlegroups.com>
Source record: 14744

>
> If I remember correctly, the original design of the G5RV does NOT use
> coax. [If interested, check it out on Google.]
> --
> Ian- Hide quoted text -
>
> - Show quoted text -

I think you are right. Most of the commercial antennas called "G5RV"
have coax supplied with them or instruct you to attach a certain
length coax.

One of Reg Edwards programs, Dipole3 models a twin lead-coax miltiband
antenna. It also has a G5RV feature.

Gary N4AST

433. Re: Coax + Ladder Line

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-11 11:47:33 UTC
From: Ed Cregger <ecregger@bellsouff.net>
Message-ID: <h0qqsr$857$1@news.eternal-september.org>
Source record: 14745

<jgboyles@aol.com> wrote in message
news:911fcd5c-d256-4498-983e-e2c21dc32871@z7g2000vbh.googlegroups.com...
On Jun 10, 3:36?pm, "Kash J. Rangan" <kjran...@yahoo.com> wrote:
> Is it advisable to use a combination of Coax and a ladder line to feed a
> simple horizontal multiband dipole antenna?
>
> In my new QTH it would be very easy for me to get a short run of coax out
> of
> my shack window but I would like to use a low loss ladder line for the
> main
> run up to the antenna feed point. Is it OK to place a 4:1 balun just
> outside
> of the window ?for the transition?
>
> Kash, AG4EL

The G5RV antenna uses a combination of coax and ladder line, so this
type of antenna is in use by 1000's of Hams.

The 4:1 balun is a bad idea for a multiband antenna, due to the
impedances involved at the various operating frequencies. Just
transistion from the ladder line to the coax and use a 1:1 choke balun
at the antenna input of your tuner. You did not mention an antenna
tuner, but you will need one for multiband operation.

In general keep the coax length as short as possible.

Gary N4AST

Another thing to consider is that the length of the 450/300 ohm twinlead
feedline is an important factor when considering the operational bandwidth
of said "dipole" antenna (it's only a dipole when operated at its resonant
length).

The twinlead is utilized as part of the radiating system when operated on
certain bands. This unusual impedance is why the tuner is needed. Shortening
the twinlead and using more coax limits this antenna's ability to operate
over wide frequency ranges. My Van Gordan All Bander's twinlead enters my
shack and then connects to a balun, which is then fed by coax that is
connected to my MFJ-989C tuner. I can often tune down into the 160 meter
band using this setup, though I wish my twinlead feedline length was a bit
longer for even greater tuning flexibility.

By the way, my All Bander also works great on six meters.

Ed, AJ4PJ

434. Re: Coax + Ladder Line

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-11 11:58:27 UTC
From: Jon Kåre Hellan <dev@null.com>
Message-ID: <1m8wjz3rto.fsf@uninett.no>
Source record: 14746

"Kash J. Rangan" <kjrangan@yahoo.com> writes:

> Is it advisable to use a combination of Coax and a ladder line to feed a
> simple horizontal multiband dipole antenna?
>
> In my new QTH it would be very easy for me to get a short run of coax out of
> my shack window but I would like to use a low loss ladder line for the main
> run up to the antenna feed point. Is it OK to place a 4:1 balun just outside
> of the window for the transition?

I use a combination of window line and coax for my 80m antenna. I
don't have enough space for a full size dipole, so I had to shorten it
somewhat. From memory, about 6m of window line makes up for about 3m
of missing wire on each dipole leg. Easier to do than loading coils,
that's why. EZNEC claims that losses are negligible, don't know if
that's really so or a transmission line model is inappropriate here.

Totally by accident, the antenna also ended up with a resonance in the
30m band.

Jon LA4RT, Trondheim, Norway

435. Re: Coax + Ladder Line

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-11 13:28:32 UTC
From: Bob <rmiller47@satx.rr.com>
Message-ID: <b512351fnbnkvkbf6ck1jk51l7cvfubtpc@4ax.com>
Source record: 14747

In Varney's original r.s.g.b. article in July 1958 he showed it both ways, 100% open wire feeder to a tuner, or 34' of open wire feeder to any length of 72 ohm coax or twin lead to a tuner or the transmitter.

bob
k5qwg

On Thu, 11 Jun 2009 10:43:38 +0100, Ian Jackson <ianREMOVETHISjackson@g3ohx.demon.co.uk> wrote:

>In message
><911fcd5c-d256-4498-983e-e2c21dc32871@z7g2000vbh.googlegroups.com>,
>jgboyles@aol.com writes
>>On Jun 10, 3:360 >> Is it advisable to use a combination of Coax and a ladder line to feed a
>>> simple horizontal multiband dipole antenna?
>>>
>>> In my new QTH it would be very easy for me to get a short run of coax out of
>>> my shack window but I would like to use a low loss ladder line for the main
>>> run up to the antenna feed point. Is it OK to place a 4:1 balun just outside
>>> of the window 0 >>
>>> Kash, AG4EL
>>
>>The G5RV antenna uses a combination of coax and ladder line, so this
>>type of antenna is in use by 1000's of Hams.
>>
>>The 4:1 balun is a bad idea for a multiband antenna, due to the
>>impedances involved at the various operating frequencies. Just
>>transistion from the ladder line to the coax and use a 1:1 choke balun
>>at the antenna input of your tuner. You did not mention an antenna
>>tuner, but you will need one for multiband operation.
>>
>>In general keep the coax length as short as possible.
>>
>If I remember correctly, the original design of the G5RV does NOT use
>coax. [If interested, check it out on Google.]

436. Re: Coax + Ladder Line

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-11 13:47:17 UTC
From: steveeh131047 <google@karinya.net>
Message-ID: <5c9a156d-72a4-469e-8012-a6c85509970f@k38g2000yqh.googlegroups.com>
Source record: 14748

I agree with Gary N4AST: the direct answer to your question is:

* Use the shortest length of good quality coax you can get away with.
* Use a good quality 1:1 current (choke) balun at the ladderline/coax
junction.
* If you find the tuner can't reach a match on some bands, only then
consider a 4:1 balun; even so choose a 4:1 **current** balun.

On the topic of G5RVs, some (unscrupulous) antenna suppliers provide a
nice long length of RG58 as part of the package to "tame" the VSWRs.
Take a look at some of the losses that introduces:
http://www.karinya.net/g3txq/g5rv/

73,
Steve G3TXQ

437. Re: Coax + Ladder Line

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-11 14:55:22 UTC
From: Michael Coslo <mjc5@psu.edu>
Message-ID: <h0r5ss$9c48$1@tr22n12.aset.psu.edu>
Source record: 14749

Ed Cregger wrote:

> Another thing to consider is that the length of the 450/300 ohm twinlead
> feedline is an important factor when considering the operational bandwidth
> of said "dipole" antenna (it's only a dipole when operated at its resonant
> length).

I have to chuckle when you bring this up in a discussion of that true chimera, the G5RV. I've heard so many antennas called G5RV's that the term means nothing any more - kinda of like scotch tape.

So yeah, I guess we should call it a doublet. Of course, all doublets are dipoles at some point, and all dipoles are doublets.....

- 73 de Mike N3LI -

438. Re: Mag Mount lesson

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-11 15:06:42 UTC
From: Michael Coslo <mjc5@psu.edu>
Message-ID: <h0r6i2$9c4a$1@tr22n12.aset.psu.edu>
Source record: 14750

Erich wrote:

>> - 73 de Mike N3LI -
> I have a triple magnet and hamstick that has survived 70MPH and 50MPH
> wind gusts with no problem. We get a lot of wind out here and it has
> handled it all for the last 3 years.

Well that is great, glad it hasn't been a problem, Erich. But I'd feel pretty stupid to try that sort of mount again, unless someone wants to front the 275 dollars I just paid to put a new window on. Then I might experiment.

Could be a weak or otherwise bad magnet, maybe just bad luck-who knows? But the antenna will now be mounted just like my Bugcatcher, which means it will only come off if there is enough force to pull the back door off, or otherwise destroy the antenna in situ.

- 73 de Mike N3LI -

439. Re: Coax + Ladder Line

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-11 16:17:43 UTC
From: "Kash J. Rangan" <kjrangan@yahoo.com>
Message-ID: <4a313001$1@usenet.ugs.com>
Source record: 14651

Thanks for all your responses and ideas.

Yes, I do have an antenna tuner. The maximum length of the antenna I can hope for can only be about 65ft because of the placement of trees in my back yard and access to my shack. At this time I will be happy if I can tune to some bands up to 40M. I did not want to drill any additional holes for outside access if I can help it amd make use of the existing one. I also wanted the option of total disconnect from the outside. My equipment has been fried by lightning in my previous QTH.

I figure it would be about a 60 ft run to the feed point. I am aware that certain feed line lengths are to be avoided to minimize transmission line radiation and tuning problems. In addition to low loss I thought ladder line would be much lighter than coax. I don't have any way to support my antenna at the center so I am trying to keep it as light as possible. Not sure of the wind loads though but I will have a modest workable antenna up soon.

You all have been very helpful in sharing your thoughts.

73

AG4EL, Kash

440. Re: Cassegrain Antenna Development

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-11 18:39:03 UTC
From: Emanuele Colucci <emack@gameprog.it>
Message-ID: <4a314f48$0$47538$4fafbaef@reader1.news.tin.it>
Source record: 14652

Thank you John for this message.

J. Mc Laughlin ha scritto:
> You are commended for initiative in wishing to have a radio telescope.
> Crafting such an instrument can be an end into itself. However, having an
> observational goal seems to be desirable if this is more than a construction
> project. I recommend that you read the ample literature that is available
> to help you design an observational goal.

Yep, I'm still documenting. Perhaps, there are alternatives to a Cas
antenna (Yes, I admit, because of exams I haven't crafted it yet, but
for me this is a very long term project), like a little array of offset
parabolic antennas.

> Note that you need a large size if you are to achieve resolution, which
> might not be an objective. I worked on the receiving system for a system at
> NRAO at Green Bank, W.Va. that used a fixed, high gain antenna to observe
> (once a day) the strength of one source. The antenna used had a predictable
> gain and, with calibration, the system was able to provide flux measurements
> (with an attendant uncertainty, of course).

This is interesting!
How much time did it take to make a complete radio stellar map?

> Note that the first real radio
> telescope by Reber was a parabolic dish - it still exists. (He was a really
> bright, innovative guy.)

Reber's parabolic dish is giant :) My site is situated in countryside,
and it could be able to host dishes of max 3 meters of diameter: the
data would be transmitted over the internet to my home (near Naples, ITA).

> The presence of antennas used to receive satellite broadcasts that use
> offset feeds should be considered. Such antennas can have desirable antenna
> temperatures because of the placement of the feed while not having
> feed-blockage.

Great. I'll watch for these antennas too!

> Most important is the avoidance of re-inventing the wheel that can be
> effected by serious study of the literature. That is where I recommend that
> you start. Kraus' books on antennas and radio-astronomy could be a good
> place to start. It would be wonderful to be young and have so much learning
> to look forward to! After over 50 years of studying radio related subjects,
> I am still excited.

Thanks again for reporting your experiences and the advices!

I haven't read Kraus book about radio astronomy: my sources are Collin and some italian books by Flavio Falcinelli. But now I'll surely look for this book too!

Greetings,

Emanuele Colucci
emack@gameprog.it

441. Re: Coax + Ladder Line

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-11 20:33:36 UTC
From: Ed Cregger <ecregger@bellsouff.net>
Message-ID: <h0rpn5$9ui$1@news.eternal-september.org>
Source record: 14653

"Michael Coslo" <mjc5@psu.edu> wrote in message
news:h0r5ss$9c48$1@tr22n12.aset.psu.edu...
> Ed Cregger wrote:
>
>> Another thing to consider is that the length of the 450/300 ohm twinlead
>> feedline is an important factor when considering the operational
>> bandwidth of said "dipole" antenna (it's only a dipole when operated at
>> its resonant length).
>
>
> I have to chuckle when you bring this up in a discussion of that true
> chimera, the G5RV. I've heard so many antennas called G5RV's that the term
> means nothing any more - kinda of like scotch tape.
>
> So yeah, I guess we should call it a doublet. Of course, all doublets are
> dipoles at some point, and all dipoles are doublets.......
>
> - 73 de Mike N3LI -

Well, that wasn't the point that I was trying to make.

I was saying that the length of the twinlead is very important and that it shouldn't be shortened (commercial versions) any more than necessary, lest one lose some of the utility of this type of antenna. I know that folks are eager to transition to coax, but that isn't the way that leads to the best working sample of this antenna.

Ed, AJ4PJ

442. Re: Cassegrain Antenna Development

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-11 21:24:35 UTC
From: "J. Mc Laughlin" <jcm@power-net.net>
Message-ID: <ucKdnVL-IICP66zXnZ2dnUVZ_uKdnZ2d@bright.net>
Source record: 14654

Dear Emanuele:

Do well on your exams. It is that time of the year here as well.

It occurred to me that I had quite forgotten that two dishes exist associated with Reber. One is huge and the other is the 9.5 meter dish he built himself. Both are at NRAO. Reber was a true scientist and a great friend of my mentor, Kraus. Here is a story about him: http://www.nrao.edu/whatisra/hist_reber.shtml

The maps he published just before the war, were studied by Dutch astronomers who were sequestered during the war. After the war, the Dutch moved the field forward. Reber's interests were many. You will note papers on beans, for which he performed truly original work much of it while we were both at NRAO. After dinner, when one learned not to leave the meat platter too close to him, he would go off to inspect his research garden. He was a collector - not quite the right word, but close - of early radios. I have seen him get them working, construct a box that would just hold the radio, and then store the boxed radio for a future museum. In his testing of old (pre war) radios he discovered that one company had discovered stagger tuning. His note on that subject caused a lot of noise.

His observation - known to everyone in the radio field - that the ionosphere was most thin near VK7, resulted in his measuring radiation from space at low frequencies well before satellites. His genius of seeing in common knowledge new possibilities is his hallmark and one that I wish for all who would push knowledge forward. He constructed all of his own measuring instruments, which were strikingly beautiful. I spoke to radio amateurs in VK7 while he was still alive and they told of how beloved he was by the people of that island.

By the way, my first name is James, not John. I use "Mac" as it seems more suited to this newsgroup than "Professor."

It is just possible that the sort of offset-feed antenna for receiving broadcast signals is not common in Italy. If that is the case, a search will uncover surplus dishes in North America. They tend to be in the one meter size, which might be too small unless used in an array. I am told that surplus, conventional dishes show up from time-to-time as agencies/people move or up-grade. I like the idea of operating remotely.

Study, learn, plan, do, observe and you will learn even more. Consider getting an amateur radio license.

Warm regards, James / Mac N8TT
--
J. McLaughlin; Michigan, USA

Home: JCM@power-net.net
"Emanuele Colucci" <emack@gameprog.it> wrote in message
news:4a314f48$0$47538$4fafbaef@reader1.news.tin.it...
> Thank you John for this message.
>
>
> J. Mc Laughlin ha scritto:
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>> literature that is available to help you design an observational goal.
>
> Yep, I'm still documenting. Perhaps, there are alternatives to a Cas
> antenna (Yes, I admit, because of exams I haven't crafted it yet, but for
> me this is a very long term project), like a little array of offset
> parabolic antennas.
>
>
>> Note that you need a large size if you are to achieve resolution,
>> which might not be an objective. I worked on the receiving system for a
>> system at NRAO at Green Bank, W.Va. that used a fixed, high gain antenna
>> to observe (once a day) the strength of one source. The antenna used had
>> a predictable gain and, with calibration, the system was able to provide
>> flux measurements (with an attendant uncertainty, of course).
>
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> How much time did it take to make a complete radio stellar map?
>
>> Note that the first real radio telescope by Reber was a parabolic dish -
>> it still exists. (He was a really bright, innovative guy.)
>
> Reber's parabolic dish is giant :) My site is situated in countryside, and
> it could be able to host dishes of max 3 meters of diameter: the data
> would be transmitted over the internet to my home (near Naples, ITA).
>
>
>> The presence of antennas used to receive satellite broadcasts that
>> use offset feeds should be considered. Such antennas can have desirable
>> antenna temperatures because of the placement of the feed while not
>> having feed-blockage.
>
> Great. I'll watch for these antennas too!
>
>
>> Most important is the avoidance of re-inventing the wheel that can be
>> effected by serious study of the literature. That is where I recommend
>> that you start. Kraus' books on antennas and radio-astronomy could be a
>> good place to start. It would be wonderful to be young and have so much
>> learning to look forward to! After over 50 years of studying radio

>> related subjects, I am still excited.
>
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> I haven't read Kraus book about radio astronomy: my sources are Collin and
> some italian books by Flavio Falcinelli. But now I'll surely look for this
> book too!
>
>
> Greetings,
>
> Emanuele Colucci
> emack@gameprog.it

443. Re: Cassegrain Antenna Development

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-11 21:32:06 UTC
From: Jerry <jerrymartes@verizon.net>
Message-ID: <qJeYl.1964$u86.28@nwrddc01.gnilink.net>
Source record: 14655

"Emanuele Colucci" <emack@gameprog.it> wrote in message
news:4a314f48$0$47538$4fafbaef@reader1.news.tin.it...
> Thank you John for this message.
>
>
> J. Mc Laughlin ha scritto:
>> You are commended for initiative in wishing to have a radio
>> telescope. Crafting such an instrument can be an end into itself.
>> However, having an observational goal seems to be desirable if this is
>> more than a construction project. I recommend that you read the ample
>> literature that is available to help you design an observational goal.
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> Yep, I'm still documenting. Perhaps, there are alternatives to a Cas
> antenna (Yes, I admit, because of exams I haven't crafted it yet, but for
> me this is a very long term project), like a little array of offset
> parabolic antennas.
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> book too!
>
>
> Greetings,
>
> Emanuele Colucci
> emack@gameprog.it

Hi Emanuele

The probability of your realizing any success with parabolas less then 10 feet diameter using cassegrain systems is extremely low at L-band. I realize that you are able to decide for yourself, which antenna system is best for your project. I do want to alert you to the fact that the beam from the "source radiator", behind the dish, needs to be shaped to be concentrated on the reflector at the focus. There is not enough room in a 3 meter dish to provide access to a primary feed with the narrow beam required for realizing the benefits of a cassegrain feed.

I have has some succes with a 1 meter off center fed dish at L-band (1.691 GHz) for redceiving signals from a geosynchronouis satellite. The feed I designed for that dish might be of some use to you.

Jerry KD6JDJ

444. Re: Cassegrain Antenna Development

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-11 23:51:11 UTC
From: Jim Lux <james.p.lux@jpl.nasa.gov>
Message-ID: <h0s59t$iv9$1@news.jpl.nasa.gov>
Source record: 14656

Jerry wrote:
> "Emanuele Colucci" <emack@gameprog.it> wrote in message
> news:4a314f48$0$47538$4fafbaef@reader1.news.tin.it...
<snip>
>> I haven't read Kraus book about radio astronomy: my sources are Collin and
>> some italian books by Flavio Falcinelli. But now I'll surely look for this
>> book too!
>>
>>
>> Greetings,
>>
>> Emanuele Colucci
>> emack@gameprog.it
>
> Hi Emanuele
>
> The probability of your realizing any success with parabolas less then 10
> feet diameter using cassegrain systems is extremely low at L-band. I
> realize that you are able to decide for yourself, which antenna system is
> best for your project. I do want to alert you to the fact that the beam
> from the "source radiator", behind the dish, needs to be shaped to be
> concentrated on the reflector at the focus. There is not enough room in a
> 3 meter dish to provide access to a primary feed with the narrow beam
> required for realizing the benefits of a cassegrain feed.
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> GHz) for redceiving signals from a geosynchronouis satellite. The feed I
> designed for that dish might be of some use to you.
>
>

You might also look at the design for the Allen Telescope Array, which
is a Gregorian feed, and is offset.

All of these are useful to have minimum noise contribution from the
surrounding earth.. if the feed over-illuminates the secondary
reflector, you are still looking at cold sky, unlike with a prime focus
sort of feed, where overillumination looks at the dirt behind the reflector.

There's a set of articles in IEEE Antennas and Propagation Magazine (not
the transactions) a few years back that has all the equations and design
rules for all of the various reflector configurations.

As for reflector sources.. 1.5m parabolic reflectors intended for offset
feet are readily available in Europe. They're used by British

Expatriates in places like the Canary Islands to get BskyB broadcasts (since they're well out of the satellite footprint, they need more gain than the usual 50cm sort of dish on the side of your house).

A couple years ago, I remember googling for reflectors of this size for a project and ran across this kind of thing. The reflectors were real cheap (10-15 pounds), but shipping to the US would cost many times that. They seem NOT to be readily available surplus here in the US.. VSAT stations in Alaska might be the only application.

445. i need a new matching network for my cushcraft 13bt 2 meter beam

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-12 02:54:49 UTC
From: longduckdong567@webtv.net
Message-ID: <12654-4A31C379-1359@storefull-3172.bay.webtv.net>
Source record: 14657

thank you for your help

446. Re: Coax + Ladder Line

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-12 03:15:59 UTC
From: nm5k@wt.net
Message-ID: <b4213e36-6d8a-4349-b43a-d7a4d2b16616@c19g2000prh.googlegroups.com>
Source record: 14658

On Jun 11, 11:17 am, "Kash J. Rangan" <kjran...@yahoo.com> wrote:
> Thanks for all your responses and ideas.
>
> Yes, I do have an antenna tuner. The maximum length of the antenna I can
> hope for can only be about 65ft because of the placement of trees in my back
> yard and access to my shack. At this time I will be happy if I can tune to
> some bands up to 40M. I did not want to drill any additional holes for
> outside access if I can help it amd make use of the existing one. I also
> wanted the option of total disconnect from the outside. My equipment has
> been fried by lightning in my previous QTH.
>
> I figure it would be about a 60 ft run to the feed point. I am aware that
> certain feed line lengths are to be avoided to minimize transmission line
> radiation and tuning problems. In addition to low loss I thought ladder line
> would be much lighter than coax. I don't have any way to support my antenna
> at the center so I am trying to keep it as light as possible. Not sure of
> the wind loads though but I will have a modest workable antenna up soon.
>
> You all have been very helpful in sharing your thoughts.
>
> 73
>
> AG4EL, Kash

If it were me and I were using a tuner, I'd just run ladder
line the whole way. I've noticed that even if you pass
the line across a metal window frame, there is usually
no noticeable change to speak of. If you have to do that,
it's best to keep the line at right angles to the frame to
keep it as balanced as possible.
You could easily chunk the line outside during storms,
or you could rig up a way to disconnect by using
banana plugs, etc.. That way you can disconnect but
not have to fiddle with unplugging from the rig.
I would prefer to have those outside, so when
disconnected the line is totally out of the house.
It's probably quite well known on this group that
I don't like mixing feed line types in a case like this. :/

Running ladder line the whole way is the least lossy
vs mixing ladder line with coax, choke, etc..
Using G5RV type feeding schemes will work, but they
can take a decent hunk of your RF and turn it to heat
in many cases.
Even with a 80/1 mismatch, ladder line has low loss.

If the length of coax is short, the loss will be fairly low.
But.. many add a choke, etc, and I think the choke
is where a good portion of the loss is on these type
of feed systems. Some of these might use fairly long
coax lines, and the loss could add up vs ladder line.
BTW... Tune the tuner using the least inductance
needed to get a usable match whichever way you go.

447. RE:Hygain 18AVT v 18AVQ

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-12 03:36:58 UTC
From: VK2KC <vk2kcjohn@gmail.com>
Message-ID: <u3kYl.18128$y61.1569@news-server.bigpond.net.au>
Source record: 14659

Hello,
Can anyone tell me the difference between the Hygain 18AVQ and the 18AVT verticals?

A copy in pdf of the manual would be very welcome.

Many thanks
John VK2KC

448. Re: Be careful when using Excel

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-12 06:42:18 UTC
From: Owen Duffy <none@no.where>
Message-ID: <Xns9C28A9EF07C54nonenowhere@61.9.191.5>
Source record: 14660

Jeff Liebermann <jeffl@cruzio.com> wrote in
news:dghe05ti6r8pdvtb2aa4b733sbrn711q8o@4ax.com:

> On Sun, 10 May 2009 20:10:46 GMT, Owen Duffy <none@no.where> wrote:
>
>>The early versions of Excel did have very good compatibility. One
cannot
>>say that about OpenOffice, last time I looked it did not support VBA,
>
> VBA support was added in Open Office 2.x:
> <http://wiki.services.openoffice.org/wiki/VBA>
>

Oh well, having opened a spreadsheet with VBA macros, and clicked away an error box a hundred time, I got to the point where the macros were visible and I could see that the OO implementation would not tell me the number of rows in a variant array of variants passed as argument #1.

I will look again in a few years.

Looks good, but it sure doesn't work like Excel 2000, not yet anyway.

Owen

449. Re: Coax + Ladder Line

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-12 11:16:10 UTC
From: steveeh131047 <google@karinya.net>
Message-ID: <c86d4c82-9b83-46f9-969d-98eb8de25f1c@k38g2000yqh.googlegroups.com>
Source record: 14661

>>Running ladder line the whole way is the least lossy
vs mixing ladder line with coax, choke, etc.. <<

Often, but not always:

* Depending on the impedances, frequencies and lengths involved, the loss in a coax section can be lower than in the equivalent length of ladderline.
* Although there may be losses in a 1:1 current balun at the ladderline/coax transition, don't forget that there will also be losses in the tuner balun if ladderline is used all the way; if the ubiquitous 4:1 tuner internal voltage balun is used, those losses could be significant.

Steve G3TXQ

450. Re: Coax + Ladder Line

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-12 12:09:31 UTC
From: Ian Jackson <ianREMOVETHISjackson@g3ohx.demon.co.uk>
Message-ID: <ZH+2S1A7VkMKFwQd@g3ohx.demon.co.uk>
Source record: 14662

In message
<c86d4c82-9b83-46f9-969d-98eb8de25f1c@k38g2000yqh.googlegroups.com>,
steveeh131047 <google@karinya.net> writes
>>>Running ladder line the whole way is the least lossy
>vs mixing ladder line with coax, choke, etc.. <<
>
>Often, but not always:
>
>* Depending on the impedances, frequencies and lengths involved, the
>loss in a coax section can be lower than in the equivalent length of
>ladderline.
>* Although there may be losses in a 1:1 current balun at the
>ladderline/coax transition, don't forget that there will also be
>losses in the tuner balun if ladderline is used all the way; if the
>ubiquitous 4:1 tuner internal voltage balun is used, those losses
>could be significant.
>
Maybe, instead of 'ubiquitous', read 'inappropriate' (at least on
certain occasions). I'm sure that, if you can't resist the urge to use
coax, a current balun / longitudinal choke (often wound from the coax)
could have much less loss.
--
Ian

451. Re: Hygain 18AVT v 18AVQ

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-12 14:52:00 UTC
From: Allodoxaphobia <bit-bucket@config.com>
Message-ID: <slrnh34qsg.26s1.bit-bucket@shell.config.com>
Source record: 14663

On Fri, 12 Jun 2009 03:36:58 GMT, VK2KC wrote:
>
> Can anyone tell me the difference between the Hygain 18AVQ and the 18AVT
> verticals?

A hundred years ago I had the older one -- I forget now which of the "T"
or "Q". The older one had large black plastic, old style 2-lb
coffee-can-sized (for the rest of the world: approx. 20cm Dia. x 10cm H),
coil and capacitor traps.

I obtained mine used and, in reality, it was a 12AVT-or-Q. I don't know
if it was sold that-a-way: a 10-15-20M model, or if it was "re-engineered"
before I got it.

Anyway, I believe the difference was in the traps -- the newer models
being of the "aluminium sleeve" style.

HTH
Jonesy
--
Marvin L Jones | jonz | W3DHJ | linux
38.24N 104.55W | @ config.com | Jonesy | OS/2
* Killfiling google & XXXXbanter.com: jonz.net/ng.htm

452. RE:Hygain 18AVT v 18AVQ

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-12 15:09:36 UTC
From: Bert Hyman <bert@iphouse.com>
Message-ID: <Xns9C28675AA949DVeebleFetzer@216.250.184.7>
Source record: 14664

In news:u3kYl.18128$y61.1569@news-server.bigpond.net.au "VK2KC"
<vk2kcjohn@gmail.com> wrote:

> Hello,
> Can anyone tell me the difference between the Hygain 18AVQ and the 18AVT
> verticals?
>
> A copy in pdf of the manual would be very welcome.

http://www.hy-gain.com/man/pdf/AV-18AVQII.pdf

http://www.hy-gain.com/man/pdf/AV-18AVT.pdf

--
Bert Hyman St. Paul, MN bert@iphouse.com

453. Update: DTV antenna on VHF

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-12 21:25:40 UTC
From: Gordon <gonzo@alltomyself.com>
Message-ID: <Xns9C2892BAA8058greederxprtnet@194.177.98.144>
Source record: 14665

AS expected, local channels 8, 10 and 12 moved their digital
broadcasts back to their VHF assignments last night. They
had been temporarily broadcasting digital in the UHF band.
I was expecting to have problems with my dual bowtie antenna.
But this morning I rescaned the channels (and verified that
the move had taken place). Then checked reception on the
affected channels. It was great. No problems. All that
worrying for nothing. Thanks for listening.

454. Re: Update: DTV antenna on VHF

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-12 22:33:55 UTC
From: Rich Griffiths <richgrif@one.net>
Message-ID: <vv2dnVUYOJdOSq_XnZ2dnUVZ_jdi4p2d@posted.nuvoxcommunications>
Source record: 14666

On Fri, 12 Jun 2009 23:25:40 +0200, Gordon wrote:

> AS expected, local channels 8, 10 and 12 moved their digital broadcasts
> back to their VHF assignments last night. They had been temporarily
> broadcasting digital in the UHF band. I was expecting to have problems
> with my dual bowtie antenna. But this morning I rescaned the channels
> (and verified that the move had taken place). Then checked reception on
> the affected channels. It was great. No problems. All that worrying
> for nothing. Thanks for listening.

One situation that cropped up in my area (Cincinnati) is that channel 9,
which was broadcasting digital on channel 10 VHF, had to wait until just
before the conversion to raise their DTV antenna from 100 ft down to the
top of their tower. We're also using a dual bowtie, and their change
made a difference.

Maybe not THE factor in your case, but glad things worked out for you.

--
Rich W2RG

455. Re: Coax + Ladder Line

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-12 22:43:28 UTC
From: Owen Duffy <none@no.where>
Message-ID: <Xns9C2958C0377Bnonenowhere@61.9.191.5>
Source record: 14667

nm5k@wt.net wrote in
news:b4213e36-6d8a-4349-b43a-d7a4d2b16616@c19g2000prh.googlegroups.com:

...
> Even with a 80/1 mismatch, ladder line has low loss.

30m of Wireman 551 with a load of 5+j0 has VSWR=80 at the load end, VSWR=28 at the source end, and the transmission loss is 4.6dB... 65% of the input power is converted to heat.

Speaks to your meaning of "low loss".

Mythical properties are ascribed to ladder line, some of attributable to ARRL publications.

Owen

456. Re: Update: DTV antenna on VHF

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-12 22:46:51 UTC
From: Rich Griffiths <richgrif@one.net>
Message-ID: <vv2dnVQYOJdGR6_XnZ2dnUVZ_jdi4p2d@posted.nuvoxcommunications>
Source record: 14668

On Fri, 12 Jun 2009 17:33:55 -0500, Rich Griffiths wrote:

> On Fri, 12 Jun 2009 23:25:40 +0200, Gordon wrote:
>
>> AS expected, local channels 8, 10 and 12 moved their digital broadcasts
>> back to their VHF assignments last night. They had been temporarily
>> broadcasting digital in the UHF band. I was expecting to have problems
>> with my dual bowtie antenna. But this morning I rescaned the channels
>> (and verified that the move had taken place). Then checked reception
>> on the affected channels. It was great. No problems. All that
>> worrying for nothing. Thanks for listening.
>
> One situation that cropped up in my area (Cincinnati) is that channel 9,
> which was broadcasting digital on channel 10 VHF, had to wait until just
> before the conversion to raise their DTV antenna from 100 ft down to the
> top of their tower. We're also using a dual bowtie, and their change
> made a difference.
>
> Maybe not THE factor in your case, but glad things worked out for you.

I should have mentioned:

what especially interested me about this is how relatively unimportant
antenna height has seemed to be in my microwave work.

Until this past year (when rotator cuff surgery took me out), I had been
doing quite a bit of microwave work as a rover (903 MHz - 10 GHz). I was
often impressed by how far over the horizon it would work with an antenna
only about 5 ft off the ground and about 1 W of power.

Granted we were working with MUCH lower signal quality requirements than
the TV stations, but I still am surprised by how poor our reception is of
DTV channel 12 (and earlier, ch9), which is transmitting MANY kW from a
multihundred-ft tower only about 16 km away.

Engineers may argue otherwise, but it still seems to have a certain
element of black magic to me :-)

--
Rich W2RG

457. Re: Coax + Ladder Line

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-12 23:05:13 UTC
From: Jim Lux <james.p.lux@jpl.nasa.gov>
Message-ID: <h0umv9$77d$1@news.jpl.nasa.gov>
Source record: 14671

Owen Duffy wrote:
> nm5k@wt.net wrote in
> news:b4213e36-6d8a-4349-b43a-d7a4d2b16616@c19g2000prh.googlegroups.com:
>
> ...
>> Even with a 80/1 mismatch, ladder line has low loss.
>
> 30m of Wireman 551 with a load of 5+j0 has VSWR=80 at the load end, VSWR=28
> at the source end, and the transmission loss is 4.6dB... 65% of the input
> power is converted to heat.
>
> Speaks to your meaning of "low loss".
>
> Mythical properties are ascribed to ladder line, some of attributable to
> ARRL publications.
>

Or, I think more properly, to statements in ARRL publications taken with
a different set of underlying assumptions..

For instance, ladder line between a tube amp output tank and a doublet
is probably "reasonably" low loss in most common practical applications..

And in an inappropriate application (reactive load with weird Z to 50
ohm transmitter) it's probably lower loss than RG-58.

Maybe it's that subjective term "low loss"???

Half a dB per foot is low loss at 32 GHz, but you'd be hard pressed to
find a commercially available transmission line with that kind of loss
at 7 MHz. (maybe that funky 1000 ohm Z delay line stuff?)

Ham applications in any case are kind of an odd thing, efficiency-wise,
since the limit is on RF power at the transmitter output connector.
Pretty much every other user of RF power amplifiers sets the system
measurement plane somewhere else.. in space (EIRP or ERP) or at the
power source (power budgets). For instance, you can trade increased
power consumption against lower feedline loss.

458. Re: Update: DTV antenna on VHF

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-12 23:13:40 UTC
From: Jim Lux <james.p.lux@jpl.nasa.gov>
Message-ID: <h0unf4bsr1@news.jpl.nasa.gov>
Source record: 14670

Rich Griffiths wrote:
> On Fri, 12 Jun 2009 17:33:55 -0500, Rich Griffiths wrote:
>
>> On Fri, 12 Jun 2009 23:25:40 +0200, Gordon wrote:
>>
>>> AS expected, local channels 8, 10 and 12 moved their digital broadcasts
>>> back to their VHF assignments last night. They had been temporarily
>>> broadcasting digital in the UHF band. I was expecting to have problems
>>> with my dual bowtie antenna. But this morning I rescaned the channels
>>> (and verified that the move had taken place). Then checked reception
>>> on the affected channels. It was great. No problems. All that
>>> worrying for nothing. Thanks for listening.
>> One situation that cropped up in my area (Cincinnati) is that channel 9,
>> which was broadcasting digital on channel 10 VHF, had to wait until just
>> before the conversion to raise their DTV antenna from 100 ft down to the
>> top of their tower. We're also using a dual bowtie, and their change
>> made a difference.
>>
>> Maybe not THE factor in your case, but glad things worked out for you.
>
> I should have mentioned:
>
> what especially interested me about this is how relatively unimportant
> antenna height has seemed to be in my microwave work.
>
> Until this past year (when rotator cuff surgery took me out), I had been
> doing quite a bit of microwave work as a rover (903 MHz - 10 GHz). I was
> often impressed by how far over the horizon it would work with an antenna
> only about 5 ft off the ground and about 1 W of power.
>
> Granted we were working with MUCH lower signal quality requirements than
> the TV stations, but I still am surprised by how poor our reception is of
> DTV channel 12 (and earlier, ch9), which is transmitting MANY kW from a
> multihundred-ft tower only about 16 km away.
>
> Engineers may argue otherwise, but it still seems to have a certain
> element of black magic to me :-)
>
I dare say you weren't transmitting digital data at 20 Mbps in a 6MHz
wide channel as a rover.

CW or SSB with a bandwidth of a few hundred Hz or maybe a couple kHz at
a SNR of 0dB vs 6MHz BW and a SNR of 20dB

30-40 dB of increased noise bandwidth
20dB more signal power relative to that noise for decoding

There's your 100kW right there (100kW = 50dB over 1W)

And, transmit end of the link has lower gain than you probably use as a microwave rover, because it's omni (in the horizontal plane, at least). A 1-2 degree beamwidth works out to about 30dB in gain

This kind of thing is why working the world with 10W on PSK31 is pretty straightforward, compared to SSB.

459. Re: RE:Hygain 18AVT v 18AVQ

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-12 23:46:00 UTC
From: VK2KC <vk2kcjohn@gmail.com>
Message-ID: <YMBYl.18281$y61.9531@news-server.bigpond.net.au>
Source record: 14669

Thanks Bert,
But I have already been there and done that, and I do appreciate your time
in replying to my query. I have copies of the online manuals of both of the
antennae that you refer to.

So the question still remains, what is an AV-18AVQ???

Someone out there in Ham Radio Land must have a copy of a manual for the
AV-18AVQ in PDF format and would like to share it.

Cheers & 73
John
VK2KC

"Bert Hyman" <bert@iphouse.com> wrote in message
news:Xns9C28675AA949DVeebleFetzer@216.250.184.7...
> In news:u3kYl.18128$y61.1569@news-server.bigpond.net.au "VK2KC"
> <vk2kcjohn@gmail.com> wrote:
>
>> Hello,
>> Can anyone tell me the difference between the Hygain 18AVQ and the 18AVT
>> verticals?
>>
>> A copy in pdf of the manual would be very welcome.
>
>
> http://www.hy-gain.com/man/pdf/AV-18AVQII.pdf
>
> http://www.hy-gain.com/man/pdf/AV-18AVT.pdf
>
> --
> Bert Hyman St. Paul, MN bert@iphouse.com
>

460. Re: "Panel" style UHF DTV antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-13 00:53:49 UTC
From: stratus46@yahoo.com
Message-ID: <24d3eea0-2907-4cb1-a26e-2135cfe48e4b@y9g2000yqg.googlegroups.com>
Source record: 14672
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew,alt.tv.tech.hdtv

On May 31, 7:31 am, Usual Suspect <re...@thegroup.net> wrote:
> > I've had one on the roof since Dec 2004 in 90274 35 miles from Mt
> > Wilson split 4 ways with no preamps. It's a fine little UHF
antenna
> > and while they say it can do upper VHF, I have serious doubts.
I'll
> > find out for certain in 2 weeks.
> > G²
>
> Thanks, G, for answering the question *asked*. I appreciate it. :-)
>
> The issue re. rights may be interesting to some, but was not asked.
(Man, the
> signal-to-noise ration on USENET is *so* low...)
>
> If you think of it, please post a follow-up in 2 weeks.
>
> Thanks.
> --
> Al, the usual

Well, it's the 'big day' and while we have an excellent antenna at
work, I didn't think the little 'SquareShooter' would be adequate for
VHF-hi (channels 7-13) DTV. I brought home the spectrum analyzer to
check out the signal before I tried a re-scan. So far 2 of the 4 VHF-
hi have completed the change over. KABC-7 and KCAL-9 are in their new
homes. The spectrum analyzer showed better than 20dB carrier to noise
which should be OK. I then connected to the computer tuner and it
works very well. I must say I am totally surprised about that as the
analog stations 7-13 were SO weak as to not even SEE a locked umage
from analog. As it is, it appears to be as good as the UHF DTV. If Fox
11 and KCOP-13 are as good as 7 and 9 I won't need to change a thing.

G²

461. Re: Coax + Ladder Line

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-13 01:11:42 UTC
From: Owen Duffy <none@no.where>
Message-ID: <Xns9C2971E1B4FB6nonenowhere@61.9.191.5>
Source record: 14673

Jim Lux <james.p.lux@jpl.nasa.gov> wrote in
news:h0umv9$77d$1@news.jpl.nasa.gov:

...
>> Mythical properties are ascribed to ladder line, some of attributable
>> to ARRL publications.
>>
>
> Or, I think more properly, to statements in ARRL publications taken
> with a different set of underlying assumptions..

The ARRL has long published characteristics of "Generic ladder line"
being #18 conductors spaced 1". They publish loss figures better than
theoretical loss for the same size copper conductors in a vacuum (eg at
10MHz, about 0.27dB/100m vs 0.47dB/100m).

The second factor is, I think, the notion that since one-way loss is
relatively low on open wire lines, that it is safe to consider it
always insignificant (irrespective of VSWR), then exagerate the point
by talking about it being essentially lossless at extreme VSWR.

I think that the best characterisation we have of ladder line is that of
Wes, N7WS. Similar measurements at lower frequencies might well reveal
whether the stranded copper clad steel versions have inadequate cladding
depth for copper-like performance at low HF.

>
> For instance, ladder line between a tube amp output tank and a doublet
> is probably "reasonably" low loss in most common practical
> applications..

Perhaps a better concept is "acceptable loss" where acceptable is
influence by the application. The compromises accepted for multiband
operation might well include 3dB of line loss on the lowest band.

...
> Ham applications in any case are kind of an odd thing,
> efficiency-wise, since the limit is on RF power at the transmitter
> output connector. Pretty much every other user of RF power amplifiers
> sets the system measurement plane somewhere else.. in space (EIRP or
> ERP) or at the power source (power budgets). For instance, you can
> trade increased power consumption against lower feedline loss.

Actually, interesting you mention that.

I recently had cause to probe the meaning of the term "transmitter" in
our (VK) regulatory framework. Whilst we are limited in transmitter power

output, the meaning of transmitter is relevant.

From our legislation:

===quote

8 Definitions of radio emission and transmitter

(1) For the purposes of this Act, a radio emission is any
emission of electromagnetic energy of frequencies less than 420 terahertz
without continuous artificial guide, whether or not any person intended
the emission to occur.

(2) For the purposes of this Act, a transmitter is:

(a) anything designed or intended for radio
emission; or

(b) any other thing, irrespective of its use or
function or the purpose of its design, that is capable of radio emission.

=== end quote

It could be argued that an "emission" exists beyond the antenna ("without
continuous artificial guide"), and that everything up to an including the
antenna could be captured as part of a "transmitter" as defined.

Though there is a well understood ordinary meaning to the word
"transmitter", the drafters of the legislation have provided a definition
that should override any ordinary meaning in the context of that law.

Perhaps we (VK) are entitled to apply our limit to radiated power!

Owen

462. Re: Coax + Ladder Line

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-13 01:18:48 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <mLadnZ7-05DkY6_XnZ2dnUVZ_t2dnZ2d@giganews.com>
Source record: 14674

It's a mistake to lump all ladder and window line together as "ladder line" and draw conclusions about its loss characteristics. There's a vast difference between punched polyethylene window line and real 600 ohm ladder line made with large diameter conductors and low loss spacers. Even more so when the line is wet.

Roy Lewallen, W7EL

463. Re: Coax + Ladder Line

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-13 01:50:11 UTC
From: Owen Duffy <none@no.where>
Message-ID: <Xns9C2978684ADC4nonenowhere@61.9.191.5>
Source record: 14675

Roy Lewallen <w7el@eznec.com> wrote in news:mLadnZ7-05DkY6
_XnZ2dnUVZ_t2dnZ2d@giganews.com:

> It's a mistake to lump all ladder and window line together as "ladder
> line" and draw conclusions about its loss characteristics. There's a
> vast difference between punched polyethylene window line and real 600
> ohm ladder line made with large diameter conductors and low loss
> spacers. Even more so when the line is wet.

Yes Roy.

I was talking about the commercial "ladder line", and used the example of Wireman 551 which is of the punched polyethylene window line type you mention.

The other comparison I made was the ARRL "Generic ladder line" whatever that means with ideal copper conductors of same dimensions in a vacuum. I cannot see how adding insulation can possibly halve its dB loss, can you?

Owen

464. Re: "Panel" style UHF DTV antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-13 06:56:40 UTC
From: "Sal M. Onella" <salmonella@food.poisoning.org>
Message-ID: <J4IYI.7361$mX2.4180@newsfe05.iad>
Source record: 14676
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew,alt.tv.tech.hdtv

<stratus46@yahoo.com> wrote in message
news:24d3eea0-2907-4cb1-a26e-2135cfe48e4b@y9g2000yqg.googlegroups.com...

So far 2 of the 4 VHF-
hi have completed the change over. KABC-7 and KCAL-9 are in their new
homes. The spectrum analyzer showed better than 20dB carrier to noise
which should be OK. I then connected to the computer tuner and it
works very well. I must say I am totally surprised about that as the
analog stations 7-13 were SO weak as to not even SEE a locked umage
from analog. As it is, it appears to be as good as the UHF DTV. If Fox
11 and KCOP-13 are as good as 7 and 9 I won't need to change a thing.

==========

I got KABC but, so far, no KCAL. I'm in San Diego, so my situation will be
variable, depending on the ducting. I think I've lost KCBS, since they
moved to KCAL's old channel, 43, which has a local LPTV station sitting on
it. I still have some more antenna tricks to try. KCAL on 43 was always
very "iffy."

I've also lost KCET; There's a Mexican station (full power) on 28. KOCE
generally good.

465. Re: "Panel" style UHF DTV antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-13 08:08:24 UTC
From: stratus46@yahoo.com
Message-ID: <0bbb2bf3-3152-484b-8f6a-3ab5cba5e612@f19g2000yqh.googlegroups.com>
Source record: 14677
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew,alt.tv.tech.hdtv

On Jun 12, 11:56 pm, "Sal M. Onella" <salmone...@food.poisoning.org>
wrote:
> <stratu...@yahoo.com> wrote in message
>
> news:24d3eea0-2907-4cb1-
a26e-2135cfe48e4b@y9g2000yqg.googlegroups.com...
>
> So far 2 of the 4 VHF-
> hi have completed the change over. KABC-7 and KCAL-9 are in their
new
> homes. The spectrum analyzer showed better than 20dB carrier to
noise
> which should be OK. I then connected to the computer tuner and it
> works very well. I must say I am totally surprised about that as
the
> analog stations 7-13 were SO weak as to not even SEE a locked umage
> from analog. As it is, it appears to be as good as the UHF DTV. If
Fox
> 11 and KCOP-13 are as good as 7 and 9 I won't need to change a
thing.
>
> ====================================
>
> I got KABC but, so far, no KCAL. I'm in San Diego, so my
situation will be
> variable, depending on the ducting. I think I've lost KCBS, since
they
> moved to KCAL's old channel, 43, which has a local LPTV station
sitting on
> it. I still have some more antenna tricks to try. KCAL on 43 was
always
> very "iffy."
>
> I've also lost KCET; There's a Mexican station (full power) on 28.
 KOCE
> generally good.

My optimism was premature. KABC is better than I expected and KCAL was
marginal. KTTV-11 Fox is way down in the mud and KCOP-13 is worse than
11, neither of which is usable at all. Keep in mind this is that
little SquareShooter (without the preamp) which is good for UHF isn't
going to make it for VHF hi. Oh well, some more cable along with a UHF/
VHF splitter (combiner) and that big Winegard in the garage will

hopefully cure it.

At 12:30am 6-13-09 KWHY-22 analog was still on the air but all that's left are a few low power analogs - as they told us.

G²

466. Re: "Panel" style UHF DTV antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-13 08:39:01 UTC
From: stratus46@yahoo.com
Message-ID: <913746fa-b991-474a-b3b1-31745887fcbb@b9g2000yqm.googlegroups.com>
Source record: 14678
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew,alt.tv.tech.hdtv

On Jun 13, 1:08 am, stratu...@yahoo.com wrote:
>
> At 12:30am 6-13-09 KWHY-22 analog was still on the air but all
that's
> left are a few low power analogs - as they told us.
>
> G²

Dummy me, I just remembered KWHY is one of the LA nightlight stations
that will stay on another month with an infomercial on how to get your
TV converted.

G²

467. Re: Update: DTV antenna on VHF

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-13 13:27:46 UTC
From: Rich Griffiths <richgrif@one.net>
Message-ID: <Q-qdnT7FhtHPNK7XnZ2dnUVZ_rOdnZ2d@posted.nuvoxcommunications>
Source record: 14679

On Fri, 12 Jun 2009 16:13:40 -0700, Jim Lux wrote:

> Rich Griffiths wrote:
>> On Fri, 12 Jun 2009 17:33:55 -0500, Rich Griffiths wrote:
>>
>>> On Fri, 12 Jun 2009 23:25:40 +0200, Gordon wrote:
>>>
>>>> AS expected, local channels 8, 10 and 12 moved their digital
>>>> broadcasts back to their VHF assignments last night. They had been
>>>> temporarily broadcasting digital in the UHF band. I was expecting to
>>>> have problems with my dual bowtie antenna. But this morning I
>>>> rescaned the channels (and verified that the move had taken place).
>>>> Then checked reception on the affected channels. It was great. No
>>>> problems. All that worrying for nothing. Thanks for listening.
>>> One situation that cropped up in my area (Cincinnati) is that channel
>>> 9, which was broadcasting digital on channel 10 VHF, had to wait until
>>> just before the conversion to raise their DTV antenna from 100 ft down
>>> to the top of their tower. We're also using a dual bowtie, and their
>>> change made a difference.
>>>
>>> Maybe not THE factor in your case, but glad things worked out for you.
>>
>> I should have mentioned:
>>
>> what especially interested me about this is how relatively unimportant
>> antenna height has seemed to be in my microwave work.
>>
>> Until this past year (when rotator cuff surgery took me out), I had
>> been doing quite a bit of microwave work as a rover (903 MHz - 10 GHz).
>> I was often impressed by how far over the horizon it would work with
>> an antenna only about 5 ft off the ground and about 1 W of power.
>>
>> Granted we were working with MUCH lower signal quality requirements
>> than the TV stations, but I still am surprised by how poor our
>> reception is of DTV channel 12 (and earlier, ch9), which is
>> transmitting MANY kW from a multihundred-ft tower only about 16 km
>> away.
>>
>> Engineers may argue otherwise, but it still seems to have a certain
>> element of black magic to me :-)
>>
> I dare say you weren't transmitting digital data at 20 Mbps in a 6MHz
> wide channel as a rover.

Nope

> CW or SSB with a bandwidth of a few hundred Hz or maybe a couple kHz at
> a SNR of 0dB vs 6MHz BW and a SNR of 20dB

Yup

> 30-40 dB of increased noise bandwidth 20dB more signal power relative to
> that noise for decoding

Yup. Which is why I acknowledged that "we were working with MUCH lower signal quality requirements than the TV stations, but ..."

> There's your 100kW right there (100kW = 50dB over 1W)
>
> And, transmit end of the link has lower gain than you probably use as a
> microwave rover, because it's omni (in the horizontal plane, at least).
> A 1-2 degree beamwidth works out to about 30dB in gain

Yup. 1 W to a 60-cm (2-ft) dish at 10 GHz yields about 2 kW ERP with a 3.5 degree beamwidth.

> This kind of thing is why working the world with 10W on PSK31 is pretty
> straightforward, compared to SSB.

I know how to do the system and path loss calculations. Yet I'm still impressed when I can work another rover at 300+ km, sometimes with S9 signals and then go home and see the choppy signals I sometimes get between ch.12 at 300 m HAAT and my antenna at more than 10 m HAAT.

Amateur microwave work is pretty cool stuff :-)

BTW, using roughly 2-m dishes and only 100 mW, amateurs have transmitted 802.11b (WiFi) and higher-rate signals around 300 km several times. This allows digital video and audio. I think the current record is 389 km.

--
Rich W2RG

468. Re: Coax + Ladder Line

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-13 13:54:23 UTC
From: steveeh131047 <google@karinya.net>
Message-ID: <19fe849c-55e9-4a12-9ec4-932bab0badf6@v23g2000pro.googlegroups.com>
Source record: 14680

On Jun 13, 12:05 am, Jim Lux <james.p....@jpl.nasa.gov> wrote:
>
> Ham applications in any case are kind of an odd thing, efficiency-wise,
> since the limit is on RF power at the transmitter output connector.

Jim,

That's not the case in the UK. The licence conditions specify "....
power supplied to the antenna by a transmitter ...."

Steve G3TXQ

469. Re: Coax + Ladder Line

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-13 15:25:36 UTC
From: Jim Lux <jimlux@earthlink.net>
Message-ID: <6260e1a7-ad42-4c20-9437-11b0f6fd9708@x31g2000prc.googlegroups.com>
Source record: 14681

On Jun 13, 6:54 am, steveeh131047 <goo...@karinya.net> wrote:
> On Jun 13, 12:05 am, Jim Lux <james.p....@jpl.nasa.gov> wrote:
>
>
>
> > Ham applications in any case are kind of an odd thing, efficiency-wise,
> > since the limit is on RF power at the transmitter output connector.
>
> Jim,
>
> That's not the case in the UK. The licence conditions specify "....
> power supplied to the antenna by a transmitter ...."
>
> Steve G3TXQ

How interesting, so in both VK and UK (mixing abbreviations).. the "reference plane" for the measurement is potentially "after" the transmission line. The 5kW Active Antenna Tuner lives!

Here in the US, I'm sure the rule is interpreted the way it is because of the heritage of "1kW DC power to the final stage" rule, which in turn came from pre-ham radio rules for marine transmitters using sparkgaps, etc... It was simple change from measuring plate current/ voltage to hooking a power meter at the output connector. I wonder if anyone ever measured RF power on a non-50 ohm transmitter in an enforcement action?

My father and grandfather both had stories, apocryphal perhaps, about clever hams having very large "exciters" that fed through a relatively low power "final stage"... using the final tube as a coupling capacitor, perhaps, with unity gain.

470. Re: "Panel" style UHF DTV antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-13 17:10:24 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <nmm7355i2i2qd4bp8mnri4m2gl60pqaef7@4ax.com>
Source record: 14682
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew,alt.tv.tech.hdtv

On Sat, 13 Jun 2009 01:08:24 -0700 (PDT), stratus46@yahoo.com wrote:

>Oh well, some more cable along with a UHF/
>VHF splitter (combiner) and that big Winegard in the garage will
>hopefully cure it.

By this little snippet of what was intended as an aside may, in fact,
be your solution for VHF. Given your predicament of "code" (arbitrary
or otherwise), you can put the cable to work.

The solution is called a "Franklin Antenna." It would be disguised as
an antenna cable (or telephone cable, or power line, or other
innocuous wire) that trails up (to something innocuous), but never
connects (who is going to look? and if they did, it could always be a
dummy connection).

A Franklin antenna is a stacked, gain antenna that is very colinear
(hence the cable motif). These are most often described on the Web
for home wi-fi or bluetooth applications, but with scaling you can
bring them back down into the TV VHF band. A quick search gives:
http://www.para.org.ph/membersarticles/DU1ANV/Development%20of%20Collinear%20Antennas_Matching%20and%20Feeding%20Techniques%20-%2021.pdf
which on page 11 gives a pictorial representation (I can't say I vouch
for the entire paper, but it is representative of the topic).

73's
Richard Clark, KB7QHC

471. Re: Cassegrain Antenna Development

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-13 17:31:28 UTC
From: Emanuele Colucci <emack@gameprog.it>
Message-ID: <4a33e275$1$47539$4fafbaef@reader1.news.tin.it>
Source record: 14683

Thanks to James for the advices and to Jerry and Jim for the news.

Jerry: I'd like to know more about your solution, if you agree. :)

Jim Lux ha scritto:
> There's a set of articles in IEEE Antennas and Propagation Magazine (not
> the transactions) a few years back that has all the equations and design
> rules for all of the various reflector configurations.

Where I can find these articles?

Best wishes,

Emanuele Colucci
emack@gameprog.it

472. Re: Coax + Ladder Line

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-13 21:21:12 UTC
From: nm5k@wt.net
Message-ID: <640e154f-268a-4d81-8d9f-c07a39879a94@x1g2000prh.googlegroups.com>
Source record: 14684

On Jun 12, 5:43 pm, Owen Duffy <n...@no.where> wrote:
> n...@wt.net wrote
innews:b4213e36-6d8a-4349-b43a-d7a4d2b16616@c19g2000prh.googlegroups.com:
>
> ...
>
> > Even with a 80/1 mismatch, ladder line has low loss.
>
> 30m of Wireman 551 with a load of 5+j0 has VSWR=80 at the load end, VSWR=28
> at the source end, and the transmission loss is 4.6dB... 65% of the input
> power is converted to heat.
>
> Speaks to your meaning of "low loss".
>
> Mythical properties are ascribed to ladder line, some of attributable to
> ARRL publications.
>
> Owen

I might have been a bit carried away with the degree of mismatch
and loss, but I still think running the ladder/window line the whole
way to the tuner will still be the best in most cases for "all band"
use.
If the major portion of the feed line will still be ladder line, even
with
the coax lead in, he will still deal with the same line losses for the
majority of the run with such a severe mismatch.
It won't be that bad most of the time.
With the coax and choke addition, even more loss is added to the
system. And if he saw an 80:1 mismatch, just 15 feet of RG-8
should cost you half your power at 14 mhz. That's more loss than 15
extra feet of the ladder line which at 80:1, should be about 1 db loss
or so.
I just find the addition of the coax and choke as totally unnecessary
unless there is no way at all to feed the ladder/window line through
to the shack.
Sure, there are losses with the balun used in most tuners, but I
consider that a price to pay for a multi band antenna.
Myself, I don't use many all band antennas..
Most of my dipoles are single band, and coax fed. :/
Here is one online calculator which seems to match your
numbers fairly close if set for 14 mhz. They include the
551 line as one of the choices.
I notice "generic" 450 line has less loss.. I don't know

what the difference is between generic and 551..
Maybe 551 has more plastic, and less open window..
I notice generic 600 ohm ladder line will show about 2.2 db
loss with an 80:1 mismatch. I'll agree.. Maybe not low loss,
but it's quite usable considering an ugly 80:1 mismatch.

http://www.qsl.net/co8tw/Coax%20Calculator.htm

473. Re: Cassegrain Antenna Development

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-13 23:22:08 UTC
From: Jerry <jerrymartes@verizon.net>
Message-ID: <AwWYI.2252$u86.879@nwrddc01.gnilink.net>
Source record: 14685

"Emanuele Colucci" <emack@gameprog.it> wrote in message
news:4a33e275$1$47539$4fafbaef@reader1.news.tin.it...
> Thanks to James for the advices and to Jerry and Jim for the news.
>
> Jerry: I'd like to know more about your solution, if you agree. :)
>
> Jim Lux ha scritto:
>> There's a set of articles in IEEE Antennas and Propagation Magazine (not
>> the transactions) a few years back that has all the equations and design
>> rules for all of the various reflector configurations.
>
> Where I can find these articles?
>
>
> Best wishes,
>
> Emanuele Colucci
> emack@gameprog.it

Hi Emanuele

I submit that, if you intend to actually build an antenna for L-Band and
are restricting its diameter to 3 meters, you need not consider a cassegrain
feed. The reflector at the focus is too small to allow the primary feed to
illuminate it with a high percentage of the available source at the rear of
the dish.

For one example, let the cassegrain reflector be 1/2 meter diameter and be
spaced 1meter from the apex of the dish. Wouldnt that suggest that the
primary beam, from behind the dish will have a beamwidth of about 30 degrees
(at -3dB)??
If the cassegrain reflector is made bigger, that blocks more of the
parabolic dish apperature. If the cassegrain reflector is made smaller,
that increases the need for a high gain primary feed.

It is my contention that, if you want to research Cassegrain antennas,
that is a worthy project. If you want to build a functing L-Band telescope
with 3 meter dishes, dont include cassegrain feeds in the project.

Jerry KD6JDJ

>

474. Re: "Panel" style UHF DTV antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-14 00:28:56 UTC
From: Jeff Liebermann <jeffl@cruzio.com>
Message-ID: <m4f835dfmegcbqru1r00j56lqfprlvml7s@4ax.com>
Source record: 14686
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew,alt.tv.tech.hdtv

On Sat, 13 Jun 2009 10:10:24 -0700, Richard Clark <kb7qhc@comcast.net>
wrote:

(...)
>The solution is called a "Franklin Antenna." It would be disguised as
>an antenna cable (or telephone cable, or power line, or other
>innocuous wire) that trails up (to something innocuous), but never
>connects (who is going to look? and if they did, it could always be a
>dummy connection).
>
>A Franklin antenna is a stacked, gain antenna that is very colinear
>(hence the cable motif). These are most often described on the Web
>for home wi-fi or bluetooth applications, but with scaling you can
>bring them back down into the TV VHF band. A quick search gives:
>http://www.para.org.ph/membersarticles/DU1ANV/Development%20of%20Collinear%20Antennas_Mat
ching%20and%20Feeding%20Techniques%20-%2021.pdf
>which on page 11 gives a pictorial representation (I can't say I vouch
>for the entire paper, but it is representative of the topic).
>
>73's
>Richard Clark, KB7QHC

The only problem is that a Franklin antenna is usually vertically
polarized. TV is horizontal.... well some station have a vertically
polarized component, but it's mostly horizontal.
<http://www.tvtechnology.com/article/68820>
The Franklin antenna is not very wide band, covering perhaps a few UHF
channels, but certainly not the entire UHF TV band.

Topic drift: Franklin or AMOS antennas for Wi-Fi. NEC2 deck is under
the "main" page and is easily scaled for your favorite TV channel.
<http://802.11junk.com/jeffl/antennas/AMOS-7/index.html>
<http://802.11junk.com/jeffl/antennas/AMOS-5/index.html>

I don't have photos of the "disguise" TV antenna I installed on top of
a 175ft redwood tree. It was vertically polarized, crammed into a PVC
pipe, and filled with urethane foam (fence post compound). 20dB gain
wide band GaAsFET amp at the base. It was painted brown, to match the
tree trunk.

Performance was a disaster. There wasn't enough gain so most stations
were noisy. With an omnidirectinal pattern, it did a superior job of
converting reflections from the surrounding mountains, into obnoxious
and irritating ghosts. 4 tries, and no luck.

The plan was to install a pully near the top of the tree, and use a rope to raise and lower verious experiments. Unfortunately, I used a rope that did not do well in the sun. After about a year of trial and error, the rope crumbled. The pully is still in the tree and can probably be used again.

As for other disguise antennas, I've done some tinkering characterizing various road signs for operation as antennas. The aluminum sign is a tolerable radiator, but the galvanized steel support is a problem. I've also seen all manner of urethane sculptures, designed to resemble a tree, cactus, building materials, lamps, boulders, etc, each with an antenna behind or inside. Also fiberglass panels for hiding antennas in the sidewalk.

I've also crammed wi-fi repeaters inside a plastic owl. I've disguised a wi-fi antenna by making it look like a giant bird nest. If the neighbors asked, I told the owner to tell them it was a Roc nest. <http://en.wikipedia.org/wiki/Roc_(mythology)>
For HF, I've loaded into the rain gutters, installed chicken wire under the carpeting for a ground, and strung wires between telephone poles.

--
Jeff Liebermann jeffl@cruzio.com
150 Felker St #D http://www.LearnByDestroying.com
Santa Cruz CA 95060 http://802.11junk.com
Skype: JeffLiebermann AE6KS 831-336-2558

475. Re: Electromagnetic wave question

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-14 01:37:34 UTC
From: Peter <colleenpeter@westnet.com.au>
Message-ID: <QqednS0zRIrHyanXnZ2dnUVZ8hOdnZ2d@westnet.com.au>
Source record: 14687

"Wimpie" <wimabctel@tetech.nl> wrote in message
news:542b933d-99c6-49e5-9514-e10b7abd854f@y9g2000yqg.googlegroups.com...
On 9 jun, 11:01, "Peter" <colleenpe...@westnet.com.au> wrote:
> In the electric power industry there is increasing public concern
> regarding
> fields around power lines. The general public often refers to these fields
> as electromagnetic radiation, which it is not. We generally are concerned
> with magnetic fields and less often with the electric charge fields. The
> two
> are treated as separate issues.
>
> I believe the same is true of antennas, that is the electric and magnetic
> fields are separate when you are close in to the antenna in terms of
> wave-length.
>
> Question:
>
> If this assumption is correct at what point or distance do the two
> relatively independent fields become the one all important electromagnetic
> wave?
>
> Peter VK6YSF
>
> http://members.optushome.com.au/vk6ysf/vk6ysf/main.htm

Hello Peter,

The point where the fields merge to the EM wave depends on various
things.

There are three field zones used within the antenna community:

1. The far field zone (Fraunhofer region), where there is a true
spherical wave behavior, and the radiation pattern of the antenna is
independent of the distance to the antenna. The antenna can be treated
as a true point source emitting EM waves. The far field zone is mostly
taken r > 2*b^2/lambda, where b is the largest size of the antenna.
This formula is very conservative. Depending on the current or
aperture distribution, the far field can start from r > 0.5*b^2/
lambda. E- and H- field is proportional with 1/r (r=distance).

2. The transition field zone (Fresnel region), where the fields have a
reasonable wave character, but are not spherical. The radiation
pattern of the antenna depends on the measuring distance. This one is
tricky. An antenna with a null in the far field pattern may show
significant radiation (in same direction) in the transition field. So

within the transition field, you cannot for sure assess field strength levels based on the far field radiation pattern. Also the main lobe in the far field pattern may not be the main lobe in the radiation pattern measured at distance far below the far field distance. You can compare that with coherent light passing through a round aperture, you get an onion shaped ring pattern on the wall (airy disk). You can even get a black hole in the center at certain distance. So here field is not proportional with 1/r.

3. The reactive field zone. This is the region where you can calculate the fields using electrostatics and induction. In many cases, fields are 90 degrees out of (time) phase. r<0.16*lambda is used frequently. Of course, there is no hard distance where the reactive field zone stops and the transition field starts. The decay of the H and E field are different depending on the antenna and the orientation of the antenna.

For small loop antennas, r > diameter AND r<0.16*lambda, H field decay is proportional with 1/r^3.

Another example is a HW dipole. It does not radiate on the axis of the dipole. But when you are at (for example) 0.5*lambda from the ends (but on the axis), you will sure measure an E-field (because of the reactive fields that decay with r^3 to r^2).

Another example is the field between a wide parallel strip
transmission line that is well terminated (strips face each other)☺.
Both E and H are virtually homogenous between the strips, are in time
phase and are spatially 90 degrees out of phase. So there is a plane
EM wave traveling between the strips (no reactive issues).

The situation becomes more complicated when interaction with other materials is present also (for example reflection on metal sheet). You can have points where you have only E, but no H, and vice versa. This is comparable with reflection in a transmission line.

Sorry for the long text, but I hope it is useful.

Best regards,

Wim
PA3DJS
www.tetech.nl
please remove the obvious three letters in the PM

Thanks for the reply Wim

That is a great explanation. I assume from the explanation that the EM wave will due to interaction with path feature i.e. building, ground etc. have more of less of the various zone components. I'm thinking for example as the EM wave passes a hill it may have some of the Fresnel region characteristics that would manifest as say the so called knife edge effect.

Cheers

--
Peter VK6YSF

http://members.optushome.com.au/vk6ysf/vk6ysf/main.htm

476. Re: Electromagnetic wave question

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-14 01:42:35 UTC
From: Peter <colleenpeter@westnet.com.au>
Message-ID: <D_adnTxIFNsYyKnXnZ2dnUVZ8uGdnZ2d@westnet.com.au>
Source record: 14688

"Szczepan Bia&#65533;ek" <sz.bialek@wp.pl> wrote in message
news:h0nf8u$8eh$1@node1.news.atman.pl...
>
> "Peter" <colleenpeter@westnet.com.au> wrote
> news:C4udnQrCK6JkubPXnZ2dnUVZ8vqdnZ2d@westnet.com.au...
>> In the electric power industry there is increasing public concern
>> regarding fields around power lines. The general public often refers to
>> these fields as electromagnetic radiation, which it is not.
>
> Yes. Radiation is proportional to f^4. So at 50Hz practically no
> radiation.
>
>> We generally are concerned with magnetic fields and less often with the
>> electric charge fields. The two are treated as separate issues.
>
> The two were seperate in ancient ages and now in the textbooks. It is the
> necessary simplification.
> But the adults have the two ways:
> 1. The way (EM theory) by Biot-Savart and Maxwell where the current create
> the magnetic whirl,
> 2. The way by Ampere and many others where the moving charge create also
> electric field. Here the magnetism is an illusion.
>>
>> I believe the same is true of antennas, that is the electric and magnetic
>> fields are separate when you are close in to the antenna in terms of
>> wave-length.
>>
>> Question:
>>
>> If this assumption is correct at what point or distance do the two
>> relatively independent fields become the one all important
>> electromagnetic wave?
>
> You have the answers for the way 1.
> For the way 2 we have only the one electric wave. But would be easy to you
> to check which way is right.
>
> In the way 1 EM waves are radiated by the AC (current create magnetic
> whirl and this create electric whirl and so on). Radiate this part of
> antenna where the current is max.
>
> In the way 2 the electric waves are radiated by the two ends of Hertz
> dipole. So the dipole radiate the two coupled electric waves. The

> receiving antena should detect the doubled frequency (on monopoles no such
> effect). You must distinguish it from the harmonics.
> S*
>>
>> Peter VK6YSF
>>
>> http://members.optushome.com.au/vk6ysf/vk6ysf/main.htm
>

Thanks to all for the response and relatively detailed explanations that has given me something to ponder.

Regards Peter YSF
--
Peter VK6YSF

http://members.optushome.com.au/vk6ysf/vk6ysf/main.htm

477. Re: Sun Spots

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-14 03:19:58 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <y%ZYl.22516$hc1.17764@flpi150.ffdc.sbc.com>
Source record: 14689

Jim Kelley wrote:
> Also true, unlike "Photons are emitted by decelerating electrons"
> otherwise known as Bremsstrahlung.

You must be drunk because I know you cannot possibly be
that ignorant. You are saying that since all calico cats
are female, then all females must be calico cats. Good Grief!

FYI, RF photons are indeed emitted by decelerating electrons
which are being decelerated by the RF source field supplied
to the antenna conductor. It has absolutely nothing to do with
Bremsstrahlung radiation which is completely outside the
context of these postings. Congratulations on another feeble
attempt at a diversionary obfuscation. You seem to be trying
for the record for such nonsense.
--
73, Cecil, IEEE, OOTC, http://www.w5dxp.com

478. Re: Coax + Ladder Line

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-14 03:55:10 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <tw_Yl.31626$Ws1.20593@nlpi064.nbdc.sbc.com>
Source record: 14690

Kash J. Rangan wrote:
> Is it OK to place a 4:1 balun just outside
> of the window for the transition?

Given the impedance seen by the balun, is a 4:1
transformation what you want?

If the impedance seen by the balun is 10 ohms,
for instance, do you think taking the impedance
down to 2.5 ohms is an improvement?
--
73, Cecil, IEEE, OOTC, http://www.w5dxp.com

479. Re: "Panel" style UHF DTV antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-14 05:55:46 UTC
From: stratus46@yahoo.com
Message-ID: <dc8ac04e-cddb-4911-913c-37900132cf19@i6g2000yqj.googlegroups.com>
Source record: 14691
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew,alt.tv.tech.hdtv

On Jun 13, 10:10 am, Richard Clark <kb7...@comcast.net> wrote:
> On Sat, 13 Jun 2009 01:08:24 -0700 (PDT), stratu...@yahoo.com
wrote:
> >Oh well, some more cable along with a UHF/
> >VHF splitter (combiner) and that big Winegard in the garage will
> >hopefully cure it.
>
> By this little snippet of what was intended as an aside may, in
fact,
> be your solution for VHF. Given your predicament of
"code" (arbitrary
> or otherwise), you can put the cable to work.
>
> The solution is called a "Franklin Antenna." It would be disguised
as
> an antenna cable (or telephone cable, or power line, or other
> innocuous wire) that trails up (to something innocuous), but never
> connects (who is going to look? and if they did, it could always
be a
> dummy connection).
>
> A Franklin antenna is a stacked, gain antenna that is very colinear
> (hence the cable motif). These are most often described on the Web
> for home wi-fi or bluetooth applications, but with scaling you can
> bring them back down into the TV VHF band. A quick search
gives:http://www.para.org.ph/membersarticles/DU1ANV/Development%20of
%20Coll...
> which on page 11 gives a pictorial representation (I can't say I
vouch
> for the entire paper, but it is representative of the topic).
>
> 73's
> Richard Clark, KB7QHC

I hung the spectrum analyzer on the Winegard all channel antenna in
the rafters of the garage. The VHF channels are strong and free of
response 'bumps' (meaning no serious multipath) and the UHF may be
better than the squareshooter on the roof. Tomorrow I shoot a hole in
the stucco wall to get the new RG-6 coax (crazy guy at Torrance
Electronics sold me 100 ft for $9) pulled in to the splitter to feed
the computers and STB. It looks like it will be good.

G²

480. Re: Update: DTV antenna on VHF

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-14 07:46:50 UTC
From: "Sal M. Onella" <salmonella@food.poisoning.org>
Message-ID: <MV1ZI.1443$AL2.353@newsfe10.iad>
Source record: 14692

"Rich Griffiths" <richgrif@one.net> wrote in message
news:vv2dnVQYOJdGR6_XnZ2dnUVZ_jdi4p2d@posted.nuvoxcommunications...

> Until this past year (when rotator cuff surgery took me out), I had been
> doing quite a bit of microwave work as a rover (903 MHz - 10 GHz). I was
> often impressed by how far over the horizon it would work with an antenna
> only about 5 ft off the ground and about 1 W of power.

Antenna gain on both ends explains most of that.

> Granted we were working with MUCH lower signal quality requirements than
> the TV stations, but I still am surprised by how poor our reception is of
> DTV channel 12 (and earlier, ch9), which is transmitting MANY kW from a
> multihundred-ft tower only about 16 km away.

Shannon's equations provide most of the answers:
http://www.st-andrews.ac.uk/~www_pa/Scots_Guide/iandm/part8/page1.html

Some of that is hard to follow, but the net effect is that you need a
certain (minimum) amount of power to send a complex signal in a confined
bandwidth. With ATSC, they put about 20 Mbps into a 6 MHz channel. To get
a decent SNR (16 dB or better), they need MANY KW.

I did a little mickey-wave engineering, myself. Point-to-point is easier
than broadcast!

"Sal"

481. Re: "Panel" style UHF DTV antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-14 14:32:26 UTC
From: stan <tsanford@nf.sympatico.ca>
Message-ID: <a65b8b25-51d6-4b31-b8e0-bd84c78417f7@g15g2000pra.googlegroups.com>
Source record: 14693
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew,alt.tv.tech.hdtv

```
On Jun 9, 11:21 pm, "amdx" <a...@knology.net> wrote:
> >>A mismatch can cause ghosting in an analog TV.
> >>What does ghosting do to a digital TV signal?
>
>   Just as a point of interest (to me at least) I grew up within 3 blocks of
> an airport, it
> was a several times a day occurance to have the picture flutter as an
> airplane flew by.
>                                                    Mike

It was identifying the reflection of radio signals from a flying
aircraft that led to the development and use of radar.
Radar was major factor in the successful defence of Britain (Britain
1940) against German bombing (The Blitz) early in WWII (1939-1945).
Although it was initially very crude, (It was called Radio-location or
RDF, Radio Direction Finding) at the time.
Unfortunately the first war time US use of radar was misinterpreted
when the Japanese attacked Pearl Harbour in Dec 1941!
```

482. Re: Update: DTV antenna on VHF

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-14 15:17:20 UTC
From: Rich Griffiths <richgrif@one.net>
Message-ID: <Nu-dneoNBKAdiajXnZ2dnUVZ_hVi4p2d@posted.nuvoxcommunications>
Source record: 14694

On Sun, 14 Jun 2009 00:46:50 -0700, Sal M. Onella wrote:

> "Rich Griffiths" <richgrif@one.net> wrote in message
> news:vv2dnVQYOJdGR6_XnZ2dnUVZ_jdi4p2d@posted.nuvoxcommunications...
>
>> Until this past year (when rotator cuff surgery took me out), I had
>> been doing quite a bit of microwave work as a rover (903 MHz - 10 GHz).
>> I was often impressed by how far over the horizon it would work with
>> an antenna only about 5 ft off the ground and about 1 W of power.
>
> Antenna gain on both ends explains most of that.

To me, it's a partial explanation, but not most of it. Microwavers often resort to quasi-scientific explanations like "troposcattering", as do VHF-ers. And sometimes the explanations get even fuzzier, like "enhancement". They (and ducting) are somewhat predictable, but as a rover the operating mantra was always just 'Let's try it".

>
>> Granted we were working with MUCH lower signal quality requirements
>> than the TV stations, but I still am surprised by how poor our
>> reception is of DTV channel 12 (and earlier, ch9), which is
>> transmitting MANY kW from a multihundred-ft tower only about 16 km
>> away.
>
> Shannon's equations provide most of the answers:
> http://www.st-andrews.ac.uk/~www_pa/Scots_Guide/iandm/part8/page1.html

Shannon's equations don't actually tell you much that's useful, as a Ham. And even in a lot of commercial situations, it can be hard to be sure what assumptions to make about noise and signal strengths, for example.

>
> Some of that is hard to follow, but the net effect is that you need a
> certain (minimum) amount of power to send a complex signal in a confined
> bandwidth. With ATSC, they put about 20 Mbps into a 6 MHz channel. To
> get a decent SNR (16 dB or better), they need MANY KW.
>
> I did a little mickey-wave engineering, myself. Point-to-point is
> easier than broadcast!
>
> "Sal"

As an amateur rover, I generally found point-to-point to be more difficult, because of simple real-world Ham issues that don't have a lot

to do with heavy theory. At 10 GHz, a 60-cm dish has a beamwidth of about 3.5 degrees. The rovers can cope with that with some care, but it seems many fixed stations are using rotators that don't provide that kind of resolution. So it could be hard lining up. In contrast, over-the-horizon signals smear out a lot horizontally. I once estimated another rover who was 180 km away as having about a 45-degree signal width, and found 20+ degrees to be common.

Besides that, 10 GHz, and sometimes 5.7 GHz, will occasionally do downright freaky/cool things. Rainscatter is one fun example. And I once worked a station (S9, SSB) over a 50+ km path with a 90-degree bend in it, because the "line-of-sight" path was heavily obstructed by trees etc. We told each other we were bouncing off downtown Cincinnati, which was not visible over the horizon.

I guess I'd like to end this sales pitch with the note that the Ham microwave bands can be great fun. The advantages, and Ham capabilities, of playing around with "real radio" and the small antennas that involves can be substantial.

50 MHz and up ... Everything else is DC.

--
Rich

483. Re: Update: DTV antenna on VHF

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-14 17:03:29 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <uaba359d0dmi4buma9eehckeu6j3llv5co@4ax.com>
Source record: 14695

On Sun, 14 Jun 2009 10:17:20 -0500, Rich Griffiths <richgrif@one.net>
wrote:

>> Shannon's equations provide most of the answers:
>> http://www.st-andrews.ac.uk/~www_pa/Scots_Guide/iandm/part8/page1.html
>
>Shannon's equations don't actually tell you much that's useful, as a
>Ham.

This would presume that the Ham is rather indifferent or incapable.
Shannon's work is exceedingly useful, and at the core, quite simple to
perceive which further illuminates those mediocre qualities of your
Ham. It is unfortunate that the link above offers no graphs by which
Shannon's points would become startling apparent.

For instance:
http://www.aero.org/publications/crosslink/winter2002/images/04_04.gif
shows how signal to noise ratio has a vast effect over bit error in
digital transmission. In the face of equal powers (noise and bit
level), you would run the odds of 1 bit in 10 being mistaken (pretty
good odds, actually). If you were to raise the power in the bit by
10dB, that would fall to 1 bit in a million being mistaken.

In the same graph, Shannon reveals how, if you code your bits (I will
leave it to the student to discover the meaning of that), you could
achieve the same 1:1000000 advantage with the addition of less than 1
dB of power boost.

73's
Richard Clark, KB7QHC

484. Re: Update: DTV antenna on VHF

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-14 18:08:36 UTC
From: Jim Lux <jimlux@earthlink.net>
Message-ID: <dac139f4-7fd0-4d88-a7ee-f08c4cb32546@s38g2000prg.googlegroups.com>
Source record: 14696

On Jun 14, 10:03 am, Richard Clark <kb7...@comcast.net> wrote:

> In the same graph, Shannon reveals how, if you code your bits (I will
> leave it to the student to discover the meaning of that), you could
> achieve the same 1:1000000 advantage with the addition of less than 1
> dB of power boost.
>
> 73's
> Richard Clark, KB7QHC

Until fairly recently, hams didn't do much coding, for a variety of reasons. Computational horsepower is probably a big reason. Coding's easy, decoding not so easy, at least in a "parts readily available from Radio Shack" sort of sense. Obviously, today, one could do all sorts of coding on a laptop PC, particularly at low bit rates, but you'd still need to have an unusual convergence of someone who knows how to implement the coding algorithms who's also interested in amateur microwave operating. It's not anything like a turnkey thing, or even a "go get gnuradio" thing. Where you see coding in common ham use, it's buried in an application (PSK31, JT65, and the like)

The other problem is the frequency control issue. If you want low rates and ragged edge of Shannon, you need good frequency stability and control (and to a lesser extent, good phase noise). Until recently (with GPS disciplined oscillators and surplus Rb sources) this was a real challenge. As Rich commented with respect to antenna pointing, you also have to be right on for frequency, and that's hard, especially in a field situation. Tuning to 10Hz accuracy at 10GHz implies 1E-9 frequency accuracy, which is challenging. To a certain extent, processing power in a PC helps (get close, do parallel demodulation, find the signal), but just like for coding, it requires finding a person (or small group) who can deal with building low phase noise stable oscillators AND with developing software that is somewhat complex, compared to the usual "whack it out in a weekend of coding" stuff.

I suspect there ARE hams experimenting with this, but it's a long way from critical mass wide acceptance. You need something that you can write an article in QST, and offer <$100 widgets to make that happen. There's not much cheap surplus gear either, since commercial equipment these days tends to be more specialized and isn't as amenable to hackery.

There are also proprietary rights issues with some coding techniques (e.g. Turbo) but I suspect that legal issues aren't what's holding hams back. For things like LDPC, there are published software

implementations that are free to use. I haven't looked but I imagine that various convolutional codes and decoders are also publicly available, along with Viterbi soft-decision decoders.

485. Re: Update: DTV antenna on VHF

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-14 19:09:39 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <irha35lebhhknl72m1qfhakivukagov7hj@4ax.com>
Source record: 14697

On Sun, 14 Jun 2009 11:08:36 -0700 (PDT), Jim Lux
<jimlux@earthlink.net> wrote:

>Until fairly recently, hams didn't do much coding, for a variety of
>reasons.

This neither negates the specific issues of signal to noise in their relationship, a matter that is quite in the power of the Ham to control to some extent; nor does it invalidate the simplicity of that relationship revealed through one graphic that serves to reduce the obscurity of a lot of math.

As for the variety of reasons, computation power would seem to be in abundance (the first mythical Cray is a door stop today). That as an excuse is a croak.
>It's not anything like a turnkey thing,
Like I said, an indifferent or incapable individual in the guise of "Ham." I am amazed how that Lid is raised on a pedestal.
>or even a "go get gnuradio" thing. Where you see coding in common ham
>use, it's buried in an application (PSK31, JT65, and the like)
So, let me get this straight, because it is available (a seeming contradiction from the tenor of your response), it is not accessible? Or it is not useful? Or it is not understood? Or Shannon has been rendered obsolete?

Your objections are answered with your own solutions and yet the sense of what you say is shove Shannon out the window and whine about the noise.

73's
Richard Clark, KB7QHC

486. Re: Update: DTV antenna on VHF

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-14 20:04:57 UTC
From: Rich Griffiths <richgrif@one.net>
Message-ID: <tN6dnQKJWbV0yqjXnZ2dnUVZ_sednZ2d@posted.nuvoxcommunications>
Source record: 14698

On Sun, 14 Jun 2009 10:03:29 -0700, Richard Clark wrote:

On Sun, 14 Jun 2009 10:03:29 -0700, Richard Clark wrote:

> On Sun, 14 Jun 2009 10:17:20 -0500, Rich Griffiths <richgrif@one.net>
> wrote:
>
>
>>Shannon's equations don't actually tell you much that's useful, as a
>>Ham.
>
> This would presume that the Ham is rather indifferent or incapable.
> Shannon's work is exceedingly useful
<snip>

Well, I do admit that I went overboard there! Probably shouldn't speak too quickly about moonbounce, meteor scatter, etc. I do think, however, that for many Hams (me, at least :-)) the applicable word is "indifferent" rather than "incapable".

If you can genuinely find useful application to what microwave rovers do -- or most microwave operators, for that matter -- that would be a special contribution. I expect that would be even less likely for most HF and VHF operations.

I'd characterize Shannon's work as more of academic interest (for most Ham radio) than practical interest. In most of what most Hams do, there are just too many other issues to deal with.

Please note the use of the word "most". I'm sure there are exceptions, but I expect they're a small part of hamdom (as is microwaving, sigh).

--
Rich W2RG

487. Re: Update: DTV antenna on VHF

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-15 05:03:57 UTC
From: Jim Lux <jimlux@earthlink.net>
Message-ID: <4e9b08cc-8cf5-47f5-8234-ce7ba3837dcf@y10g2000prc.googlegroups.com>
Source record: 14699

> I'd characterize Shannon's work as more of academic interest (for most Ham
> radio) than practical interest. In most of what most Hams do, there are
> just too many other issues to deal with.
>
> Please note the use of the word "most". I'm sure there are exceptions,
> but I expect they're a small part of hamdom (as is microwaving, sigh).
>
> --
> Rich   W2RG

I think you've hit the nail on the head..

If you're communicating with deep space probes, you've probably
already eked out the last tenth of dB everywhere else in the system,
so you can worry about coding and how close you are to the Shannon
limit.

If you're a ham, especially microwave rovering, then getting the last
couple dB is the least of your problems. It's easier for the ham to
get 3dB by some other means than, say, implementing coding.

Where some kind soul has made using coding easy, it's used (e.g.
JT65).

488. Re: 6m and 10m inv V calc

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-15 17:59:02 UTC
From: JB <nospam@goofball.net>
Message-ID: <GZvZl.1159$P5.245@nwrddc02.gnilink.net>
Source record: 14700

<nm5k@wt.net> wrote in message
news:14d9756e-c231-4cd5-92bf-7e650a5449c6@t11g2000vbc.googlegroups.com...
On Jun 10, 11:15 am, Jim Lux <james.p....@jpl.nasa.gov> wrote:

>
> given the complexity of rotators in general, rigging up two crossed
> dipoles and a switch might be a better solution.
>
>
Don't even need the switch.. Just feed the crossed dipoles
with a single coax line and off to the races. :)

Truly. I just hung 40m from 80m wire with some spreaders. If I had more
wire I would add a couple more at 80m just for bandwidth.

I doubt that 6 and 10 meter cause any interaction with a common feed. At
that size a rotatable dipole is easily made with mobile whips. A rotatable
dipole takes advantage of the deep nulls.

A dipole with 120 degrees included angle is just a droopy dipole. An
inverted V with 90 degrees included angle or less has a combination of
vertical and horizontal components to its radiation and is more
omnidirectional. More so with a metal supporting mast.

489. Re: Cassegrain Antenna Development

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-15 18:24:13 UTC
From: Jim Lux <james.p.lux@jpl.nasa.gov>
Message-ID: <h163kabse1@news.jpl.nasa.gov>
Source record: 14601

Emanuele Colucci wrote:
> Thanks to James for the advices and to Jerry and Jim for the news.
>
> Jerry: I'd like to know more about your solution, if you agree. :)
>
> Jim Lux ha scritto:
>> There's a set of articles in IEEE Antennas and Propagation Magazine
>> (not the transactions) a few years back that has all the equations and
>> design rules for all of the various reflector configurations.
>
> Where I can find these articles?
>
>
> Best wishes,
>
> Emanuele Colucci
> emack@gameprog.it
>

You might want to take a look at W1GHZ's online book
http://www.w1ghz.org/antbook/conf/Multiple_reflector_antennas.pdf

He gives a procedure, and refers to a variety of sources, among them,
the ones I was thinking of:
The articles I was thinking of were by Christophe Granet at CSIRO in
Australia, and published in Tom Milligan's "Antenna Designer's Notebook"
column in the A&P Magazine

April 1998, "Designing Axially Symmetric Cassegrain or Gregorian
Dual-Reflector Antennas from Combinations of Prescribed Geometric
Parameters"

June 98, Minimum blockage
Dec 99, Displaced axis dual reflector antenans (4 types)
Dec 2001, Dragonian Dual-Reflector
June2002, Offset Cassegrain or Gregorian
Dec 2003, Designing ..offset.. Part 2, Feed-horn Blockage Conditions.

There's some FORTRAN available too, from Tom Milligan.

490. Re: RE:Hygain 18AVT v 18AVQ

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-15 19:29:21 UTC
From: David Thompson <thompson@mindspring.com>
Message-ID: <jK-dnatOANeXPKvXnZ2dnUVZ_tGdnZ2d@earthlink.com>
Source record: 14602

I see someone sent you the pages to get PDF's of both verticals. I recall that the 18AVT is an upgrade to the original 18AVQ with wider bandwidth on 80(75).

Dave K4JRB

491. Atlanta DTV reception on rabbit ears

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-15 19:39:30 UTC
From: David Thompson <thompson@mindspring.com>
Message-ID: <POydneIVVuj0PqvXnZ2dnUVZ_tKdnZ2d@earthlink.com>
Source record: 14603

I have a set of rabbit ears that was given to me several years ago for the TV in the bedroom. The antenna cost about $15 in the 2002 catalog (Radio Shack quit publishing a catalog soon thereafter).

I use a digital converter made under the RCA name and after the scan virtually all of the pictures came out far better than the old analog reception. However, almost all say "cannot get good reception rescan". The sound tiles in and out. The bedroom is on the second floor. I looked at amplified indoor antennas at Target and they sell for $20 to $50. The non-amplified is $18 (only one they have).

Do most go to an amplified antenna or use an outside antenna? I just took down my old big outside antenna 3 years ago as we have Comcast cable in 3 rooms. Comcast cost $$$ for each set up and add more wires to the house. I also assume the signal gets weaker the more I add.

Dave K4JRB

492. Possible new problem TVI

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-15 19:43:02 UTC
From: David Thompson <thompson@mindspring.com>
Message-ID: <HKidnbyWQ4uhOavXnZ2dnUVZ_hydnZ2d@earthlink.com>
Source record: 14604

I assume many will go to over-the air reception of local channels to get the highest versions of HD (Cable and satellite can't do this).

Does this mean we go back to having TVI problems
as we did before cable?

Dave K4JRB

493. Re: Possible new problem TVI

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-15 20:01:12 UTC
From: Rich Griffiths <richgrif@one.net>
Message-ID: <hLGdnbQ9NdcVNavXnZ2dnUVZ_qidnZ2d@posted.nuvoxcommunications>
Source record: 14605

On Mon, 15 Jun 2009 15:43:02 -0400, David Thompson wrote:

> I assume many will go to over-the air reception of local channels to get
> the highest versions of HD (Cable and satellite can't do this).
>
> Does this mean we go back to having TVI problems as we did before cable?
>
> Dave K4JRB

I switched to digital about 3 years ago. All over-the-air, no cable or
satellite. The little bit of TVI had been seeing went away entirely when
I switched.

Rich W2RG

494. Re: Possible new problem TVI

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-15 20:42:03 UTC
From: Bert Hyman <bert@iphouse.com>
Message-ID: <Xns9C2B9F7A46700VeebleFetzer@216.250.184.7>
Source record: 14606

In news:HKidnbyWQ4uhOavXnZ2dnUVZ_hydnZ2d@earthlink.com "David Thompson" <thompson@mindspring.com> wrote:

> I assume many will go to over-the air reception of local channels to
> get the highest versions of HD (Cable and satellite can't do this).
>
> Does this mean we go back to having TVI problems
> as we did before cable?

On the other hand, it means I no longer live in a channel 2 area; maybe I'll finally try 6 meters.

--
Bert Hyman St. Paul, MN bert@iphouse.com

495. Re: Be careful when using Excel

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-15 20:44:38 UTC
From: Joel Koltner <zapwireDASHgroups@yahoo.com>
Message-ID: <XoyZl.182116$jp1.125551@en-nntp-06.dc1.easynews.com>
Source record: 14607

"Owen Duffy" <none@no.where> wrote in message
news:Xns9C28A9EF07C54nonenowhere@61.9.191.5...
> Looks good, but it sure doesn't work like Excel 2000, not yet anyway.

The program that works like Excel 2000 the best will always be... Excel 2000.

The vast majority of Excel spreadsheets are just "data" without any macros, and import into OO without difficulty. As soon as you start adding automation to those Excel spreadsheets, though, you're venturing into waters where OO might still be a good choice, but you definitely have to start planning on spending time fixing things. This is true with any other spread that claims to be able to import Excel files as well... although certainly some will tend to be better or worse than OO in specific instances.

496. Re: Atlanta DTV reception on rabbit ears

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-15 21:23:38 UTC
From: Gordon <gonzo@alltomyself.com>
Message-ID: <Xns9C2B9267AE8CEgreederxprtnet@194.177.98.144>
Source record: 14608

"David Thompson" <thompson@mindspring.com> wrote in
news:POydneIVVuj0PqvXnZ2dnUVZ_tKdnZ2d@earthlink.com:

> I have a set of rabbit ears that was given to me several years ago for
> the TV in the bedroom. The antenna cost about $15 in the 2002 catalog
> (Radio Shack quit publishing a catalog soon thereafter).
>
> I use a digital converter made under the RCA name and after the scan
> virtually all of the pictures came out far better than the old analog
> reception. However, almost all say "cannot get good reception
> rescan". The sound tiles in and out. The bedroom is on the second
> floor. I looked at amplified indoor antennas at Target and they sell
> for $20 to $50. The non-amplified is $18 (only one they have).
>
> Do most go to an amplified antenna or use an outside antenna? I just
> took down my old big outside antenna 3 years ago as we have Comcast
> cable in 3 rooms. Comcast cost $$$ for each set up and add more wires
> to the house. I also assume the signal gets weaker the more I add.
>
> Dave K4JRB
>
>
>

Rabbit ears aren't the best thing to receive DTV with. Most DTV
is broadcast in the UHF band. Go to www.antennaweb.org to find a
list of the DTV stations in your area. You will also see what
channel they are transmitting on. (just because a TV station
identifies itself as 'channel 12' doesn't mean that it is transmitting
on the actual channel 12 frequency. There have been a lot of
shuffleing around of the frequency assignments as part of this
DTV conversion.). Antennaweb.org will also tell you the distance
and direction to each TV transmitter with a color code indicating
the type of antenna you will need.

Armed with this information, you can set up a proper antenna.
In my case, I went from rabbit ears (not very good) to a cheap
set top loop (not much better). Then I yanked the loop and cobbled
in a bowtie (getting better). Then, (I wish a took a picture) I
cobbled up a hand bent bowtie out of 12ga wire and attached it to
the top of the commercial bowtie. I finaly built a dual bowtie
setup that can be seen here:
http://mysite.verizon.net/g_reeder/Content/DTV_antenna.html
Works very well for me. YMMV.
There are other designs for DTV antennas on the internet. But

instead of just randomly trying antennas, got that info from
antennaweb.org so you know which dirrection to point the thing.

497. Re: Atlanta DTV reception on rabbit ears

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-15 21:36:57 UTC
From: dplatt@radagast.org
Message-ID: <pgrig6-co.ln1@radagast.org>
Source record: 14609

In article <POydneIVVuj0PqvXnZ2dnUVZ_tKdnZ2d@earthlink.com>,
David Thompson <thompson@mindspring.com> wrote:

>I have a set of rabbit ears that was given to me several years ago for the
>TV in the bedroom. The antenna cost about $15 in the 2002 catalog (Radio
>Shack quit publishing a catalog soon thereafter).
>
>I use a digital converter made under the RCA name and after the scan
>virtually all of the pictures came out far better than the old analog
>reception. However, almost all say "cannot get good reception rescan". The
>sound tiles in and out.

That does suggest that the signal is inconsistent - possibly it's
weak, over-all, or possibly it's subject to momentary dropouts due to
multipath reflections from moving objects (airplanes, trees, etc.).

If you're in an urban area, multipath problems are likely to be at the
heart of your problem.

Moving the rabbit-ears around to different positions will give you
some amount of gain and inteference rejection... you might find a
position which gives you a more stable result on one or more channels.

> The bedroom is on the second floor. I looked at
>amplified indoor antennas at Target and they sell for $20 to $50. The
>non-amplified is $18 (only one they have).
>
>Do most go to an amplified antenna or use an outside antenna?

As a general rule, I don't favor amplified indoor antennas. The
amplification usually doesn't buy you very much, since the front-end
section of the TV set has quite a lot of gain/sensitivity. The
antenna's own amplification will simply "replace" some of the
amplification in the TV (to no particularly good end), it will add
some amount of additional noise, and it may be subject to
strong-signal overload. Antenna-based amplifiers won't do anything to
help multipath problems, or noise problems from nearby interference
sources.

Indoor antennas may work well, or very badly. A lot depends on the
building construction. In some wood-frame buildings, they can work
fine. If the outer walls are stucco (with embedded chicken-wire), or
if the walls have foil-backed insulation, they may work very badly...
the building acts as a partial Faraday cage, and blocks most of the
signal.

> I just took
>down my old big outside antenna 3 years ago as we have Comcast cable in 3
>rooms. Comcast cost $$$ for each set up and add more wires to the house. I
>also assume the signal gets weaker the more I add.

For good TV reception, a reasonable-sized outdoor antenna on a mast is
hard to beat. Getting the antenna up into direct line-of-sight of the
transmitter/tower can help eliminate all sorts of reception problems.

If you can't arrange a roof antenna, then a smaller beam antenna
located in the attic might be a workable second choice.

Yes, when you feed a signal down the coax into the house, and split it
among several rooms, the signal in each room is weaker than if you fed
the antenna output directly to a signal room. This is actually one of
the situations in which an antenna amplifier can help: it makes up
for the losses in the signal-division process and in the coax.
Ideally, the amplifier is located close to the antenna, before any
long run of coax and before any signal-splitter.

Be careful, though. Many inexpensive antenna amplifiers (mast-mounted
or part of a splitter / distribution box) use only a simple
one-transistor amplification circuit, and can be prone to problems
from strong-signal overload. If you're located near a TV transmitter
(or a ham operator, CB'er, police/fire station, AM broadcast station)
a strong signal from the nearby transmitter can saturate the
amplifier, pushing it into distortion. The resulting signal on many
channels can be worse than if there was no amplifier at all.

--
Dave Platt <dplatt@radagast.org> AE6EO
Friends of Jade Warrior home page: http://www.radagast.org/jade-warrior
I do _not_ wish to receive unsolicited commercial email, and I will
boycott any company which has the gall to send me such ads!

498. Re: RE:Hygain 18AVT v 18AVQ

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-15 22:54:26 UTC
From: VK2KC <vk2kcjohn@gmail.com>
Message-ID: <CiAZl.18915$y61.4506@news-server.bigpond.net.au>
Source record: 14610

Hello David,
No I wasn't sent the pages, but links to the 18-AVQII and the 18-AVT, which
I thank the sender.
I had on file the manuals for both of them, I had done a "google" on them
some time ago.
But I am still looking for a copy of a manual for the AV-18AVQ.
Many thanks for your reply.
73
John
VK2KC

"David Thompson" <thompson@mindspring.com> wrote in message
news:jK-dnatOANeXPKvXnZ2dnUVZ_tGdnZ2d@earthlink.com...
>I see someone sent you the pages to get PDF's of both verticals. I recall
>that the 18AVT is an upgrade to the original 18AVQ with wider bandwidth on
>80(75).
>
> Dave K4JRB
>

499. Re: Atlanta DTV reception on rabbit ears

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-15 23:21:03 UTC
From: MTV <volztexas@comcast.net>
Message-ID: <3IAZI.158025$Lo1.62292@en-nntp-04.dc1.easynews.com>
Source record: 14611

David Thompson wrote:
> I have a set of rabbit ears that was given to me several years ago for the
> TV in the bedroom. The antenna cost about $15 in the 2002 catalog (Radio
> Shack quit publishing a catalog soon thereafter).
>
> I use a digital converter made under the RCA name and after the scan
> virtually all of the pictures came out far better than the old analog
> reception. However, almost all say "cannot get good reception rescan". The
> sound tiles in and out. The bedroom is on the second floor. I looked at
> amplified indoor antennas at Target and they sell for $20 to $50. The
> non-amplified is $18 (only one they have).
>
> Do most go to an amplified antenna or use an outside antenna? I just took
> down my old big outside antenna 3 years ago as we have Comcast cable in 3
> rooms. Comcast cost $$$ for each set up and add more wires to the house. I
> also assume the signal gets weaker the more I add.
>
> Dave K4JRB
>
>
I put rabbit ears on top of a cabinet, extended 'ears' all the way out,
put the 'ears' down flat (dipole) and turned broadside to TV transmitter
area. Best reception other than outside antenna.

Marv

500. Re: "Panel" style UHF DTV antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-16 01:32:40 UTC
From: tom <news4792@taring.org>
Message-ID: <4a36f638$0$18864$8046368a@newsreader.iphouse.net>
Source record: 14612
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew,alt.tv.tech.hdtv

stan wrote:

> It was identifying the reflection of radio signals from a flying
> aircraft that led to the development and use of radar.
> Radar was major factor in the successful defence of Britain (Britain
> 1940) against German bombing (The Blitz) early in WWII (1939-1945).
> Although it was initially very crude, (It was called Radio-location or
> RDF, Radio Direction Finding) at the time.
> Unfortunately the first war time US use of radar was misinterpreted
> when the Japanese attacked Pearl Harbour in Dec 1941!

Actually it was blocking of a radio transmission by ships passing on a
river that led to the development of radar.

tom
K0TAR

501. Re: Atlanta DTV reception on rabbit ears

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-16 03:45:08 UTC
From: JCOOPER574@webtv.net
Message-ID: <12656-4A371544-1859@storefull-3172.bay.webtv.net>
Source record: 14613

RABBIT EARS TIP 101# IF YOU WANNA TAKE THE TIME TO DO THIS STEP 1 TAKE
THE SCREWS OUT OF THE RABBIT EARS PUT AN 300OHM TO 75 OHM ADAPTER
BETWEEN THE SCREWS TIGHT THEM BACK DOWN NOW YOU CAN GET SOME CABLE AND
PUT THE RABBIT EARS OUTSIDE ON A POLE I USED ZIP TIES ON MY 20 FT POLE
OR HIGHER THE BETTER TURN THE POLE FOR THE BEST RECEPTION ALSO WORKS
GREAT FOR FM RADIO HOOK IT UP TO MY BOSE RADIO FOR FM DX ALSO FROM THE
4 LAND

502. Re: "Panel" style UHF DTV antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-16 13:42:30 UTC
From: Allodoxaphobia <bit-bucket@config.com>
Message-ID: <slrnh3f8a6.10mt.bit-bucket@shell.config.com>
Source record: 14614
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew,alt.tv.tech.hdtv

```
On Mon, 15 Jun 2009 20:32:40 -0500, tom wrote:
> stan wrote:
>
>> It was identifying the reflection of radio signals from a flying
>> aircraft that led to the development and use of radar.
>> Radar was major factor in the successful defence of Britain (Britain
>> 1940) against German bombing (The Blitz) early in WWII (1939-1945).
>> Although it was initially very crude, (It was called Radio-location or
>> RDF, Radio Direction Finding) at the time.
>> Unfortunately the first war time US use of radar was misinterpreted
>> when the Japanese attacked Pearl Harbour in Dec 1941!
>
> Actually it was blocking of a radio transmission by ships passing on a
> river that led to the development of radar.

The Potomac -- I think that's what I read about it.

Jonesy
--
Marvin L Jones | jonz | W3DHJ | linux
38.24N 104.55W | @ config.com | Jonesy | OS/2
* Killfiling google & XXXXbanter.com: jonz.net/ng.htm
```

503. Re: "Panel" style UHF DTV antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-16 17:15:44 UTC
From: Jeff Liebermann <jeffl@cruzio.com>
Message-ID: <h2jf355h4guhvit8po0ngq5jfhbcn2s5ss@4ax.com>
Source record: 14615
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew,alt.tv.tech.hdtv

On Mon, 15 Jun 2009 20:32:40 -0500, tom <news4792@taring.org> wrote:

>stan wrote:
>
>> It was identifying the reflection of radio signals from a flying
>> aircraft that led to the development and use of radar.
>> Radar was major factor in the successful defence of Britain (Britain
>> 1940) against German bombing (The Blitz) early in WWII (1939-1945).
>> Although it was initially very crude, (It was called Radio-location or
>> RDF, Radio Direction Finding) at the time.
>> Unfortunately the first war time US use of radar was misinterpreted
>> when the Japanese attacked Pearl Harbour in Dec 1941!
>
>Actually it was blocking of a radio transmission by ships passing on a
>river that led to the development of radar.
>
>tom
>K0TAR

RF blocking was used by both sides as a "burglar alarm" to detect
naval vessels passing through narrow straights. Germany tried to get
such a system working across the Straits of Gibraltar, but were foiled
by Spain's failure to cooperate.

Radar was officially "invented" in 1935 when Watson-Watt was asked by
the air ministry to calculate the possibility of using RF as a "death
ray" to cook an airplane pilot in flight. Some calculations were
performed which quickly determined that it was impossible. However,
he suggested that a similar system could be used to detect the
airplane by combining the range finding of ionospheric layers
techniques and the direction finding techniques used to detect
thunderstorms. At the time, there were also proposals for aircraft
detection using infrared and sound detection. Not wanting to lose
their funding, it was agreed that RF reflection was a good idea and
that research should continue on this different path.

--
Jeff Liebermann jeffl@cruzio.com
150 Felker St #D http://www.LearnByDestroying.com
Santa Cruz CA 95060 http://802.11junk.com
Skype: JeffLiebermann AE6KS 831-336-2558

504. Re: Possible new problem TVI

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-16 19:51:04 UTC
From: "Sal M. Onella" <salmonella@food.poisoning.org>
Message-ID: <KISZl.5516$jl6.2167@newsfe11.iad>
Source record: 14616

"Rich Griffiths" <richgrif@one.net> wrote in message
news:hLGdnbQ9NdcVNavXnZ2dnUVZ_qidnZ2d@posted.nuvoxcommunications...

>
> I switched to digital about 3 years ago. All over-the-air, no cable or
> satellite. The little bit of TVI had been seeing went away entirely when
> I switched.

But sometimes the circuits in the TV pick up TVI directly. In my unfortunate case, a big tube Sony, circa 1995, is on a digital cable box that outputs S-video/stereo audio to the TV. When I put antennas too close to the living room, I caused analog TVI in the form of SSB "wah-wah" in the audio, with flashing and streaking in the picture. (Had I been getting in at RF channel frequencies, digital would have shown tiling and audio dropout, which it didn't.) I filtered the heck out of those three cables and it only helped a little. I think the internals of the set are the receiving antenna(s).

I don't see a Faraday cage for a 35" TV in my future.
She-who-must-be-obeyed wouldn't like it, either.

"Sal"

505. Re: Update: DTV antenna on VHF

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-16 20:06:53 UTC
From: "Sal M. Onella" <salmonella@food.poisoning.org>
Message-ID: <zXSZl.12690$Dr4.6545@newsfe24.iad>
Source record: 14617

"Rich Griffiths" <richgrif@one.net> wrote in message
news:Nu-dneoNBKAdiajXnZ2dnUVZ_hVi4p2d@posted.nuvoxcommunications...
> On Sun, 14 Jun 2009 00:46:50 -0700, Sal M. Onella wrote:
>
> > "Rich Griffiths" <richgrif@one.net> wrote in message
> > news:vv2dnVQYOJdGR6_XnZ2dnUVZ_jdi4p2d@posted.nuvoxcommunications...
> >
> >> Until this past year (when rotator cuff surgery took me out), I had
> >> been doing quite a bit of microwave work as a rover (903 MHz - 10 GHz).
> >> I was often impressed by how far over the horizon it would work with
> >> an antenna only about 5 ft off the ground and about 1 W of power.

> >
> > I did a little mickey-wave engineering, myself. Point-to-point is
> > easier than broadcast!
> >
> > "Sal"

< snip >

> but as a rover the operating mantra was always
> just 'Let's try it".

< snip >

> As an amateur rover, I generally found point-to-point to be more
> difficult, because of simple real-world Ham issues that don't have a lot
> to do with heavy theory.

That changes things for me! I didn't know the term "microwave rover" was
being applied to amateur radio. I never heard it before and I wrongly
thought you were talking about work -- traveling as a microwave installer.
My bad.

I am absolutely a believer in "Let's try it!" Some very good times have
come as surprises.

"Sal"

506. Re: Atlanta DTV reception on rabbit ears

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-16 21:34:50 UTC
From: Gordon <gonzo@alltomyself.com>
Message-ID: <Xns9C2C94507C4Dgreederxprtnet@194.177.98.144>
Source record: 14618

MTV <volztexas@comcast.net> wrote in news:3IAZl.158025$Lo1.62292@en-nntp-04.dc1.easynews.com:

> I put rabbit ears on top of a cabinet, extended 'ears' all the way out,
> put the 'ears' down flat (dipole) and turned broadside to TV transmitter
> area. Best reception other than outside antenna.
>
> Marv

You don't even need to put them all the way out. If channels 2-7 are vacated in your area, then you only need to have them out about 18 inches.

507. Detecting the high def TV for the Google Lunar X Prize.

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-16 22:57:38 UTC
From: Robert Clark <rgregoryclark@yahoo.com>
Message-ID: <609fd5d7-b15e-4bf1-a5c5-60c4c68cc367@e21g2000yqb.googlegroups.com>
Source record: 14619
Cross-posted to: sci.astro,rec.radio.amateur.space,rec.radio.amateur.antenna,sci.astro.seti,sci.physics

On another forum there was debate about whether the requirement of
"near real time" high definition video transmissions was achievable
for a such a low-cost mission.
It would certainly be doable if the receiving antennas on Earth were
the large radio antennas used for space communications with
interplanetary probes or those radio antennas used for radio
astronomy. This is evidenced by the fact that the Kaguya(Selene) lunar
orbiter mission was able to send high definition video to a large
receiving dish radio antenna. And also by the fact that DirecTV sends
high definition video to only 2 foot size antennas from geosynchronous
orbit; so 10 times larger antennas would be able to receive such
signals from a 10 times larger distance at the Moon.
However, I was wondering if it would be possible to detect this using
amateur sized equipment at such a large distance. Usually for
receiving high data rates you used transmissions at very high
frequencies, as higher frequencies can carry more data. For instance
both Kaguya and DirecTV transmit the high def video at gigahertz
frequencies.
However, for the system I'm imaging I'm thinking of using much lower
frequencies, and necessarily longer wavelengths. What I wanted to do
is transmit at decametric wavelengths. High data transmissions rates
would be achieved by making it be pulsed in an on-off fashion at high
intensity but at a rapid rate.
On that other forum the data rate required for high def TV was given
as 256,000 bits per second. So I wanted to make these transmissions be
pulsed at this rapid rate at wavelengths of a few tens's of meters.
My decametric wavelength requirement was because of the fact that
high schools and universities have programs for detecting radio
emissions from Jupiter at these wavelengths:

NASA's Radio JOVE Project.
http://radiojove.gsfc.nasa.gov/

The Discovery of Jupiter's Radio Emissions.
How a chance discovery opened up the field of Jovian radio studies.
by Dr. Leonard N. Garcia
http://radiojove.gsfc.nasa.gov/library/sci_briefs/discovery.html

These school and university receiving antennas on Earth consist of
dozens to hundreds of vertical dipoles of lengths at the meters scale
to correspond to the radio wavelengths. Some questions I had: how
intense would the pulse have to be on the Moon to be detectable from
the Moon above background noise for a detector on Earth of say a few
dozen dipoles? Could this be done for the transmitter of power of say

a few hundred watts for a low cost, low weight lander mission? Could
the transmitter antenna on the moon be only a few meters size for the
low weight requirement?
A secondary purpose I had in mind was a pet project of mine involving
linking these many school receivers to form a global telescope at
decametric wavelengths:

From: rgcl...@my-deja.com (Robert Clark)
Date: 23 May 2001 11:15:06 -0700
Subject: Will amateur radio astronomers be the first to directly
detect extrasolar planets?
Newsgroups: rec.radio.amateur.space, rec.radio.amateur.antenna,
sci.astro, sci.astro.seti, sci.space.policy
http://groups.google.com/group/sci.astro.seti/browse_frm/thread/c0018b68662c14e9

The long wavelengths should make the requirements for accurate
distance information and timing synchrony between the separate
detectors easy to manage even for amateur systems. Using this method
might make the detection achievable even if the power or transmitting
antenna size requirements are not practical for a low cost, low weight
lander on the Moon for an individual detector on Earth.
The recent achievement of real-time very long baseline interferometry
should make it possible to integrate these separate detector signals
in real-time as well:

Astronomers Demonstrate a Global Internet Telescope.
Date Released: Friday, October 08, 2004
Source: Jodrell Bank Observatory
http://www.spaceref.com/news/viewpr.html?pid=15251

Bob Clark

508. Re: Update: DTV antenna on VHF

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-16 23:16:59 UTC
From: Rich Griffiths <richgrif@one.net>
Message-ID: <4eqdndUhbaB2uqXXnZ2dnUVZ_hBi4p2d@posted.nuvoxcommunications>
Source record: 14620

On Tue, 16 Jun 2009 13:06:53 -0700, Sal M. Onella wrote:

<snip>
> I didn't know the term "microwave rover"
> was being applied to amateur radio.

Roving (or "rovering", nobody seems to know which it should be) is a
great aspect of VHF & up operating. It's taken me to some beautiful
sites where it was wonderful to be in the outdoors enjoying the weather
and the radio at the same time -- except in January ;-)

Rover is a separate category in the ARRL and other VHF & Up contests.
See, e.g., http://www.arrl.org/contests/rules/2008/jan-vhf-ss.html

Us hard-working, dedicated operators :-) get special consideration when
computing scores.

--
Rich

509. Re: Update: DTV antenna on VHF

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-17 01:09:04 UTC
From: tom <news4792@taring.org>
Message-ID: <4a384282$0$92358$8046368a@newsreader.iphouse.net>
Source record: 14621

Rich Griffiths wrote:
> Roving (or "rovering", nobody seems to know which it should be) is a
> great aspect of VHF & up operating. It's taken me to some beautiful
> sites where it was wonderful to be in the outdoors enjoying the weather
> and the radio at the same time -- except in January ;-)
>
> Rover is a separate category in the ARRL and other VHF & Up contests.
> See, e.g., http://www.arrl.org/contests/rules/2008/jan-vhf-ss.html
>
> Us hard-working, dedicated operators :-) get special consideration when
> computing scores.
>

As a member of the club that has taken roving to new heights over the years, I can safely say that it is indeed "roving".

The rovers got us as many 10GHz grids this weekend as the sum total of the previous 11 contests. And they don't play the games that some of the east coast "owned" rovers do. The rovers in the upper Midwest will, and will try to, work anyone and everyone. Cooperation amongst competition makes for a better contest.

And thank you for roving, something I always take the time to say to anyone signing /R during the contest. You guys are definitely the hard working and dedicated operators out there. I just wish roverlog wasn't so weird and flaky.

tom
K0TAR

510. Re: Detecting the high def TV for the Google Lunar X Prize.

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-17 01:43:54 UTC
From: Jim Lux <james.p.lux@jpl.nasa.gov>
Message-ID: <h19hoo$i04$1@news.jpl.nasa.gov>
Source record: 14622
Cross-posted to: sci.astro,rec.radio.amateur.space,rec.radio.amateur.antenna,sci.astro.seti,sci.physics

Robert Clark wrote:
> On another forum there was debate about whether the requirement of
> "near real time" high definition video transmissions was achievable
> for a such a low-cost mission.
> It would certainly be doable if the receiving antennas on Earth were
> the large radio antennas used for space communications with
> interplanetary probes or those radio antennas used for radio
> astronomy. This is evidenced by the fact that the Kaguya(Selene) lunar
> orbiter mission was able to send high definition video to a large
> receiving dish radio antenna. And also by the fact that DirecTV sends
> high definition video to only 2 foot size antennas from geosynchronous
> orbit; so 10 times larger antennas would be able to receive such
> signals from a 10 times larger distance at the Moon.

Don't forget that DirecTV radiates a LOT more power than a typical deep space probe. AND they often have a higher gain antenna. A geosync relay satellite might have 96 TWTAs, each several hundred watts, on it, feeding a very clever multiple feed dish which is many meters in diameter (look at Thuraya, for instance).

> However, I was wondering if it would be possible to detect this using
> amateur sized equipment at such a large distance. Usually for
> receiving high data rates you used transmissions at very high
> frequencies, as higher frequencies can carry more data. For instance
> both Kaguya and DirecTV transmit the high def video at gigahertz
> frequencies.

There's a moderately active Amateur DSN group that listens for things like Chandrayaan or MRO using relatively small dishes (1-2 meters).

The choice of higher frequencies isn't because it carries more data. It's because a higher frequency allows you to get more gain with the same physical antenna size. Double the frequency, and your antenna gain goes up by a factor of 4, at both ends of the link.. a total of 12 dB improvement in SNR, for the same transmitter power and receiver noise figure. And, there's more spectrum available up high.

> However, for the system I'm imaging I'm thinking of using much lower
> frequencies, and necessarily longer wavelengths. What I wanted to do
> is transmit at decametric wavelengths. High data transmissions rates
> would be achieved by making it be pulsed in an on-off fashion at high
> intensity but at a rapid rate.

How high a data rate? If you're at 30 MHz (10m lambda), you're not going to be pulsing at 10 MHz, or you're going to be generating a signal

that extends from 20 to 40 MHz (and then some). You need a low symbol rate with lots of bits per symbol, which in turn means you'll need lots of SNR.

> On that other forum the data rate required for high def TV was given
> as 256,000 bits per second.

HDTV, as carried on broadcast TV, is 19.8 Mbps. If you're happy with a lower frame rate, or can do a lot of frame/frame compression, you can get it lower.

So I wanted to make these transmissions be
> pulsed at this rapid rate at wavelengths of a few tens's of meters.
> My decametric wavelength requirement was because of the fact that
> high schools and universities have programs for detecting radio
> emissions from Jupiter at these wavelengths:
>
> NASA's Radio JOVE Project.
> http://radiojove.gsfc.nasa.gov/

>
> These school and university receiving antennas on Earth consist of
> dozens to hundreds of vertical dipoles of lengths at the meters scale
> to correspond to the radio wavelengths.

Any one school only has a couple dipoles up.. the gain is quite low.

Some questions I had: how
> intense would the pulse have to be on the Moon to be detectable from
> the Moon above background noise for a detector on Earth of say a few
> dozen dipoles? Could this be done for the transmitter of power of say
> a few hundred watts for a low cost, low weight lander mission? Could
> the transmitter antenna on the moon be only a few meters size for the
> low weight requirement?

How technical do you want to get? There's a book about space telecommunications system design available for downloading from JPL (http://descanso.jpl.nasa.gov/ somewhere on that site)

Here's some basic numbers you'll need:

Free space path loss in dB = 32.44 + 20*log10(distance in km) + 20 *log10(frequency in MHz)
That's between isotropic antennas (0dBi)..

Antenna beamwidth is 70 degrees/ (diameter of antenna in wavelengths)
Antenna gain is 27000/(beamwidth^2)

A typical receiver noise figure (after figuring in losses in coax/waveguide, etc.) is probably 3dB.

kTB noise is -174 dBm/Hertz * 10*log10(bandwidth in Hz)

> A secondary purpose I had in mind was a pet project of mine involving
> linking these many school receivers to form a global telescope at
> decametric wavelengths:

Coherent combining would be a challenge, because of ionospheric
variability at HF, not to mention the other challenges.

Look up LOFAR or the SKA (Square Kilometer Array) for a fairly well
funded scheme.

511. Re: Detecting the high def TV for the Google Lunar X Prize.

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-17 03:06:44 UTC
From: tom <news4792@taring.org>
Message-ID: <4a385dbf$0$18863$8046368a@newsreader.iphouse.net>
Source record: 14623
Cross-posted to: sci.astro,rec.radio.amateur.space,rec.radio.amateur.antenna,sci.astro.seti,sci.physics

Jim Lux wrote:
>
> Don't forget that DirecTV radiates a LOT more power than a typical deep
> space probe. AND they often have a higher gain antenna. A geosync relay
> satellite might have 96 TWTAs, each several hundred watts, on it,
> feeding a very clever multiple feed dish which is many meters in
> diameter (look at Thuraya, for instance).
>

Wow. 96 TWTs with several hundred watts each. From a satellite. And
what's the efficiency?

So these are powered by what? Small nuclear reactors?

Certainly not solar panels.

tom
K0TAR

512. Re: Detecting the high def TV for the Google Lunar X Prize.

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-17 04:10:20 UTC
From: "Sal M. Onella" <salmonella@food.poisoning.org>
Message-ID: <N0_ZI.6006$x_6.758@newsfe09.iad>
Source record: 14624
Cross-posted to: sci.astro,rec.radio.amateur.space,rec.radio.amateur.antenna,sci.astro.seti

"Jim Lux" <james.p.lux@jpl.nasa.gov> wrote in message
news:h19hoo$i04$1@news.jpl.nasa.gov...

Snip >

> HDTV, as carried on broadcast TV, is 19.8 Mbps. If you're happy with a
> lower frame rate, or can do a lot of frame/frame compression, you can
> get it lower.

Yes. OP said "near real time," which I take to mean "OK to drop some frames," like the satellite video phones the reporters use from the boondocks. Thus, high-def can be confined to a lot lower bandwidth if you don't mind seeing compression artifacts as each frame is being built on the screen.

I have a contemporary example: KABC-DT, Channel 7 Los Angeles is high-def on 7-1 AND high-def on 7-2, with a service called Living Well. See http://livingwell.tv/Welcome.html.

Living Well is apparently getting a skimpy bitshare, as compression artifacts are obvious, especially on scene changes and motion, whereas ABC programming on 7-1 is just beautiful. Living Well is very good, sharp HD, but you can see details being "painted in" for a quarter-second after a scene change.

"Sal"

513. Re: Detecting the high def TV for the Google Lunar X Prize.

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-17 04:19:13 UTC
From: Jim Lux <jimlux@earthlink.net>
Message-ID: <731a24f8-4853-48e3-8189-b1f56c3920e9@k8g2000yqn.googlegroups.com>
Source record: 14625
Cross-posted to: sci.astro,rec.radio.amateur.space,rec.radio.amateur.antenna,sci.astro.seti,sci.physics

On Jun 16, 8:06 pm, tom <news4...@taring.org> wrote:
> Jim Lux wrote:
>
> > > Don't forget that DirecTV radiates a LOT more power than a typical deep
> > > space probe. AND they often have a higher gain antenna. A geosync relay
> > > satellite might have 96 TWTAs, each several hundred watts, on it,
> > > feeding a very clever multiple feed dish which is many meters in
> > > diameter (look at Thuraya, for instance).
>
> > Wow. 96 TWTs with several hundred watts each. From a satellite. And
> > what's the efficiency?
>
> > So these are powered by what? Small nuclear reactors?
>
> > Certainly not solar panels.
>
> > tom
> > K0TAR

Not all will necessarily be on at the same time.
Typical narrow band coupled cavity TWTAs can get over 50% efficiency
(DC in to RF out)
Yes Solar Panels..10kW would not be unusual.

See, e.g., http://en.wikipedia.org/wiki/ASTRIUM_E3000 ... 14 kW of
power from 45 m^2 of solar panels and 4500kg of satellite..

This is so far beyond what is used in the scientific space program
it's mind boggling. But, hey, out of the $1-2B cost, the TWTAs are
probably only 5-10% of the total, and there are definitely quantity
discounts.

514. Re: Detecting the high def TV for the Google Lunar X Prize.

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-17 06:14:05 UTC
From: No Spam <nospam@nospam.com>
Message-ID: <h1a1jd$4s2$1@news.albasani.net>
Source record: 14626
Cross-posted to: sci.astro,rec.radio.amateur.space,rec.radio.amateur.antenna,sci.astro.seti,sci.physics

On Tue, 16 Jun 2009 15:57:38 -0700, Robert Clark wrote:

> On another forum there was debate about whether the requirement of "near
> real time" high definition video transmissions was achievable for a such
> a low-cost mission.
> It would certainly be doable if the receiving antennas on Earth were
> the large radio antennas used for space communications with
> interplanetary probes or those radio antennas used for radio astronomy.
> This is evidenced by the fact that the Kaguya(Selene) lunar orbiter
> mission was able to send high definition video to a large receiving dish
> radio antenna. And also by the fact that DirecTV sends high definition
> video to only 2 foot size antennas from geosynchronous orbit; so 10
> times larger antennas would be able to receive such signals from a 10
> times larger distance at the Moon.
> However, I was wondering if it would be possible to detect this using
> amateur sized equipment at such a large distance. Usually for receiving
> high data rates you used transmissions at very high frequencies, as
> higher frequencies can carry more data. For instance both Kaguya and
> DirecTV transmit the high def video at gigahertz frequencies.
> However, for the system I'm imaging I'm thinking of using much lower
> frequencies, and necessarily longer wavelengths. What I wanted to do is
> transmit at decametric wavelengths. High data transmissions rates would
> be achieved by making it be pulsed in an on-off fashion at high
> intensity but at a rapid rate.
> On that other forum the data rate required for high def TV was given
> as 256,000 bits per second. So I wanted to make these transmissions be
> pulsed at this rapid rate at wavelengths of a few tens's of meters.
> My decametric wavelength requirement was because of the fact that
> high schools and universities have programs for detecting radio
> emissions from Jupiter at these wavelengths:
>
> NASA's Radio JOVE Project.
> http://radiojove.gsfc.nasa.gov/
>
> The Discovery of Jupiter's Radio Emissions. How a chance discovery
> opened up the field of Jovian radio studies. by Dr. Leonard N. Garcia
> http://radiojove.gsfc.nasa.gov/library/sci_briefs/discovery.html
>
> These school and university receiving antennas on Earth consist of
> dozens to hundreds of vertical dipoles of lengths at the meters scale to
> correspond to the radio wavelengths. Some questions I had: how intense
> would the pulse have to be on the Moon to be detectable from the Moon
> above background noise for a detector on Earth of say a few dozen

> dipoles? Could this be done for the transmitter of power of say a few
> hundred watts for a low cost, low weight lander mission? Could the
> transmitter antenna on the moon be only a few meters size for the low
> weight requirement?
> A secondary purpose I had in mind was a pet project of mine involving
> linking these many school receivers to form a global telescope at
> decametric wavelengths:
>
> From: rgcl...@my-deja.com (Robert Clark) Date: 23 May 2001 11:15:06
> -0700
> Subject: Will amateur radio astronomers be the first to directly detect
> extrasolar planets?
> Newsgroups: rec.radio.amateur.space, rec.radio.amateur.antenna,
> sci.astro, sci.astro.seti, sci.space.policy
> http://groups.google.com/group/sci.astro.seti/browse_frm/thread/
c0018b68662c14e9
>
> The long wavelengths should make the requirements for accurate
> distance information and timing synchrony between the separate detectors
> easy to manage even for amateur systems. Using this method might make
> the detection achievable even if the power or transmitting antenna size
> requirements are not practical for a low cost, low weight lander on the
> Moon for an individual detector on Earth.
> The recent achievement of real-time very long baseline interferometry
> should make it possible to integrate these separate detector signals in
> real-time as well:
>
> Astronomers Demonstrate a Global Internet Telescope. Date Released:
> Friday, October 08, 2004 Source: Jodrell Bank Observatory
> http://www.spaceref.com/news/viewpr.html?pid=15251
>

You will never get uncompressed HD video transmitted from the lunar surface. And really, there is no need for it if the compression is handled right. Only a few people I know can do that part.

Since the image is mostly repetitive, a low bitrate can be achieved which should allow for a very good signal level path budget. this would make for a higher energy per bit and a more reasonable earth station within the budget of amateurs. (if thats the goal) To achieve a very low bitrate, such things as Pre/post-distortion to utilize less bits, (black gamas) using extremely long GOP structures and since the action of the video is extremely slow and repetitive, a slow frame rate such as 1fps. These can be counteracted at the receive station with software without effecting the total image resolution.

The image resolution is where the wow factor is anyway! :-)

My *guess* is that whomever would put a spacecraft on the lunar surface would only have one high speed datapath back. The HD transport stream would be muxed in with the other data elements of the spacecraft on a

transmission system without consideration for amateur reception. Perhaps encrypted if a commercial entity is paying for the broadcast rights.

515. Re: Detecting the high def TV for the Google Lunar X Prize.

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-17 13:31:42 UTC
From: Jim Lux <jimlux@earthlink.net>
Message-ID: <a8aced6a-cf3e-4664-8bc3-5e59d701c894@c9g2000yqm.googlegroups.com>
Source record: 14627
Cross-posted to: sci.astro,rec.radio.amateur.space,rec.radio.amateur.antenna,sci.astro.seti

> Yes. OP said "near real time," which I take to mean "OK to drop some
> frames," like the satellite video phones the reporters use from the
> boondocks. Thus, high-def can be confined to a lot lower bandwidth if you
> don't mind seeing compression artifacts as each frame is being built on the
> screen.
>
> I have a contemporary example: KABC-DT, Channel 7 Los Angeles is high-def
> on 7-1 AND high-def on 7-2, with a service called Living Well.
 Seehttp://livingwell.tv/Welcome.html.
>
> Living Well is apparently getting a skimpy bitshare, as compression
> artifacts are obvious, especially on scene changes and motion, whereas ABC
> programming on 7-1 is just beautiful. Living Well is very good, sharp HD,
> but you can see details being "painted in" for a quarter-second after a
> scene change.
>

There's a fairly complex trade. For a lunar mission, the scene is
going to be pretty static, just shifted. (not like there's a baskeball
team doing a fast break in the field of view), so it should compress
well, given a suitable algorithm.

The challenge is that compression (especially good compression) takes
computational power. So you have a tradeoff: do you spend you joules
on compressing the images and radiate less RF energy, or do you
compress less, and use a bigger power amp. There's also a mass
tradeoff.. big amp or big antenna. The big antenna needs more
accurate pointing, which increases complexity. Or the trade of
frequency selection, higher frequency means more antenna gain, but
usually lower efficiency in the PA and higher NF in the receiver end,
as well as higher probabiliity of weather related fading.

And even there, because Moore's law means that semiconductor
technology is always advancing, the tradespace is shifting towards
more processing (because it gets cheaper in size, weight, power, while
power amps are pretty much at the physics limits)

This is, of course, "rocket science".. or more properly, spacecraft
system engineering. It's straightforward, for the most part, but non-
trivial. Pick your requirements, define the tradespace(s), try
configurations and see what happens.

516. Re: Detecting the high def TV for the Google Lunar X Prize.

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-17 15:32:19 UTC
From: Jim Lux <james.p.lux@jpl.nasa.gov>
Message-ID: <h1b2bj$2bq$1@news.jpl.nasa.gov>
Source record: 14629

Jim Lux wrote:
>> Yes. OP said "near real time," which I take to mean "OK to drop some
>> frames," like the satellite video phones the reporters use from the
>> boondocks. Thus, high-def can be confined to a lot lower bandwidth if you
>> don't mind seeing compression artifacts as each frame is being built on the
>> screen.
>>
>>

Here's a back of the envelope link budget for a 500E3 km link carrying 1 Mbps

Let's assume 2GHz for the working frequency (not necessarily a good choice, but somewhere to start)

Free Space Path Loss from Moon to earth, between isotropic antennas = 32.44 + 20*log10(500E3) + 20*log10(2E3) = 32.44 + 114 + 66 = about 212 dB

Assume an antenna 2m in diameter at one end (moon end)
lambda for 2GHz is 15cm, so the antenna is 13 wavelengths in diameter
Beamwidth will be about 70/13 = 5 degrees.. OK, because Earth is 2 degrees wide from the moon, so you can just point at the middle of the visible earth.

Assume an antenna 10m in diameter at the earth end. Beamwidth will be 1 degree, twice the visible lunar disc size, so you can just point at the moon, generally.

Gains of antennas
2m @ 2GHz = 30dB
10m @ 2GHz = 44dB

Preceived at Earth = Ptransmitted +30 - 212 +44dB = Ptransmit -138dB.

Assume transmitting with 10 Watts or +40dBm..
Prec = -100dBm

Now, let's look at the receiver:
Power Spectral density of Noise is kT+NF.. kT is -174dBm/Hz and a decent NF might be 2dB (allowing for some plumbing losses, etc.

-172 dBm/Hz

Eb (energy/Bit) = -100dBm -60dB (1Mbps) = -160dBmJ

So, Eb/No is about +12dB... If you allow 2dB for implementation loss, that gets you to 10dB, which will get you a BER of 1E-6, which isn't terrible. Coding will improve it, etc.

Take home message:

10W at 2Ghz with reasonably sized antennas at moon and earth can carry 1 Mbps.

Scales linearly with data rate.. You want 10Mbps, you need 100W. Or bigger antennas.

517. Re: AT&T Usenet Netnews Service Shutting Down

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-17 15:34:01 UTC
From: Cecil Moore <w5dxp@hotmail.com>
Message-ID: <I18_I.21677$mX2.2775@newsfe05.iad>
Source record: 14628

newsmaster@bellsouth.net wrote:
> Please note that on or around July 15, 2009, AT&T will no longer be
> offering access to the Usenet Netnews service.

I'm one of those affected. I've subscribed to:

http://teranews.com/
--
73, Cecil, w5dxp.com

518. Re: Possible new problem TVI

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-17 17:13:44 UTC
From: JB <nospam@goofball.net>
Message-ID: <cv9_l.1561$P5.103@nwrddc02.gnilink.net>
Source record: 14630

"Sal M. Onella" <salmonella@food.poisoning.org> wrote in message
news:KISZl.5516$jI6.2167@newsfe11.iad...
>
> "Rich Griffiths" <richgrif@one.net> wrote in message
> news:hLGdnbQ9NdcVNavXnZ2dnUVZ_qidnZ2d@posted.nuvoxcommunications...
>
> >
> > I switched to digital about 3 years ago. All over-the-air, no cable or
> > satellite. The little bit of TVI had been seeing went away entirely
when
> > I switched.
>
> But sometimes the circuits in the TV pick up TVI directly. In my
> unfortunate case, a big tube Sony, circa 1995, is on a digital cable box
> that outputs S-video/stereo audio to the TV. When I put antennas too
close
> to the living room, I caused analog TVI in the form of SSB "wah-wah" in
the
> audio, with flashing and streaking in the picture. (Had I been getting in
> at RF channel frequencies, digital would have shown tiling and audio
> dropout, which it didn't.) I filtered the heck out of those three cables
> and it only helped a little. I think the internals of the set are the
> receiving antenna(s).
>
> I don't see a Faraday cage for a 35" TV in my future.
> She-who-must-be-obeyed wouldn't like it, either.
>
> "Sal"
>
If you ground all the inputs, do you still have interference? Common mode
is the usual problem. Given the number of DVD-players, VCR's, surround
sound systems, switchboxes, Media Center computers tied in, you could easily
have more problems than which of seven remote controls to look for.

519. Re: AT&T Usenet Netnews Service Shutting Down

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-17 18:10:48 UTC
From: Tom Donaly <dtdonaly@sbcglobal.net>
Message-ID: <kda_l.41$Dx2.38@flpi146.ffdc.sbc.com>
Source record: 14631

Cecil Moore wrote:
> newsmaster@bellsouth.net wrote:
>> Please note that on or around July 15, 2009, AT&T will no longer be
>> offering access to the Usenet Netnews service.
>
> I'm one of those affected. I've subscribed to:
>
> http://teranews.com/
> --
> 73, Cecil, w5dxp.com

It sounds as if AT&T is having financial problems. Why else would
they cancel Usenet service?
73,
Tom Donaly, KA6RUH

520. Re: Possible new problem TVI

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-17 18:26:45 UTC
From: Rich Griffiths <richgrif@one.net>
Message-ID: <9PSdna8Ppbj4qKTXnZ2dnUVZ_t-dnZ2d@posted.nuvoxcommunications>
Source record: 14632

On Tue, 16 Jun 2009 12:51:04 -0700, Sal M. Onella wrote:

> "Rich Griffiths" <richgrif@one.net> wrote in message
> news:hLGdnbQ9NdcVNavXnZ2dnUVZ_qidnZ2d@posted.nuvoxcommunications...
>
>
>> I switched to digital about 3 years ago. All over-the-air, no cable or
>> satellite. The little bit of TVI had been seeing went away entirely
>> when I switched.
>
> But sometimes the circuits in the TV pick up TVI directly. In my
> unfortunate case, a big tube Sony, circa 1995, is on a digital cable box
> that outputs S-video/stereo audio to the TV. When I put antennas too
> close to the living room, I caused analog TVI in the form of SSB
> "wah-wah" in the audio, with flashing and streaking in the picture.
> (Had I been getting in at RF channel frequencies, digital would have
> shown tiling and audio dropout, which it didn't.) I filtered the heck
> out of those three cables and it only helped a little. I think the
> internals of the set are the receiving antenna(s).

I guess this analog-to-digital transition is going to be another your-
mileage-may-vary situation, but I do hope it works out for most folks.

Did you also check out the power wiring as another possible antenna? If
proximity of the RF source and the TV system was a factor, I think I'd
worry more about the susceptibility of the receiving system more than the
cleanness of the RF source, and RF getting in by the power cord used to
be a common problem.

>
> I don't see a Faraday cage for a 35" TV in my future.
> She-who-must-be-obeyed wouldn't like it, either.
>
> "Sal"

For sure, it's not nice to fool .... OH! ... I guess you mean the
wife :-)

--
Rich

521. Re: AT&T Usenet Netnews Service Shutting Down

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-17 18:37:29 UTC
From: Michael Coslo <mjc5@psu.edu>
Message-ID: <h1bd59$dk1c$1@tr22n12.aset.psu.edu>
Source record: 14633

Tom Donaly wrote:
> Cecil Moore wrote:
>> newsmaster@bellsouth.net wrote:
>>> Please note that on or around July 15, 2009, AT&T will no longer be
>>> offering access to the Usenet Netnews service.
>>
>> I'm one of those affected. I've subscribed to:
>>
>> http://teranews.com/
>> --
>> 73, Cecil, w5dxp.com
>
> It sounds as if AT&T is having financial problems. Why else would
> they cancel Usenet service?

two biggest reasons:

Since binaries are stored on Netnews providers servers, they became one
of the most identifiable providers of Kiddie porn.

Netnews has a generous supply of crazies, some of whom post in here,
with a few posters managing to make thouhsands of posts every day. Most
with almost the same content.

It is no wonder that Netnews is being dropped like a hot potato among
ISP's. A huge liability if they were to carry binaries, and probably the
source of thousands of complaints if only carrying the groups.

- 73 de Mike N3LI -

522. Re: AT&T Usenet Netnews Service Shutting Down

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-17 19:28:13 UTC
From: Tom Donaly <dtdonaly@sbcglobal.net>
Message-ID: <ttb_l.43$iz2.13@nlpi070.nbdc.sbc.com>
Source record: 14634

Michael Coslo wrote:
> Tom Donaly wrote:
>> Cecil Moore wrote:
>>> newsmaster@bellsouth.net wrote:
>>>> Please note that on or around July 15, 2009, AT&T will no longer be
>>>> offering access to the Usenet Netnews service.
>>>
>>> I'm one of those affected. I've subscribed to:
>>>
>>> http://teranews.com/
>>> --
>>> 73, Cecil, w5dxp.com
>>
>> It sounds as if AT&T is having financial problems. Why else would
>> they cancel Usenet service?
>
>
> two biggest reasons:
>
> Since binaries are stored on Netnews providers servers, they became one
> of the most identifiable providers of Kiddie porn.
>
> Netnews has a generous supply of crazies, some of whom post in here,
> with a few posters managing to make thouhsands of posts every day. Most
> with almost the same content.
>
>
> It is no wonder that Netnews is being dropped like a hot potato among
> ISP's. A huge liability if they were to carry binaries, and probably the
> source of thousands of complaints if only carrying the groups.
>
> - 73 de Mike N3LI -
>

The same thing could be said of independent newsgroup providers. Are
they shutting down, too? I seriously doubt that child pornography or
nut-case users would have any influence on AT&T's decision-making
process.
73,
Tom Donaly, KA6RUH

523. Re: AT&T Usenet Netnews Service Shutting Down

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-17 19:50:16 UTC
From: Cecil Moore <w5dxp@hotmail.com>
Message-ID: <ZNb_l.730$hE.228@newsfe13.iad>
Source record: 14635

Tom Donaly wrote:
> It sounds as if AT&T is having financial problems. Why else would
> they cancel Usenet service?

Many ISPs have canceled and are canceling Usenet service
in order to be politically correct. Instead of trying to
define and filter politically incorrect newsgroups, they
are simply shutting down Usenet servers.
--
73, Cecil, w5dxp.com

524. Re: "Panel" style UHF DTV antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-17 20:02:13 UTC
From: Baron <baron.nospam@linuxmaniac.nospam.net>
Message-ID: <h1bi46$1um$1@news.eternal-september.org>
Source record: 14636

Gordon wrote:

> It works OK, but you would
> get better results with copper wire, not steel coat hangers.

Just Curious.
In what way would copper improve performance over using steel ?

--
Best Regards:
Baron.

525. Re: "Panel" style UHF DTV antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-17 20:25:04 UTC
From: Cecil Moore <w5dxp@hotmail.com>
Message-ID: <yic_l.7689$7C4.380@newsfe04.iad>
Source record: 14637

Baron wrote:
> In what way would copper improve performance over using steel ?

Copper is less lossy than steel.
--
73, Cecil, w5dxp.com

526. Re: Update: DTV antenna on VHF

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-17 20:58:28 UTC
From: Rich Griffiths <richgrif@one.net>
Message-ID: <9PSdnakPpbhpxaTXnZ2dnUVZ_t-dnZ2d@posted.nuvoxcommunications>
Source record: 14638

On Tue, 16 Jun 2009 20:09:04 -0500, tom wrote:

> Rich Griffiths wrote:
<snip my stuff>

> As a member of the club that has taken roving to new heights over the
> years, I can safely say that it is indeed "roving".
>
> The rovers got us as many 10GHz grids this weekend as the sum total of
> the previous 11 contests. And they don't play the games that some of
> the east coast "owned" rovers do.

Sshhhh! That's supposed to be a secret ;-)

> The rovers in the upper Midwest will,
> and will try to, work anyone and everyone. Cooperation amongst
> competition makes for a better contest.

I have no sense of shame. I'll work anyone :-)
>
> And thank you for roving, something I always take the time to say to
> anyone signing /R during the contest. You guys are definitely the hard
> working and dedicated operators out there.

My pleasure, but I appreciate the compliment.

--
Rich W2RG EM79 (and EM78, EN80, EM89, ...)

527. Re: Coax + Ladder Line

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-18 00:58:29 UTC
From: Mike Coslo <mjc5@psu.edu>
Message-ID: <h1c3fj$fc06$1@tr22n12.aset.psu.edu>
Source record: 14639

nm5k@wt.net wrote:

> Sure, there are losses with the balun used in most tuners, but I
> consider that a price to pay for a multi band antenna.

Chiming in late on this one...

Mythical attributes aside, I believe the real reason that ladder line has become more popular is:

1. Almost all rigs are All HF band these days.

2. Many people have just one antenna they can put up at any given time. Whether it is space considerations, maintaining a low profile or keeping the XYL happy I remember the discussions with my wife when I wanted to put up the HF vertical. "Why do you need two antennas?" "Are you going to transmit two signals at the same time?". Twasn't easy, and a lot of Hams might lose that argument.

So assuming it is a doublet, and I wanted to run 80 to 10 meters, I'd put up much wire as I could, not mess with coax, just run ladder line to a window panel, then into the house, into a tuner that can handle balanced line. And pay attention to the lengths that might make for trouble in matching.

- 73 de Mike N3LI -

528. Re: AT&T Usenet Netnews Service Shutting Down

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-18 01:48:20 UTC
From: Tom Donaly <dtdonaly@sbcglobal.net>
Message-ID: <Y8h_l.102$lv5.27@flpi149.ffdc.sbc.com>
Source record: 14640

Cecil Moore wrote:
> Tom Donaly wrote:
>> It sounds as if AT&T is having financial problems. Why else would
>> they cancel Usenet service?
>
> Many ISPs have canceled and are canceling Usenet service
> in order to be politically correct. Instead of trying to
> define and filter politically incorrect newsgroups, they
> are simply shutting down Usenet servers.
> --
> 73, Cecil, w5dxp.com

That sounds paranoid to me, Cecil. Most of the people who run companies like AT&T are dyed-in-the-wool Republicans who oppose political correctness to the bone. I still think it might have something to do with money.
73,
Tom Donaly, KA6RUH

529. Re: Update: DTV antenna on VHF

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-18 03:09:53 UTC
From: tom <news4792@taring.org>
Message-ID: <4a39b04d$0$92352$8046368a@newsreader.iphouse.net>
Source record: 14641

Rich Griffiths wrote:
>> The rovers got us as many 10GHz grids this weekend as the sum total of
>> the previous 11 contests. And they don't play the games that some of
>> the east coast "owned" rovers do.
>
> Sshhhh! That's supposed to be a secret ;-)
>

An unfortunate smear on the east coast in general, especially since I am from there. It is well known who the stations/clubs are that get away with it. I would make a disparaging remark about the blessed League caring about cheating here, but it would offend the masses.

tom
K0TAR

530. Re: AT&T Usenet Netnews Service Shutting Down

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-18 03:41:16 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <sf6dnQ-XTOHDKqTXnZ2dnUVZ_sadnZ2d@giganews.com>
Source record: 14642

Tom Donaly wrote:
>
> The same thing could be said of independent newsgroup providers. Are
> they shutting down, too? I seriously doubt that child pornography or
> nut-case users would have any influence on AT&T's decision-making
> process.
> 73,
> Tom Donaly, KA6RUH

My independent local provider dropped Usenet newsgroups a couple of weeks ago.

Roy Lewallen, W7EL

531. Re: Possible new problem TVI

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-18 05:51:11 UTC
From: "Sal M. Onella" <salmonella@food.poisoning.org>
Message-ID: <jBk_l.1472$dg5.340@newsfe25.iad>
Source record: 14643

"JB" <nospam@goofball.net> wrote in message
news:cv9_l.1561$P5.103@nwrddc02.gnilink.net...
>
> "Sal M. Onella" <salmonella@food.poisoning.org> wrote in message
> news:KISZl.5516$jI6.2167@newsfe11.iad...

< snip >

> > But sometimes the circuits in the TV pick up TVI directly. In my
> > unfortunate case, a big tube Sony, circa 1995, is on a digital cable box
> > that outputs S-video/stereo audio to the TV.

< snip >

> >
> If you ground all the inputs, do you still have interference? Common
mode
> is the usual problem. Given the number of DVD-players, VCR's, surround
> sound systems, switchboxes, Media Center computers tied in, you could
easily
> have more problems than which of seven remote controls to look for.

I will try that and see what happens. Thanks.

"Sal"

532. Re: AT&T Usenet Netnews Service Shutting Down

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-18 12:34:20 UTC
From: Cecil Moore <w5dxp@hotmail.com>
Message-ID: <gvq_l.7834$7C4.1192@newsfe04.iad>
Source record: 14644

Tom Donaly wrote:
> That sounds paranoid to me, Cecil.

I read it on www.drudgereport.com/ The example was
a teenager accessing alt.sex.*

> I still think it might have something to do with money.

No doubt it affects the bottom line.
--
73, Cecil, IEEE, OOTC, http://www.w5dxp.com

533. Re: AT&T Usenet Netnews Service Shutting Down

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-18 13:36:42 UTC
From: Dan Richardson <k6mhe@k6mhe.com>
Message-ID: <lkgk35tjgu5906cd4082n1i3knlp14k16n@4ax.com>
Source record: 14645

On Wed, 17 Jun 2009 20:41:16 -0700, Roy Lewallen <w7el@eznec.com>
wrote:
>
>My independent local provider dropped Usenet newsgroups a couple of
>weeks ago.
>
>Roy Lewallen, W7EL

Comcast dropped their Usenet service over a year ago.

Danny, K6MHE

534. Re: AT&T Usenet Netnews Service Shutting Down

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-18 15:12:05 UTC
From: JOYCE PURSLEY <foxy37@gmail.com>
Message-ID: <3f284605-008c-4dd3-b509-e05a7ddd925f@n8g2000vbb.googlegroups.com>
Source record: 14646

On Jun 17, 11:34 am, Cecil Moore <w5...@hotmail.com> wrote:
> newsmas...@bellsouth.net wrote:
> > Please note that on or around July 15, 2009, AT&T will no longer be
> > offering access to the Usenet Netnews service.
>
> I'm one of those affected. I've subscribed to:
>
> http://teranews.com/
> --
> 73, Cecil, w5dxp.com

I think the reason they are cancelling is because they do not want to
hear all the comments about their lousy service, plus charging
customers in the southeast higher prices than in non bellsouth areas.

http://www.bellsouth.com/consumer/inetsrvcs/index.html
http://www.att.com/gen/general?pid=6431

535. RE:Hygain 18AVT v 18AVQ

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-18 15:32:03 UTC
From: Dave Oldridge <doldridg@leavethisoutshaw.ca>
Message-ID: <Xns9C2E56BFF1947doldridgsprintca@69.16.185.250>
Source record: 14647

"VK2KC" <vk2kcjohn@gmail.com> wrote in news:u3kYl.18128$y61.1569@news-server.bigpond.net.au:

>Hello,
>Can anyone tell me the difference between the Hygain 18AVQ and the 18AVT
>verticals?
>
>A copy in pdf of the manual would be very welcome.

I cannot tell you about the difference, as I never had the opportunity to test them both in the same place. My 18AVQ was in an urban backyard in Richnmond BC and worked adequately but was not really stellar, possibly because of local noises from old tube type TV sets still very common at the time.

The 18AVT was in a salt marsh in a remote location offshore in the Atlantic well away from housing. I worked all continents on 75M SSB the night after I put it up!

--
Dave Oldridge+
ICQ 454777283

536. Re: Coax + Ladder Line

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-18 15:38:52 UTC
From: Dave Oldridge <doldridg@leavethisoutshaw.ca>
Message-ID: <Xns9C2E57E7C5F2Bdoldridgsprintca@69.16.185.250>
Source record: 14648

"Kash J. Rangan" <kjrangan@yahoo.com> wrote in
news:4a301b31@usenet.ugs.com:

>Is it advisable to use a combination of Coax and a ladder line to feed
>a simple horizontal multiband dipole antenna?
>
>In my new QTH it would be very easy for me to get a short run of coax
>out of my shack window but I would like to use a low loss ladder line
>for the main run up to the antenna feed point. Is it OK to place a 4:1
>balun just outside of the window for the transition?

If your antenna is balanced, it would probably be better to simply split
the ladder line onto the center conducters of two identical short coaxes
and then run ladder line inside to your tuner. If you MUST ground the
shields that's OK and you can use lightning arrestors on both coaxes. But
remember, no lighning arrestor is as good for protecting equipment as a
foot or two of air. Disconnecting during thunderstorms is solid policy!

--
Dave Oldridge+
ICQ 454777283

537. Re: AT&T Usenet Netnews Service Shutting Down

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-18 15:50:08 UTC
From: Michael Coslo <mjc5@psu.edu>
Message-ID: <h1dnng$nc4e$1@tr22n12.aset.psu.edu>
Source record: 14649

Tom Donaly wrote:
> Cecil Moore wrote:
>> Tom Donaly wrote:
>>> It sounds as if AT&T is having financial problems. Why else would
>>> they cancel Usenet service?
>>
>> Many ISPs have canceled and are canceling Usenet service
>> in order to be politically correct. Instead of trying to
>> define and filter politically incorrect newsgroups, they
>> are simply shutting down Usenet servers.
>> --
>> 73, Cecil, w5dxp.com
>
> That sounds paranoid to me, Cecil. Most of the people who run
> companies like AT&T are dyed-in-the-wool Republicans who oppose
> political correctness to the bone. I still think it might have
> something to do with money.

Well, they certainly don't make money on Netnews.

But I still think that if the authorities came to any of us, telling us we had something illegal stored on our servers, probably 9 out of 10 of us would drop it in a heartbeat. Why would I keep something that is only a liability or at best, a nuisance?

I mean even from a moral point of view, the only control you have is shutting off the binaries, all of 'em, because the bad guys don't limit their posts to the groups you might expect them to. And while you can't be responsible for everything posted on your servers, you sure can after you know it's there and don't remove it......

Then the problem is that after getting rid of the binaries, the regular newsgroups can end up with a little guilt by association, even if they aren't doing anything illegal. So they get tossed too.

- 73 de Mike N3LI -

538. Re: Update: DTV antenna on VHF

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-18 15:59:24 UTC
From: Michael Coslo <mjc5@psu.edu>
Message-ID: <h1do8s$nc4g$1@tr22n12.aset.psu.edu>
Source record: 14650

tom wrote:
> Rich Griffiths wrote:
>>> The rovers got us as many 10GHz grids this weekend as the sum total of
>>> the previous 11 contests. And they don't play the games that some of
>>> the east coast "owned" rovers do.
>>
>> Ssshhhh! That's supposed to be a secret ;-)
>>
>
> An unfortunate smear on the east coast in general, especially since I am
> from there. It is well known who the stations/clubs are that get away
> with it. I would make a disparaging remark about the blessed League
> caring about cheating here, but it would offend the masses.

All contesters cheat except for me and thee....

So if I go roving, and I don't belong to one of these clubs, will they
not talk to me?

And if they are cheating, and it's documented, why hasn't anyone
submitted proof, and get their sorry butts DQ'ed?

Takes lots of people to cheat, those cheating, and those putting up with it.

Sorry for the rant, but as a person who runs a contest, I get many, many
accusations of people or clubs cheating, and precious little to support
that. Most of the time the accuser pops up with great angst, describing
the terrible situation, the nefarious cheaters, and often the complicity
of the contest organizers. Then when pressed for proof, the reply is
usually "Gee, I don't want to start anything!"

Not sayin, I'm just sayin'...

- 73 de Mike N3LI -

539. Re: Coax + Ladder Line

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-18 17:18:06 UTC
From: JB <nospam@goofball.net>
Message-ID: <iFu_l.1724$P5.13@nwrddc02.gnilink.net>
Source record: 14551

"Dave Oldridge" <doldridg@leavethisoutshaw.ca> wrote in message
news:Xns9C2E57E7C5F2Bdoldridgsprintca@69.16.185.250...
> "Kash J. Rangan" <kjrangan@yahoo.com> wrote in
> news:4a301b31@usenet.ugs.com:
>
> >Is it advisable to use a combination of Coax and a ladder line to feed
> >a simple horizontal multiband dipole antenna?
> >
> >In my new QTH it would be very easy for me to get a short run of coax
> >out of my shack window but I would like to use a low loss ladder line
> >for the main run up to the antenna feed point. Is it OK to place a 4:1
> >balun just outside of the window for the transition?
>
> If your antenna is balanced, it would probably be better to simply split
> the ladder line onto the center conducters of two identical short coaxes
> and then run ladder line inside to your tuner. If you MUST ground the
> shields that's OK and you can use lightning arrestors on both coaxes. But
> remember, no lighning arrestor is as good for protecting equipment as a
> foot or two of air. Disconnecting during thunderstorms is solid policy!
>
> --
> Dave Oldridge+
> ICQ 454777283
>
Sounds a little backwards. The Ladder Line should transition to coax
(balanced as you pointed out) inside to hopefully reduce RF in the shack.
An arrestor outside in addition to disconnecting from equipment will avoid
arcing in the shack at least. You have to be there to even remember to
disconnect.

540. Re: AT&T Usenet Netnews Service Shutting Down

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-18 17:52:38 UTC
From: 'Doc <ltdoc@yahoo.com>
Message-ID: <89ad7dbf-004a-401d-829c-57badaf78cd5@h23g2000vbc.googlegroups.com>
Source record: 14552

Cecil,
Just something to think about. I signed up with TeraNews last night. I'm sure part of the problem was me just not understanding 'their' way of doing things, but there were problems. Couldn't get a satisfactory answer to too many questions, and finally had to cancel the subscription.
Did some checking to see if anyone else had these sort of problems, and it seems to be fairly common. I honestly can't say TeraNews is a bad choice, but it was certainly the wrong one for me.
As for why AT&T decided to quit newsgroups? So they can make a buck on it, of course! AT&T and 'Ma Bell' do not have a good odor around here, even with their employees.
- 'Doc

541. Re: AT&T Usenet Netnews Service Shutting Down

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-18 20:10:59 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <nbx_l.2152$hE.678@newsfe13.iad>
Source record: 14553

'Doc wrote:
> Did some checking to see if anyone else had these sort of problems,
> and it seems to be fairly common. I honestly can't say TeraNews is a
> bad choice, but it was certainly the wrong one for me.

I also had problems because I didn't RTFM where they
say the user name has to have @teranews.com appended.
After fixing that problem which was all mine, it has
been pretty reliable.
--
73, Cecil, IEEE, OOTC, http://www.w5dxp.com

542. Re: AT&T Usenet Netnews Service Shutting Down

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-18 20:20:09 UTC
From: Michael Coslo <mjc5@psu.edu>
Message-ID: <h1e7hp$o44i$1@tr22n12.aset.psu.edu>
Source record: 14554

Cecil Moore wrote:
> 'Doc wrote:
>> Did some checking to see if anyone else had these sort of problems,
>> and it seems to be fairly common. I honestly can't say TeraNews is a
>> bad choice, but it was certainly the wrong one for me.
>
> I also had problems because I didn't RTFM where they
> say the user name has to have @teranews.com appended.
> After fixing that problem which was all mine, it has
> been pretty reliable.

Teranews is apparently a good NSP if you want to flood the newsgroups
with abuse.

- 73 de Mike N3LI -

543. Re: AT&T Usenet Netnews Service Shutting Down

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-18 20:32:53 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <Uvx_l.23847$mX2.14639@newsfe05.iad>
Source record: 14555

Michael Coslo wrote:
> Teranews is apparently a good NSP if you want to flood the newsgroups
> with abuse.

Rumor has it that they are not quick to control their
bad apples. Of course, some on this newsgroup consider
my tendency to quote technical references to be abusive. :-)
--
73, Cecil, IEEE, OOTC, http://www.w5dxp.com

544. Re: Coax + Ladder Line

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-18 23:26:02 UTC
From: Jim Lux <james.p.lux@jpl.nasa.gov>
Message-ID: <h1eiea$qk1$1@news.jpl.nasa.gov>
Source record: 14556

Mike Coslo wrote:
> nm5k@wt.net wrote:
>
>> Sure, there are losses with the balun used in most tuners, but I
>> consider that a price to pay for a multi band antenna.
>
>
> Chiming in late on this one...
>
>
> Mythical attributes aside, I believe the real reason that ladder line
> has become more popular is:
>
> 1. Almost all rigs are All HF band these days.
>
> 2. Many people have just one antenna they can put up at any given time.
> Whether it is space considerations, maintaining a low profile or
> keeping the XYL happy I remember the discussions with my wife when I
> wanted to put up the HF vertical. "Why do you need two antennas?" "Are
> you going to transmit two signals at the same time?". Twasn't easy, and
> a lot of Hams might lose that argument.
>
> So assuming it is a doublet, and I wanted to run 80 to 10 meters, I'd
> put up much wire as I could, not mess with coax, just run ladder line to
> a window panel, then into the house, into a tuner that can handle
> balanced line. And pay attention to the lengths that might make for
> trouble in matching.
>

Or, put up as much wire as you can, put an autotuner at the feedpoint,
and run coax back to the shack.

probably a six of one, half dozen of the other, depending on what you
already have, what kind of support structures you have (if you are
putting up an inverted V, then supporting the weight of the tuner isn't
an issue..), etc.

545. lightning protection Re: Coax + Ladder Line

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-18 23:29:56 UTC
From: Jim Lux <james.p.lux@jpl.nasa.gov>
Message-ID: <h1eilk$u3q$1@news.jpl.nasa.gov>
Source record: 14557

Dave Oldridge wrote:
> "Kash J. Rangan" <kjrangan@yahoo.com> wrote in

>
> If your antenna is balanced, it would probably be better to simply split
> the ladder line onto the center conducters of two identical short coaxes
> and then run ladder line inside to your tuner. If you MUST ground the
> shields that's OK and you can use lightning arrestors on both coaxes. But
> remember, no lighning arrestor is as good for protecting equipment as a
> foot or two of air. Disconnecting during thunderstorms is solid policy!
>

If you have a direct hit, a one foot air gap isn't necessarily going to
do you much good, unless the antenna end of the gap is on the ground
surface. (i.e. the wire going from where the coax ends to your
lightning dissipation ground has some non-zero inductance/resistance)

If you're worried about induced voltages from adjacent strikes, then a
good transient suppressor will help, but almost all suppressors have
"let through" voltage that is above the damage threshold for, say, a FET
front end. Depends on what your equipment sensitivity is.

Shorting the input of the radio and tying it to chassis ground.. that
WILL protect the radio.

546. Sunspot news

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-19 00:02:57 UTC
From: tom <news4792@taring.org>
Message-ID: <4a3ad5f9$0$92355$8046368a@newsreader.iphouse.net>
Source record: 14558

It sounds as if there may be an explanation for the current sunspot deficit. Ok, not an explanation, but something that perhaps correlates with sunspot production. And if correct, good news.

http://science.nasa.gov/headlines/y2009/17jun_jetstream.htm

tom
K0TAR

547. Re: Update: DTV antenna on VHF

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-19 03:21:59 UTC
From: HH&C <hot-ham-and-cheese@hotmail.com>
Message-ID: <0187667c-9f28-4c7c-9e62-930afb1df59b@n30g2000vba.googlegroups.com>
Source record: 14559

On Jun 18, 11:59 am, Michael Coslo <m...@psu.edu> wrote:
> tom wrote:
> > Rich Griffiths wrote:
> >>> The rovers got us as many 10GHz grids this weekend as the sum total of
> >>> the previous 11 contests. And they don't play the games that some of
> >>> the east coast "owned" rovers do.
>
> >> Sshhhh!   That's supposed to be a secret ;-)
>
> > An unfortunate smear on the east coast in general, especially since I am
> > from there. It is well known who the stations/clubs are that get away
> > with it. I would make a disparaging remark about the blessed League
> > caring about cheating here, but it would offend the masses.
>
>   All contesters cheat except for me and thee....
>
> So if I go roving, and I don't belong to one of these clubs, will they
> not talk to me?
>
> And if they are cheating, and it's documented, why hasn't anyone
> submitted proof, and get their sorry butts DQ'ed?
>
> Takes lots of people to cheat, those cheating, and those putting up with it.
>
> Sorry for the rant, but as a person who runs a contest, I get many, many
> accusations of people or clubs cheating, and precious little to support
> that. Most of the time the accuser pops up with great angst, describing
> the terrible situation, the nefarious cheaters, and often the complicity
> of the contest organizers. Then when pressed for proof, the reply is
> usually "Gee, I don't want to start anything!"
>
> Not sayin, I'm just sayin'...
>
>   - 73 de Mike N3LI -

Hey, Dark Guard. Long time no hear. I thought you were active on in
misc.survivalism?

548. Re: AT&T Usenet Netnews Service Shutting Down

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-19 03:25:05 UTC
From: HH&C <hot-ham-and-cheese@hotmail.com>
Message-ID: <f6441066-ed1c-4a8b-b1de-4311d2408a69@j20g2000vbp.googlegroups.com>
Source record: 14560

On Jun 17, 11:34 am, Cecil Moore <w5...@hotmail.com> wrote:
> newsmas...@bellsouth.net wrote:
> > Please note that on or around July 15, 2009, AT&T will no longer be
> > offering access to the Usenet Netnews service.
>
> I'm one of those affected. I've subscribed to:
>
> http://teranews.com/
> --
> 73, Cecil, w5dxp.com

That's good info, Cecil. How've you been? I haven't talked to you
since you were a 100' tall giant shooting hoops.

549. Re: AT&T Usenet Netnews Service Shutting Down

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-19 03:27:37 UTC
From: HH&C <hot-ham-and-cheese@hotmail.com>
Message-ID: <96668542-fd52-45a7-87e8-bbd2243508f9@p4g2000vba.googlegroups.com>
Source record: 14561

On Jun 18, 11:50 am, Michael Coslo <m...@psu.edu> wrote:
> Tom Donaly wrote:
> > Cecil Moore wrote:
> >> Tom Donaly wrote:
> >>> It sounds as if AT&T is having financial problems. Why else would
> >>> they cancel Usenet service?
>
> >> Many ISPs have canceled and are canceling Usenet service
> >> in order to be politically correct. Instead of trying to
> >> define and filter politically incorrect newsgroups, they
> >> are simply shutting down Usenet servers.
> >> --
> >> 73, Cecil, w5dxp.com
>
> > That sounds paranoid to me, Cecil. Most of the people who run
> > companies like AT&T are dyed-in-the-wool Republicans who oppose
> > political correctness to the bone. I still think it might have
> > something to do with money.
>
> Well, they certainly don't make money on Netnews.
>
> But I still think that if the authorities came to any of us, telling us
> we had something illegal stored on our servers, probably 9 out of 10 of
> us would drop it in a heartbeat. Why would I keep something that is only
> a liability or at best, a nuisance?
>
> I mean even from a moral point of view, the only control you have is
> shutting off the binaries, all of 'em, because the bad guys don't limit
> their posts to the groups you might expect them to. And while you can't
> be responsible for everything posted on your servers, you sure can
> after you know it's there and don't remove it......
>
> Then the problem is that after getting rid of the binaries, the regular
> newsgroups can end up with a little guilt by association, even if they
> aren't doing anything illegal. So they get tossed too.
>
>   - 73 de Mike N3LI --

That whole "guilt by association" sure is a slippery slope. I
wouldn't worry about it. The new administration is giving out miranda
rights to everybody.

550. Re: Update: DTV antenna on VHF

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-19 03:40:52 UTC
From: tom <news4792@taring.org>
Message-ID: <4a3b08b5$0$18870$8046368a@newsreader.iphouse.net>
Source record: 14562

Michael Coslo wrote:
>
> All contesters cheat except for me and thee....
>
>
> So if I go roving, and I don't belong to one of these clubs, will they
> not talk to me?
>
> And if they are cheating, and it's documented, why hasn't anyone
> submitted proof, and get their sorry butts DQ'ed?
>
> Takes lots of people to cheat, those cheating, and those putting up with
> it.
>
> Sorry for the rant, but as a person who runs a contest, I get many, many
> accusations of people or clubs cheating, and precious little to support
> that. Most of the time the accuser pops up with great angst, describing
> the terrible situation, the nefarious cheaters, and often the complicity
> of the contest organizers. Then when pressed for proof, the reply is
> usually "Gee, I don't want to start anything!"
>
> Not sayin, I'm just sayin'...
>
> - 73 de Mike N3LI -

First, not all contesters cheat. My experience is few VHF and up
contesters cheat.

Second, the rovers are the key to the cheat. Fixed stations love to
work rovers because of the point and grid benefits. The cheating is the
rovers who won't work anyone but the mothership.

Third, it's not documented since no one will publicly admit to it, which
should be obvious. Privately is a different matter.

The cheaters are known. Very well known in some cases.

tom
K0TAR

551. Re: Update: DTV antenna on VHF

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-19 03:48:57 UTC
From: tom <news4792@taring.org>
Message-ID: <4a3b0a9a$0$18870$8046368a@newsreader.iphouse.net>
Source record: 14563

tom wrote:
> Michael Coslo wrote:
>>
>> All contesters cheat except for me and thee....
>>
>>
>> So if I go roving, and I don't belong to one of these clubs, will they
>> not talk to me?
>>
>> And if they are cheating, and it's documented, why hasn't anyone
>> submitted proof, and get their sorry butts DQ'ed?
>>
>> Takes lots of people to cheat, those cheating, and those putting up
>> with it.
>>
>> Sorry for the rant, but as a person who runs a contest, I get many,
>> many accusations of people or clubs cheating, and precious little to
>> support that. Most of the time the accuser pops up with great angst,
>> describing the terrible situation, the nefarious cheaters, and often
>> the complicity of the contest organizers. Then when pressed for proof,
>> the reply is usually "Gee, I don't want to start anything!"
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>> Not sayin, I'm just sayin'...
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>> - 73 de Mike N3LI -
>
> First, not all contesters cheat. My experience is few VHF and up
> contesters cheat.
>
> Second, the rovers are the key to the cheat. Fixed stations love to
> work rovers because of the point and grid benefits. The cheating is the
> rovers who won't work anyone but the mothership.
>
> Third, it's not documented since no one will publicly admit to it, which
> should be obvious. Privately is a different matter.
>
> The cheaters are known. Very well known in some cases.
>
> tom
> K0TAR

Missed one of your points. The Blessed League runs this contest. No
more comment needed.

tom
K0TAR

552. Re: Detecting the high def TV for the Google Lunar X Prize.

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-19 12:00:31 UTC
From: Robert Clark <rgregoryclark@yahoo.com>
Message-ID: <50c8909e-6335-4931-b98f-5610e83209e3@v4g2000vba.googlegroups.com>
Source record: 14564
Cross-posted to: sci.astro,rec.radio.amateur.space,rec.radio.amateur.antenna,sci.astro.seti,sci.physics

On Jun 17, 11:32 am, Jim Lux <james.p....@jpl.nasa.gov> wrote:
> Jim Lux wrote:
> >> Yes. OP said "near real time," which I take to mean "OK to drop some
> >> frames," like the satellite video phones the reporters use from the
> >> boondocks. Thus, high-def can be confined to a lot lower bandwidth if you
> >> don't mind seeing compression artifacts as each frame is being built on the
> >> screen.
>
> Here's a back of the envelope link budget for a 500E3 km link carrying 1
> Mbps
>
> Let's assume 2GHz for the working frequency (not necessarily a good
> choice, but somewhere to start)
>
> Free Space Path Loss from Moon to earth, between isotropic antennas =
> 32.44 + 20*log10(500E3) + 20*log10(2E3) = 32.44 + 114 + 66 = about 212 dB
>
> Assume an antenna 2m in diameter at one end (moon end)
> lambda for 2GHz is 15cm, so the antenna is 13 wavelengths in diameter
> Beamwidth will be about 70/13 = 5 degrees.. OK, because Earth is 2
> degrees wide from the moon, so you can just point at the middle of the
> visible earth.
>
> Assume an antenna 10m in diameter at the earth end. Beamwidth will be 1
> degree, twice the visible lunar disc size, so you can just point at the
> moon, generally.
>
> Gains of antennas
> 2m @ 2GHz = 30dB
> 10m @ 2GHz = 44dB
>
> Preceived at Earth = Ptransmitted +30 - 212 +44dB = Ptransmit -138dB.
>
> Assume transmitting with 10 Watts or +40dBm..
> Prec = -100dBm
>
> Now, let's look at the receiver:
> Power Spectral density of Noise is kT+NF.. kT is -174dBm/Hz and a decent
> NF might be 2dB (allowing for some plumbing losses, etc.
>
> -172 dBm/Hz
>
> Eb (energy/Bit) = -100dBm -60dB (1Mbps) = -160dBmJ

>
> So, Eb/No is about +12dB... If you allow 2dB for implementation loss,
> that gets you to 10dB, which will get you a BER of 1E-6, which isn't
> terrible. Coding will improve it, etc.
>
> Take home message:
>
> 10W at 2Ghz with reasonably sized antennas at moon and earth can carry 1
> Mbps.
>
> Scales linearly with data rate.. You want 10Mbps, you need 100W. Or
> bigger antennas.

Thanks for the info. This at least should be doable with receiving
antennas operated by universities.

Bob Clark

553. Re: Coax + Ladder Line

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-19 12:48:04 UTC
From: Dave <noone@nowhere.com>
Message-ID: <8OL_I.3367$u86.476@nwrddc01.gnilink.net>
Source record: 14565

"Jim Lux" <james.p.lux@jpl.nasa.gov> wrote in message
news:h1eiea$qk1$1@news.jpl.nasa.gov...
> Mike Coslo wrote:
>> nm5k@wt.net wrote:
>>
>>> Sure, there are losses with the balun used in most tuners, but I
>>> consider that a price to pay for a multi band antenna.
>>
>>
>> Chiming in late on this one...
>>
>>
>> Mythical attributes aside, I believe the real reason that ladder line has
>> become more popular is:
>>
>> 1. Almost all rigs are All HF band these days.
>>
>> 2. Many people have just one antenna they can put up at any given time.
>> Whether it is space considerations, maintaining a low profile or keeping
>> the XYL happy I remember the discussions with my wife when I wanted to
>> put up the HF vertical. "Why do you need two antennas?" "Are you going to
>> transmit two signals at the same time?". Twasn't easy, and a lot of Hams
>> might lose that argument.
>>
>> So assuming it is a doublet, and I wanted to run 80 to 10 meters, I'd put
>> up much wire as I could, not mess with coax, just run ladder line to a
>> window panel, then into the house, into a tuner that can handle balanced
>> line. And pay attention to the lengths that might make for trouble in
>> matching.
>>
>
> Or, put up as much wire as you can, put an autotuner at the feedpoint, and
> run coax back to the shack.
>
> probably a six of one, half dozen of the other, depending on what you
> already have, what kind of support structures you have (if you are putting
> up an inverted V, then supporting the weight of the tuner isn't an
> issue..), etc.

for most people the feedline won't be that long so just put up the inverted
v, wind a coax choke at the feed point (or not) and just run it back to the
shack and use the tuner in the rig.

554. Re: Sunspot news

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-19 12:50:04 UTC
From: Peter <colleenpeter@westnet.com.au>
Message-ID: <suSdnYJQX_nlFKbXnZ2dnUVZ8oidnZ2d@westnet.com.au>
Source record: 14566

"tom" <news4792@taring.org> wrote in message
news:4a3ad5f9$0$92355$8046368a@newsreader.iphouse.net...
> It sounds as if there may be an explanation for the current sunspot
> deficit. Ok, not an explanation, but something that perhaps correlates
> with sunspot production. And if correct, good news.
>
> http://science.nasa.gov/headlines/y2009/17jun_jetstream.htm
>
> tom
> K0TAR

Tom

Also see-:
http://members.optushome.com.au/vk6ysf/vk6ysf/solarcycles.htm

555. Re: Update: DTV antenna on VHF

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-19 15:38:19 UTC
From: Rich Griffiths <richgrif@one.net>
Message-ID: <eaWdnRkSRP52LabXnZ2dnUVZ_t2dnZ2d@posted.nuvoxcommunications>
Source record: 14567

On Thu, 18 Jun 2009 11:59:24 -0400, Michael Coslo wrote:

<snip>
> All contesters cheat except for me and thee....
>
>
> So if I go roving, and I don't belong to one of these clubs, will they
> not talk to me?
>
> And if they are cheating, and it's documented, why hasn't anyone
> submitted proof, and get their sorry butts DQ'ed?
>
> Takes lots of people to cheat, those cheating, and those putting up with
> it.
>
> Sorry for the rant, but as a person who runs a contest, I get many, many
> accusations of people or clubs cheating, and precious little to support
> that. Most of the time the accuser pops up with great angst, describing
> the terrible situation, the nefarious cheaters, and often the complicity
> of the contest organizers. Then when pressed for proof, the reply is
> usually "Gee, I don't want to start anything!"
>
> Not sayin, I'm just sayin'...
>
> - 73 de Mike N3LI -

We're getting a bit off topic here, but ....

The issue is with "captive" (or "owned", as tom said) rovers who will communicate only with the fixed club station. The rovers don't get a lot of benefit from it, but it can really pump up the score of a fixed station by getting additional grid multipliers.

What documentation may exist is in the hands of the club rovers. Proving that someone is doing this is well-nigh impossible. I suppose a contest manager could do it by examining all the rovers' logs he gets. But I don't expect that would be an easy job. And the contest managers are supposed to be having some fun too :-)

So I agree that a contest manager needs proof before acting on any accusation of cheating, but in this case I doubt that he's ever going to get it. (No comment on other forms of cheating.) Nonetheless, that doesn't mean that it isn't going on. We just can't do much about it. And those putting up with it should not be lumped in with those who may be/are doing it.

I hope the squabbling you're in the middle of doesn't dissuade you,
Mike. Keep on keepin' on. Please.

--
73
Rich W2RG

556. Re: AT&T Usenet Netnews Service Shutting Down

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-19 15:47:49 UTC
From: Michael Coslo <mjc5@psu.edu>
Message-ID: <h1gbv5$9s3i$1@tr22n12.aset.psu.edu>
Source record: 14568

Cecil Moore wrote:
> Michael Coslo wrote:
>> Teranews is apparently a good NSP if you want to flood the newsgroups
>> with abuse.
>
> Rumor has it that they are not quick to control their
> bad apples. Of course, some on this newsgroup consider
> my tendency to quote technical references to be abusive. :-)

There is such a difference between enjoying a "bloody good row" as you
do, and those "interesting individuals".

- 73 de Mike N3LI -

557. MFJ autuner review, was Re: Coax + Ladder Line

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-19 16:28:16 UTC
From: Michael Coslo <mjc5@psu.edu>
Message-ID: <h1geb3$do4i$1@tr22n12.aset.psu.edu>
Source record: 14569

Jim Lux wrote:
> Mike Coslo wrote:
>> nm5k@wt.net wrote:
>>
>>> Sure, there are losses with the balun used in most tuners, but I
>>> consider that a price to pay for a multi band antenna.
>>
>>
>> Chiming in late on this one...
>>
>>
>> Mythical attributes aside, I believe the real reason that ladder line
>> has become more popular is:
>>
>> 1. Almost all rigs are All HF band these days.
>>
>> 2. Many people have just one antenna they can put up at any given
>> time. Whether it is space considerations, maintaining a low profile
>> or keeping the XYL happy I remember the discussions with my wife when
>> I wanted to put up the HF vertical. "Why do you need two antennas?"
>> "Are you going to transmit two signals at the same time?". Twasn't
>> easy, and a lot of Hams might lose that argument.
>>
>> So assuming it is a doublet, and I wanted to run 80 to 10 meters, I'd
>> put up much wire as I could, not mess with coax, just run ladder line
>> to a window panel, then into the house, into a tuner that can handle
>> balanced line. And pay attention to the lengths that might make for
>> trouble in matching.
>>
>
> Or, put up as much wire as you can, put an autotuner at the feedpoint,
> and run coax back to the shack.
>
> probably a six of one, half dozen of the other, depending on what you
> already have, what kind of support structures you have (if you are
> putting up an inverted V, then supporting the weight of the tuner isn't
> an issue..), etc.

Speaking of autotuners, I just got my MFJ933, and have been working
with it this last week. MFJ has an interesting reputation, but I have to
say they pretty much got this one right. For $224, it is one impressive
piece of hardware/programming.

I run my window line directly to the tuner, which was a big selling
point. NOt many other auto tuners have that feature.

Construction was quite acceptable, performance has been fine so far, and appearance good with only one exception. One of the front panel's letters had a little rub mark on it. No biggie, just cleaned it with an eraser.

The analog meter is a little small, but the whole unit would have to be made bigger to put in a larger one, so that was a tradeoff. It also has the digital readout, so I find myself looking at the analog meter for initial reference on a frequency, then at the readout after that. It has a lot of other features that I'm still learning.

I give the unit an A, at least on my experience so far.

- 73 de Mike N3LI

558. Re: Detecting the high def TV for the Google Lunar X Prize.

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-19 18:20:03 UTC
From: Robert Clark <rgregoryclark@yahoo.com>
Message-ID: <8ae6e568-4378-4858-972c-659d821bb746@j20g2000vbp.googlegroups.com>
Source record: 14570
Cross-posted to: sci.astro,rec.radio.amateur.space,rec.radio.amateur.antenna,sci.astro.seti,sci.physics

On Jun 16, 6:57 pm, Robert Clark <rgregorycl...@yahoo.com> wrote:
> On another forum there was debate about whether the requirement of
> "near real time" high definition video transmissions was achievable
> for a such a low-cost mission.
> It would certainly be doable if the receiving antennas on Earth were
> the large radio antennas used for space communications with
> interplanetary probes or those radio antennas used for radio
> astronomy. This is evidenced by the fact that the Kaguya(Selene) lunar
> orbiter mission was able to send high definition video to a large
> receiving dish radio antenna. And also by the fact that DirecTV sends
> high definition video to only 2 foot size antennas from geosynchronous
> orbit; so 10 times larger antennas would be able to receive such
> signals from a 10 times larger distance at the Moon.
> However, I was wondering if it would be possible to detect this using
> amateur sized equipment at such a large distance. Usually for
> receiving high data rates you used transmissions at very high
> frequencies, as higher frequencies can carry more data. For instance
> both Kaguya and DirecTV transmit the high def video at gigahertz
> frequencies.
> However, for the system I'm imaging I'm thinking of using much lower
> frequencies, and necessarily longer wavelengths. What I wanted to do
> is transmit at decametric wavelengths. High data transmissions rates
> would be achieved by making it be pulsed in an on-off fashion at high
> intensity but at a rapid rate.
> On that other forum the data rate required for high def TV was given
> as 256,000 bits per second. So I wanted to make these transmissions be
> pulsed at this rapid rate at wavelengths of a few tens's of meters.
> My decametric wavelength requirement was because of the fact that
> high schools and universities have programs for detecting radio
> emissions from Jupiter at these wavelengths:
>
> NASA's Radio JOVE Project.http://radiojove.gsfc.nasa.gov/
>
> The Discovery of Jupiter's Radio Emissions.
> How a chance discovery opened up the field of Jovian radio studies.
> by Dr. Leonard N. Garciahttp://radiojove.gsfc.nasa.gov/library/sci_briefs/discovery.html
>
> These school and university receiving antennas on Earth consist of
> dozens to hundreds of vertical dipoles of lengths at the meters scale
> to correspond to the radio wavelengths. Some questions I had: how
> intense would the pulse have to be on the Moon to be detectable from
> the Moon above background noise for a detector on Earth of say a few
> dozen dipoles? Could this be done for the transmitter of power of say

> a few hundred watts for a low cost, low weight lander mission? Could
> the transmitter antenna on the moon be only a few meters size for the
> low weight requirement?
> A secondary purpose I had in mind was a pet project of mine involving
> linking these many school receivers to form a global telescope at
> decametric wavelengths:
>
> From: rgcl...@my-deja.com (Robert Clark)
> Date: 23 May 2001 11:15:06 -0700
> Subject: Will amateur radio astronomers be the first to directly
> detect extrasolar planets?
> Newsgroups: rec.radio.amateur.space, rec.radio.amateur.antenna,
> sci.astro, sci.astro.seti,
sci.space.policyhttp://groups.google.com/group/sci.astro.seti/browse_frm/thread/c0018...
>
> The long wavelengths should make the requirements for accurate
> distance information and timing synchrony between the separate
> detectors easy to manage even for amateur systems. Using this method
> might make the detection achievable even if the power or transmitting
> antenna size requirements are not practical for a low cost, low weight
> lander on the Moon for an individual detector on Earth.
> The recent achievement of real-time very long baseline interferometry
> should make it possible to integrate these separate detector signals
> in real-time as well:
>
> Astronomers Demonstrate a Global Internet Telescope.
> Date Released: Friday, October 08, 2004
> Source: Jodrell Bank Observatoryhttp://www.spaceref.com/news/viewpr.html?pid=15251
>

In this post I suggested using DirecTV's and other satellite TV
companies receiving dishes for SETI:

Newsgroups: sci.astro.seti, sci.astro, rec.radio.amateur.space,
sci.physics
From: rgregorycl...@yahoo.com (Robert Clark)
Date: 7 Feb 2005 15:07:03 -0800
Subject: Could DirecTV satellite dishes be used for the Square
Kilometer Array - and a more radical proposal[Re: Can DirectTV-type
satellite dishes be used for SETI?]
http://groups.google.com/group/sci.astro.seti/msg/e425e5339227855a

In the discussion in that thread there were mentioned several
problems with that proposal (possibly fixable with some expensive
retrofits) but one big problem is that satellite TV is not designed to
be two-way. Some satellite services are two-way when they are also
used for internet access, but this is a much smaller proportion of the
satellite TV subscribers.
However, instead of using the satellite TV dishes, we could use
individual dipole antennas attached to each house. You would need to
communicate high data rates for the signals detected so you would need

broadband internet access for this.
These dipole antennas as per the Radio JOVE project are just simple vertical wires so could be attached to the house when the installer is connecting the wiring for the broadband. Possibly you could use the same external wiring as for the broadband but that might cause interference with the internet signals.
As shown on the Radio JOVE page the receivers for these dipole antennas are quite simple so would contribute minimally to the cost of installation. You do need accurate positional determination and timing synchrony for each receiving system to do the very long baseline interferometry, but at these decametric wavelengths this would be easy to do with GPS receivers carried by the installers. Over time you could keep the systems in synchrony by timing stamps accessed over the internet.
I suggested before using 10 million dipoles world-wide for detecting Jovian-sized planets close in to their primaries out to perhaps 10 light-years. According to this page, over 16.6 million new broadband internet users came online just in one quarter this year alone, bringing the number of broadband users world-wide to 429 million:

More people worldwide are subscribing to high-speed Internet connections.
China and other Asian countries among the growth leaders.
http://www.nationmultimedia.com/2009/06/17/technology/technology_30105358.php

New broadband subscribers would automatically get the dipole antennas. At the rate of increase of broadband subscribers, it would only take 3 months to reach 10 million separate dipoles. If each installer when setting up a new system, also retrofitted an another existing broadband system, then you could reach the full coverage of all the broadband subscribers dipoles in 6 years.
The number of world-wide broadband subscribers will be 500 million by 2010. At current growth rates it would be 900 million within the 6 years it took to equip each broadband subscriber system with one of the antenna dipoles. This is nearly two orders of magnitude better sensitivity than a 10 million dipole system. You could detect out to 100 light-years, opening up many more stars to the possibility of detection.

Bob Clark

559. Re: MFJ autuner review, was Re: Coax + Ladder Line

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-19 21:46:50 UTC
From: Owen Duffy <none@no.where>
Message-ID: <Xns9C304F2681669nonenowhere@61.9.191.5>
Source record: 14571

Michael Coslo <mjc5@psu.edu> wrote in news:h1geb3$do4i$1
@tr22n12.aset.psu.edu:

> MFJ933

???

560. Re: MFJ autuner review, was Re: Coax + Ladder Line

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-19 21:58:57 UTC
From: Gary <jgboyles@aol.com>
Message-ID: <39924e2e-1e09-4ada-a730-86d869beb6ec@o36g2000vbi.googlegroups.com>
Source record: 14572

On Jun 19, 11:28 am, Michael Coslo <m...@psu.edu> wrote:
> Jim Lux wrote:
> > Mike Coslo wrote:
> >> n...@wt.net wrote:
>
> >>> Sure, there are losses with the balun used in most tuners, but I
> >>> consider that a price to pay for a multi band antenna.
>
> >> Chiming in late on this one...
>
> >> Mythical attributes aside, I believe the real reason that ladder line
> >> has become more popular is:
>
> >> 1. Almost all rigs are All HF band these days.
>
> >> 2. Many people have just one antenna they can put up at any given
> >> time. Whether it is space considerations, maintaining a low profile
> >> or keeping the XYL happy I remember the discussions with my wife when
> >> I wanted to put up the HF vertical. "Why do you need two antennas?"
> >> "Are you going to transmit two signals at the same time?". Twasn't
> >> easy, and a lot of Hams might lose that argument.
>
> >> So assuming it is a doublet, and I wanted to run 80 to 10 meters, I'd
> >> put up much wire as I could, not mess with coax, just run ladder line
> >> to a window panel, then into the house, into a tuner that can handle
> >> balanced line. And pay attention to the lengths that might make for
> >> trouble in matching.
>
> > Or, put up as much wire as you can, put an autotuner at the feedpoint,
> > and run coax back to the shack.
>
> > probably a six of one, half dozen of the other, depending on what you
> > already have, what kind of support structures you have (if you are
> > putting up an inverted V, then supporting the weight of the tuner isn't
> > an issue..), etc.
>
> Speaking of autotuners, I just got my MFJ933, and have been working
> with it this last week. MFJ has an interesting reputation, but I have to
> say they pretty much got this one right. For $224, it is one impressive
> piece of hardware/programming.
>
> I run my window line directly to the tuner, which was a big selling
> point. NOt many other auto tuners have that feature.

>
> Construction was quite acceptable, performance has been fine so far, and
> appearance good with only one exception. One of the front panel's
> letters had a little rub mark on it. No biggie, just cleaned it with an
> eraser.
>
> The analog meter is a little small, but the whole unit would have to be
> made bigger to put in a larger one, so that was a tradeoff. It also has
> the digital readout, so I find myself looking at the analog meter for
> initial reference on a frequency, then at the readout after that. It has
> a lot of other features that I'm still learning.
>
> I give the unit an A, at least on my experience so far.
>
> - 73 de Mike N3LI- Hide quoted text -
>
> - Show quoted text -

The MFJ-933 is a manual loop tuner according to their catalog. Which ever one you are using sounds nice, and is worth a look, but I don't think it is a MFJ-933.

Gary N4AST

561. Re: question about dipole antenna height

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-20 00:00:00 UTC
From: jimp@specsol.spam.sux.com
Message-ID: <jsktg6-05p.ln1@mail.specsol.com>
Source record: 14573

Dale j. <nospam@dot.invalid> wrote:
> I have a dipole which the ends are up 30 feet above ground. If I lower
> the ends to say 20 feet will that have much affect on the performance of
> the antenna. The center is at about 30 feet. Will 10 feet make any
> difference on 75 meter band? I feed it with 600 ohm open wire and it's
> tuned with a matchbox tuner.
> tnx
> dj

If you download the free EZNEC demo from http://www.eznec.com/demoinfo.htm
you can find out.

--
Jim Pennino

Remove .spam.sux to reply.

562. Re: question about dipole antenna height

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-20 00:16:54 UTC
From: nm5k@wt.net
Message-ID: <04f1bf9f-9280-4e7f-91f3-7d426a6abc82@a5g2000pre.googlegroups.com>
Source record: 14574

On Jun 19, 6:39 pm, "Dale j." <nos...@dot.invalid> wrote:
> I have a dipole which the ends are up 30 feet above ground. If I lower
> the ends to say 20 feet will that have much affect on the performance of
> the antenna. The center is at about 30 feet. Will 10 feet make any
> difference on 75 meter band? I feed it with 600 ohm open wire and it's
> tuned with a matchbox tuner.
> tnx
> dj
> --
> Email: dal...@mac.com
>
> Six years already.

It won't be a large change, but there will be some difference.
I'd rather have the ends at 30 ft vs 20 ft. On the low bands
using a fairly low antenna, I think the ground losses slightly
increase as the ends come closer to the ground.
I've tested this in the real world on 75 meters.
In general, the higher the ends, the better.
But saying all that, it will still work pretty well if you do
drop the ends.

563. Re: question about dipole antenna height

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-20 01:46:58 UTC
From: Owen Duffy <none@no.where>
Message-ID: <Xns9C3077DC7288Fnonenowhere@61.9.191.5>
Source record: 14575

"Dale j." <nospam@dot.invalid> wrote in news:nospam-BA60D4.18394719062009
@news.giganews.com:

> I have a dipole which the ends are up 30 feet above ground. If I lower
> the ends to say 20 feet will that have much affect on the performance of
> the antenna. The center is at about 30 feet. Will 10 feet make any
> difference on 75 meter band? I feed it with 600 ohm open wire and it's
> tuned with a matchbox tuner.

Lowering the ends as you describe will have only a small effect on the band
you mention. You can expect the feedpoint impedance to change a little (and
that might be in our favour).

Owen

564. Wireless Sensor Network

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-20 01:58:56 UTC
From: "pswd(小刀)" <yfdiao@gmail.com>
Message-ID: <d6d754b0-39ee-43e1-ac16-e6da294b3dd0@p6g2000pre.googlegroups.com>
Source record: 14576

Hi, all.

Is there any famous forum or website discussing Wireless Sensor
Network or Ad Hoc network?

565. Re: question about dipole antenna height

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-20 03:00:05 UTC
From: pirateham4400@webtv.net
Message-ID: <21031-4A3C50B5-3284@storefull-3171.bay.webtv.net>
Source record: 14577

put it about 100ft

566. Re: question about dipole antenna height

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-20 03:00:11 UTC
From: pirateham4400@webtv.net
Message-ID: <21028-4A3C50BB-7058@storefull-3171.bay.webtv.net>
Source record: 14578

put it about 100ft

567. Re: question about dipole antenna height

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-20 03:00:19 UTC
From: pirateham4400@webtv.net
Message-ID: <21031-4A3C50C3-3285@storefull-3171.bay.webtv.net>
Source record: 14579

put it about 100ft

568. Re: question about dipole antenna height

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-20 03:43:15 UTC
From: Jim-NN7K
Message-ID: <AVY_I.172$Wj7.14@nlpi065.nbdc.sbc.com>
Source record: 14580

test

Owen Duffy wrote:
> "Dale j." <nospam@dot.invalid> wrote in news:nospam-BA60D4.18394719062009
> @news.giganews.com:
>
>> I have a dipole which the ends are up 30 feet above ground. If I lower
>> the ends to say 20 feet will that have much affect on the performance of
>> the antenna. The center is at about 30 feet. Will 10 feet make any
>> difference on 75 meter band? I feed it with 600 ohm open wire and it's
>> tuned with a matchbox tuner.
>
> Lowering the ends as you describe will have only a small effect on the band
> you mention. You can expect the feedpoint impedance to change a little (and
> that might be in our favour).
>
> Owen

569. When will we get rid of this (RF JUNK)??

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-20 04:14:52 UTC
From: Jim-NN7K
Message-ID: <NfZ_l.190$Dx2.177@flpi146.ffdc.sbc.com>
Source record: 14581

Channel 2 stations are supposed to have stopped transmitting , in
analog, and gone to Digital-
So WHY is Channel 2 (with NO call sign I have heard) STILL transmitting
, Analog, in Reno ,
NV, with a 24/7 informercial, on how to convert to Digital ???
When, o when, will Channel 2 Finally DISAPPEAR from the spectrum (in
Reno)?? How many MORE
areas are still broadcasting analog , in violation of the Digital
Conversion ?
Inquiring minds want to know! :-(Jim NN7K

570. Re: When will we get rid of this (RF JUNK)??

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-20 04:45:02 UTC
From: jimp@specsol.spam.sux.com
Message-ID: <rl5ug6-hs4.ln1@mail.specsol.com>
Source record: 14582

Jim-NN7K <nn7kexk7zfg@noway.net.> wrote:
> Channel 2 stations are supposed to have stopped transmitting , in
> analog, and gone to Digital-
> So WHY is Channel 2 (with NO call sign I have heard) STILL transmitting
> , Analog, in Reno ,
> NV, with a 24/7 informercial, on how to convert to Digital ???
> When, o when, will Channel 2 Finally DISAPPEAR from the spectrum (in
> Reno)?? How many MORE
> areas are still broadcasting analog , in violation of the Digital
> Conversion ?
> Inquiring minds want to know! :-(Jim NN7K

The requirement was to cease high power broadcasting in analog, not
cease broadcasting in analog.

In the LA area there are still 7 stations running the conversion
infomercial in low power analog.

RF channel 2 is not slated to disappear, it just won't be used by
as many stations as before.

--
Jim Pennino

Remove .spam.sux to reply.

571. Re: question about dipole antenna height

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-20 10:42:34 UTC
From: Dave <noone@nowhere.com>
Message-ID: <u23%l.152$NF6.72@nwrddc02.gnilink.net>
Source record: 14583

"Dale j." <nospam@dot.invalid> wrote in message
news:nospam-27E266.02375920062009@news.giganews.com...
> In article <Xns9C3077DC7288Fnonenowhere@61.9.191.5>,
> Owen Duffy <none@no.where> wrote:
>
>> "Dale j." <nospam@dot.invalid> wrote in news:nospam-BA60D4.18394719062009
>> @news.giganews.com:
>>
>> > I have a dipole which the ends are up 30 feet above ground. If I lower
>> > the ends to say 20 feet will that have much affect on the performance
>> > of
>> > the antenna. The center is at about 30 feet. Will 10 feet make any
>> > difference on 75 meter band? I feed it with 600 ohm open wire and it's
>> > tuned with a matchbox tuner.
>>
>> Lowering the ends as you describe will have only a small effect on the
>> band
>> you mention. You can expect the feedpoint impedance to change a little
>> (and
>> that might be in our favour).
>>
>> Owen
>
> Some tree limbs are starting to get close to the doublet and lowering it
> by ten feet will help that situation. Also I need to make it a bit
> longer to reach a MARS freq. So lowering it will serve two purposes,
> but I'm still considering and appreciate the input.
>
> I wish I had 20 acres.
> --
> Email: dalej2@mac.com
>
> Six years already.

if its tuned with a matchbox already you don't need to make it a bit longer
to reach the mars frequency. the 'bit' longer probably won't improve the
performance any more than lowering it will hurt the performance as long as
the rig is happy with the match from the tuner.

572. Antenna Orientation Question

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-20 11:59:07 UTC
From: Robert11 <rgsros@xnotme.invalid>
Message-ID: <h1iiucfhb1@news.eternal-september.org>
Source record: 14584

Hi,

Figure that if anyone would know, it would be you folks.

Seem to get contradictory results, so I thought I'd ask you experts out there. For receiving digital TV with a a simple, cheap, R/S indoor rabbit ear antenna
Works fairly well.

For rabbit ears indoor, what is the theoretical best orientation toward a single station ?

e.g., a plane encompassing the two ears would best be pointed toward the station, or the plane
should be perpendicular to the direction of the station ?

b. For the UHF loop:
the plane of the loop of the antenna should be pointed toward the station, or perpendicular to it ?

I realize it might be hard to visualize the plane that I refer to, but frankly don't know any other way of
describing orientation.

Perhaps one way would be to say if the rabbit ears are both the exact same distance to the antenna,
or if they are in a line with one right behind the other ponting to it ?

Would be more or less the same kind of description I guess for the UHF loop (parallel to the rabbit ears plane, or at 90 deg. to the rabbit ear plane) ?

Perhaps you know of a pix on a website that answers my question by showing a pix of how it should be pointed ?

Much thanks,
Bob

573. Re: When will we get rid of this (RF JUNK)??

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-20 12:21:58 UTC
From: greenpjs@neo.rr.com
Message-ID: <9skp3556fbi2iqd90heaeuhqbb3nhtnks9@4ax.com>
Source record: 14585

On Sat, 20 Jun 2009 04:45:02 GMT, jimp@specsol.spam.sux.com wrote:

>Jim-NN7K <nn7kexk7zfg@noway.net.> wrote:
>> Channel 2 stations are supposed to have stopped transmitting , in
>> analog, and gone to Digital-
>> So WHY is Channel 2 (with NO call sign I have heard) STILL transmitting
>> , Analog, in Reno ,
>> NV, with a 24/7 informercial, on how to convert to Digital ???
>> When, o when, will Channel 2 Finally DISAPPEAR from the spectrum (in
>> Reno)?? How many MORE
>> areas are still broadcasting analog , in violation of the Digital
>> Conversion ?
>> Inquiring minds want to know! :-(Jim NN7K
>
>The requirement was to cease high power broadcasting in analog, not
>cease broadcasting in analog.
>
>In the LA area there are still 7 stations running the conversion
>infomercial in low power analog.
>
>RF channel 2 is not slated to disappear, it just won't be used by
>as many stations as before.
While that is true, I don't think it answers his question. The FCC created a "nightlight" program where one station in each market is keeping their analog transmitter going for a while to help those caught by the transition. As the OP stated, they are airing a DTV infomercial in English and Spanish until the real end in a few weeks. WKYC in Cleveland's analog signal will remain on until June 26th. I will guess the Reno station is doing something similar.

574. Re: Antenna Orientation Question

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-20 12:28:16 UTC
From: greenpjs@neo.rr.com
Message-ID: <56lp35dhlod8n5cammevj7un3o9jm8c27j@4ax.com>
Source record: 14586

On Sat, 20 Jun 2009 07:59:07 -0400, "Robert11" <rgsros@xnotme.invalid>
wrote:

>Hi,
>
>Figure that if anyone would know, it would be you folks.
>
>Seem to get contradictory results, so I thought I'd ask you experts out
>there. For receiving digital TV with a a simple, cheap, R/S indoor rabbit
>ear antenna
>Works fairly well.
>
>For rabbit ears indoor, what is the theoretical best orientation toward a
>single station ?
>
>e.g., a plane encompassing the two ears would best be pointed toward the
>station, or the plane
>should be perpendicular to the direction of the station ?
>
>b. For the UHF loop:
>the plane of the loop of the antenna should be pointed toward the station,
>or perpendicular to it ?
>
>I realize it might be hard to visualize the plane that I refer to, but
>frankly don't know any other way of
>describing orientation.
>
>Perhaps one way would be to say if the rabbit ears are both the exact same
>distance to the antenna,
>or if they are in a line with one right behind the other ponting to it ?
>
>Would be more or less the same kind of description I guess for the UHF loop
>(parallel to the rabbit ears plane, or at 90 deg. to the rabbit ear plane) ?
>
>Perhaps you know of a pix on a website that answers my question by showing a
>pix of how it should be pointed ?
>
>Much thanks,
>Bob
>
In general, the "plane" of the antenna should be pointed toward the
station. For example, if the station is north of you, the elements
(or the sides of the UHF loop) would be pointing east and west. Of
course, rabbit ear antennas are one huge compromise and should be

pointed however they work best whether or not it makes sense or fits with theory. The desired signal might just be reflecting off your refridgerator so aiming that way is best at that moment.

575. Re: When will we get rid of this (RF JUNK)??

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-20 12:39:04 UTC
From: greenpjs@neo.rr.com
Message-ID: <nvlp355gjkuu47ab65kqupt3df23qnonp4@4ax.com>
Source record: 14587

On Fri, 19 Jun 2009 21:14:52 -0700, Jim-NN7K <nn7kexk7zfg@noway.net.>
wrote:

>Channel 2 stations are supposed to have stopped transmitting , in
>analog, and gone to Digital-
>So WHY is Channel 2 (with NO call sign I have heard) STILL transmitting
>, Analog, in Reno ,
>NV, with a 24/7 informercial, on how to convert to Digital ???
>When, o when, will Channel 2 Finally DISAPPEAR from the spectrum (in
>Reno)?? How many MORE
>areas are still broadcasting analog , in violation of the Digital
>Conversion ?
>Inquiring minds want to know! :-(Jim NN7K
Soory if this is a duplicate... I sent a similar response a few
minutes ago that showed up as no longer available. I'm not sure what
that means.

Anyway, that station is probably part of the FCC's nightlight program.
It will go off around the end of June. ...Pat N8CQV

576. Re: When will we get rid of this (RF JUNK)??

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-20 12:44:40 UTC
From: greenpjs@neo.rr.com
Message-ID: <e8mp35h9lkos4ih3cdvkne09hg7cmmh13f@4ax.com>
Source record: 14588

On Sat, 20 Jun 2009 08:39:04 -0400, greenpjs@neo.rr.com wrote:

>Soory if this is a duplicate... I sent a similar response a few
>minutes ago that showed up as no longer available. I'm not sure what
>that means.
This time, both replies were there. I must have caught my earlier
message when my news server had just the header but not the whole
message yet. I need to learn patience ... and how to spell sorry.
...Pat

577. Horizontal Dipole - zero degrees elevation

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-20 13:44:14 UTC
From: greenpjs@neo.rr.com
Message-ID: <mjop35p3m3h9g178q2nav9oe1d5l6t2564@4ax.com>
Source record: 14589

Hello all you antenna experts,
I have been a ham and an engineer for a long time, but I have never delved into antenna theory. So, consider me a newbie for this question.

I recently was helping a friend set up a crude antenna to connect to his DTV converter box following the June 12th conversion to DTV. I explained that a dipole was a simple antenna that could be used. He was very interested in the subject so the conversation soon turned to theory. I explained the 468/freq formula and eventually mentioned EZNEC. I have never used EZNEC myself so I downloaded the demo version and now have all of 24 hours experience with it. I started with the included backyard 20 meter dipole. I was surprised that there was no radiation toward the horizon. I figured that I was too close to the ground so I changed the frequency to 491 MHz (RF TV channel 17) and shortened the dipole accordingly. Still no zero degree radiation. I raised the dipole to 100' - then 1000' - then 10000' - still no radiation at zero degree elevation. I then found this in the help section:

Because the far field sky wave from a horizontally polarized source is zero at a zero elevation angle for any ground type, and a vertically polarized source produces zero sky wave for any finite-conductivity ground, attempts to calculate a 2D pattern without the ground wave component under these conditions will result in an error message.

Sure enough, changing to free space instead of a real ground changed the pattern to what I would have expected. I would have thought being many wavelengths above ground would be just as good as free space, but EZNEC doesn't think so. Am I missing something? Does a horizontal dipole really have a problem seeing a broadcast TV transmitter out on the horizon? Thanks. ...Pat

578. Re: When will we get rid of this (RF JUNK)??

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-20 13:48:09 UTC
From: Jim-NN7K
Message-ID: <DM5%l.165$8r.45@nlpi064.nbdc.sbc.com>
Source record: 14590

Thanks, all- got similar from vhf cluster- apparently this will
be on the air for 30 days after the cutover -just about the time
6 meter Es Season is over (sigh)! Other cities in top 100 market
also have at least one station running this "Nitelite" infomercial
Oh well, hope it gets quieter on six , in couple more weeks-
Jim NN7K

greenpjs@neo.rr.com wrote:
> On Sat, 20 Jun 2009 08:39:04 -0400, greenpjs@neo.rr.com wrote:
>
>
>> Soory if this is a duplicate... I sent a similar response a few
>> minutes ago that showed up as no longer available. I'm not sure what
>> that means.
> This time, both replies were there. I must have caught my earlier
> message when my news server had just the header but not the whole
> message yet. I need to learn patience ... and how to spell sorry.
> ...Pat

579. has anyone built the coat hanger ant for dtv yet?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-20 13:49:11 UTC
From: pirateham4400@webtv.net
Message-ID: <12654-4A3CE8D7-7347@storefull-3172.bay.webtv.net>
Source record: 14591

i keep seeing the high tech version ant on you tube and pbs .

580. i am going to put a tv ant on my 100ft tower

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-20 14:00:03 UTC
From: pirateham4400@webtv.net
Message-ID: <12658-4A3CEB63-1266@storefull-3172.bay.webtv.net>
Source record: 14592

i going to expermint with this just to see how many dtv i can dx and fm
also not shure what kind of ant i should try i was thinking to yagi ant
side by side or the big uhf bay looking type also a channel
master amp

581. Re: MFJ autuner review, was Re: Coax + Ladder Line

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-20 14:41:28 UTC
From: "J. Mc Laughlin" <jcm@power-net.net>
Message-ID: <8tydnctgKfqIaKHXnZ2dnUVZ_vOdnZ2d@bright.net>
Source record: 14593

Dear N3LI: Might the MFJ model be 993?

73, MAc N8TT

--
J. McLaughlin; Michigan, USA
Home: JCM@power-net.net

"Michael Coslo" <mjc5@psu.edu> wrote in message
news:h1geb3$do4i$1@tr22n12.aset.psu.edu...

>
> Speaking of autotuners, I just got my MFJ933, and have been working with
> it this last week. MFJ has an interesting reputation, but I have to say
> they pretty much got this one right. For $224, it is one impressive piece
> of hardware/programming.
>
> I run my window line directly to the tuner, which was a big selling point.
> NOt many other auto tuners have that feature.
>
> Construction was quite acceptable, performance has been fine so far, and
> appearance good with only one exception. One of the front panel's letters
> had a little rub mark on it. No biggie, just cleaned it with an eraser.
>
> The analog meter is a little small, but the whole unit would have to be
> made bigger to put in a larger one, so that was a tradeoff. It also has
> the digital readout, so I find myself looking at the analog meter for
> initial reference on a frequency, then at the readout after that. It has a
> lot of other features that I'm still learning.
>
> I give the unit an A, at least on my experience so far.
>
> - 73 de Mike N3LI

582. Re: Detecting the high def TV for the Google Lunar X Prize.

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-20 14:45:18 UTC
From: Jim Lux <jimlux@earthlink.net>
Message-ID: <46430cd0-7c54-4005-a26a-e9b4f19b8cb7@r31g2000prh.googlegroups.com>
Source record: 14594

On Jun 19, 11:20 am, Robert Clark <rgregorycl...@yahoo.com> wrote:
> On Jun 16, 6:57 pm, Robert Clark <rgregorycl...@yahoo.com> wrote:
>

> > From: rgcl...@my-deja.com (Robert Clark)
> > Date: 23 May 2001 11:15:06 -0700
> > Subject: Will amateur radio astronomers be the first to directly
> > detect extrasolar planets?
> > Newsgroups: rec.radio.amateur.space, rec.radio.amateur.antenna,
> > sci.astro, sci.astro.seti,
sci.space.policyhttp://groups.google.com/group/sci.astro.seti/browse_frm/thread/c0018...
>
> > The long wavelengths should make the requirements for accurate
> > distance information and timing synchrony between the separate
> > detectors easy to manage even for amateur systems.

Not easy, not for the precision required.
You need not only precise time (straightforward), but also precise
location (not so straightforward)

You're interested in roughly 20MHz, as I recall. Wavelength of 15
meters. In time, about 45 nanoseconds.

Let's start with a real relaxed requirement, comparable to the mirror
flatness for a telescope of lambda/14. That means a time knowledge
of about 3 ns and a position knowledge of 1 meter, in absolute terms.

Typical GPS receivers that have a 1pps output are good to about 20-30
nanoseconds. Using that to discipline a quartz oscillator, you can do
a bit better, but it's non trivial to get to the 1-2 ns range.
Remember, you're also planning on integrating over time, so you have
to hold that tolerance for a long time.

It would be difficult to determine your position to an absolute
accuracy of 1 meter, much less the phase center of the antenna (which
will change as a function of the angle of incidence, quite
substantially, unless you're putting those dipoles up 100s of feet in
the air.

Using this method
> > might make the detection achievable even if the power or transmitting
> > antenna size requirements are not practical for a low cost, low weight
> > lander on the Moon for an individual detector on Earth.
> > The recent achievement of real-time very long baseline interferometry
> > should make it possible to integrate these separate detector signals
> > in real-time as well:

<snip>

You need to go beyond looking at press releases from radio
astronomers.

> However, instead of using the satellite TV dishes, we could use
> individual dipole antennas attached to each house. You would need to
> communicate high data rates for the signals detected so you would need
> broadband internet access for this.
> These dipole antennas as per the Radio JOVE project are just simple
> vertical wires so could be attached to the house when the installer is
> connecting the wiring for the broadband. Possibly you could use the
> same external wiring as for the broadband but that might cause
> interference with the internet signals.

Radio Jove uses a pair of horizontal dipoles connected together to
create a single narrower lobe pointing up.

> As shown on the Radio JOVE page the receivers for these dipole
> antennas are quite simple so would contribute minimally to the cost of
> installation.

Who's paying, and how minimal? I don't think so.

You do need accurate positional determination and timing
> synchrony for each receiving system to do the very long baseline
> interferometry, but at these decametric wavelengths this would be easy
> to do with GPS receivers carried by the installers.

No they can't. You need position accuracy of sub-1 meter accuracy,
and that isn't achievable by simple handheld devices, like your Garmin
E-trex, etc. A surveyor using a survey GPS system can get there,
although absolute position (relative to, say, the center of the earth,
or some standard datum) to 1 meter would be very challenging.

There's also the not so little problem of tidal bulge. Your position
changes in absolute (relative to a stellar reference) terms several
tens of cm. On top of that, tectonic plate movement is on the order of
several cm/year, which is in the same general ballpark as your
accuracy requirement.

To do the kind of large area combining you're contemplating requires
geodetic quality surveying or some form of in-situ calibration using
known sources (which the folks doing LOFAR and SKA have thought
about). When DSN does accurate interferometric measurements of deep
space probes (a process called Delta DOR) they use a "common view"
quasar as a timing reference, because the Hydrogen maser normally used
for VLBI kinds of things isn't good enough.

Over time you
> could keep the systems in synchrony by timing stamps accessed over the
> internet.

NTP over the internet is only good to tens of milliseconds. You need
nanosecond precision.

> New broadband subscribers would automatically get the dipole
> antennas. At the rate of increase of broadband subscribers, it would
> only take 3 months to reach 10 million separate dipoles. If each
> installer when setting up a new system, also retrofitted an another
> existing broadband system, then you could reach the full coverage of
> all the broadband subscribers dipoles in 6 years.

Let's see, leaving aside the surveying and time synchronization
problems, in economic terms this is a non-starter. Say it costs $100
for each "station"... that's a billion dollars for your 10 million
stations. And $100 is a very, very low cost estimate, because
installer time isn't free (probably about $25/hr with all benefits,
insurance, equipment, added in).
BTW, if you really want to do something like this, think in terms of
an addon to a cell site. They already have to have nanosecond
precision timing and surveys in order to do E-911 position
trilateration.

> The number of world-wide broadband subscribers will be 500 million by
> 2010. At current growth rates it would be 900 million within the 6
> years it took to equip each broadband subscriber system with one of
> the antenna dipoles. This is nearly two orders of magnitude better
> sensitivity than a 10 million dipole system. You could detect out to
> 100 light-years, opening up many more stars to the possibility of
> detection.

I think the 100 billion dollars could be better spent in other ways,
if looking for planets is your goal. Check out Terrestrial Planet
Finder (TPF) for one approach.

>
>   Bob Clark

583. Re: When will we get rid of this (RF JUNK)??

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-20 15:04:11 UTC
From: KD7HB <co_farmer@yahoo.com>
Message-ID: <8c2ae58a-6f3c-4709-8de1-c161b1b68abb@p5g2000pre.googlegroups.com>
Source record: 14595

On Jun 20, 6:48 am, Jim-NN7K <nn7kexk7...@noway.net.> wrote:
> Thanks, all- got similar from vhf cluster- apparently this will
> be on the air for 30 days after the cutover -just about the time
> 6 meter Es Season is over (sigh)! Other cities in top 100 market
> also have at least one station running this "Nitelite" infomercial
> Oh well, hope it gets quieter on six , in couple more weeks-
> Jim NN7K
>
> green...@neo.rr.com wrote:
> > On Sat, 20 Jun 2009 08:39:04 -0400, green...@neo.rr.com wrote:
>
> >> Soory if this is a duplicate...   I sent a similar response a few
> >> minutes ago that showed up as no longer available. I'm not sure what
> >> that means.
> > This time, both replies were there. I must have caught my earlier
> > message when my news server had just the header but not the whole
> > message yet. I need to learn patience ... and how to spell sorry.
> > ...Pat

Hi, Jim.
Didn't look up your QTH, but there is another possible answer.

I live in Central Oregon. We don't have a house TV connected to an antenna, I went out to the 5th wheel trailer yesterday to see what analog TV was still available to us and discovered more than a dozen were still on the air. They were all signals from either repeaters or translators located on a mountain to the East of us. The FCC did not require any repeaters/translators to go to digital. So some of the signals you are noticing may be from this source.

None of the analog TV signals I found were on VHF, however.

Paul, KD7HB

584. Re: When will we get rid of this (RF JUNK)??

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-20 15:52:23 UTC
From: "J. Mc Laughlin" <jcm@power-net.net>
Message-ID: <qPqdnf610vspmKDXnZ2dnUVZ_s6dnZ2d@bright.net>
Source record: 14596

Dear Jim NN7K:

In this area, Channel 25 continues to inform those who have yet to convert.

The station in your area that is performing the same service on channel 2 must be KTVN with an analog station some 39 km from you (and digital signal on channel 13 some 33 km from you).

I note that by next month, as many as 12 digital stations might remain on channel 2 in the US. FCC records are not clear, but it is expected that the actual number will be smaller. What is clear is that many, many mostly low power TV stations will continue to use channel 2. Within 200 km of you, a 4 watt station at 163km (165 degrees) and a 3 kw station at 169 km (284 degrees) are expected to continue.

It has been a mystery why any TV stations will continue to transmit on channels 2-6 and above 51.

73, Mac N8TT
--
J. McLaughlin; Michigan, USA
Home: JCM@power-net.net

"Jim-NN7K" <nn7kexk7zfg@noway.net.> wrote in message
news:NfZ_l.190$Dx2.177@flpi146.ffdc.sbc.com...
> Channel 2 stations are supposed to have stopped transmitting , in analog,
> and gone to Digital-
> So WHY is Channel 2 (with NO call sign I have heard) STILL transmitting ,
> Analog, in Reno ,
> NV, with a 24/7 informercial, on how to convert to Digital ???
> When, o when, will Channel 2 Finally DISAPPEAR from the spectrum (in
> Reno)?? How many MORE
> areas are still broadcasting analog , in violation of the Digital
> Conversion ?
> Inquiring minds want to know! :-(Jim NN7K

585. Re: When will we get rid of this (RF JUNK)??

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-20 16:00:02 UTC
From: jimp@specsol.spam.sux.com
Message-ID: <3advg6-c4s.ln1@mail.specsol.com>
Source record: 14597

greenpjs@neo.rr.com wrote:
> On Sat, 20 Jun 2009 04:45:02 GMT, jimp@specsol.spam.sux.com wrote:
>
>>Jim-NN7K <nn7kexk7zfg@noway.net.> wrote:
>>> Channel 2 stations are supposed to have stopped transmitting , in
>>> analog, and gone to Digital-
>>> So WHY is Channel 2 (with NO call sign I have heard) STILL transmitting
>>> , Analog, in Reno ,
>>> NV, with a 24/7 informercial, on how to convert to Digital ???
>>> When, o when, will Channel 2 Finally DISAPPEAR from the spectrum (in
>>> Reno)?? How many MORE
>>> areas are still broadcasting analog , in violation of the Digital
>>> Conversion ?
>>> Inquiring minds want to know! :-(Jim NN7K
>>
>>The requirement was to cease high power broadcasting in analog, not
>>cease broadcasting in analog.
>>
>>In the LA area there are still 7 stations running the conversion
>>infomercial in low power analog.
>>
>>RF channel 2 is not slated to disappear, it just won't be used by
>>as many stations as before.
> While that is true, I don't think it answers his question. The FCC
> created a "nightlight" program where one station in each market is
> keeping their analog transmitter going for a while to help those
> caught by the transition. As the OP stated, they are airing a DTV
> infomercial in English and Spanish until the real end in a few weeks.
> WKYC in Cleveland's analog signal will remain on until June 26th. I
> will guess the Reno station is doing something similar.

Like I said, in LA there are 7 stations doing it, not 1, and they are all
running low power.

--
Jim Pennino

Remove .spam.sux to reply.

586. Re: question about dipole antenna height

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-20 16:17:34 UTC
From: "J. Mc Laughlin" <jcm@power-net.net>
Message-ID: <b7WdnQb-rbAGlqDXnZ2dnUVZ_oydnZ2d@bright.net>
Source record: 14598

Dear Dale J. (no call sign):

A real Matchbox ("275 watt") will "tune" such an antenna from roughly 2.9
MHz to 4.9 MHz when set to the 80 meter position.
I am interested to learn what the tuning range of the BT-1500A is.

Regards, Mac N8TT
--
J. McLaughlin; Michigan, USA
Home: JCM@power-net.net

"Dale j." <nospam@dot.invalid> wrote in message
news:nospam-256C77.10000220062009@news.giganews.com...
> In article <u23%l.152$NF6.72@nwrddc02.gnilink.net>,
> "Dave" <noone@nowhere.com> wrote:
>
>> "Dale j." <nospam@dot.invalid> wrote in message
>> news:nospam-27E266.02375920062009@news.giganews.com...
>> > In article <Xns9C3077DC7288Fnonenowhere@61.9.191.5>,
>> > Owen Duffy <none@no.where> wrote:
>> >
>> >> "Dale j." <nospam@dot.invalid> wrote in
>> >> news:nospam-BA60D4.18394719062009
>> >> @news.giganews.com:
>> >>
>> >> > I have a dipole which the ends are up 30 feet above ground. If I
>> >> > lower
>> >> > the ends to say 20 feet will that have much affect on the
>> >> > performance
>> >> > of
>> >> > the antenna. The center is at about 30 feet. Will 10 feet make any
>> >> > difference on 75 meter band? I feed it with 600 ohm open wire and
>> >> > it's
>> >> > tuned with a matchbox tuner.
>> >>
>> >> Lowering the ends as you describe will have only a small effect on the
>> >> band
>> >> you mention. You can expect the feedpoint impedance to change a little
>> >> (and
>> >> that might be in our favour).
>> >>
>> >> Owen
>> >
>> > Some tree limbs are starting to get close to the doublet and lowering
>> > it

>> > by ten feet will help that situation. Also I need to make it a bit
>> > longer to reach a MARS freq. So lowering it will serve two purposes,
>> > but I'm still considering and appreciate the input.
>> >
>> > I wish I had 20 acres.
>> > --
>> > Email: dalej2@mac.com
>> >
>> > Six years already.
>>
>> if its tuned with a matchbox already you don't need to make it a bit
>> longer
>> to reach the mars frequency. the 'bit' longer probably won't improve the
>> performance any more than lowering it will hurt the performance as long
>> as
>> the rig is happy with the match from the tuner.
>
> My BT-1500A won't quite make it. It's a 128 feet long fed with about 90
> feet of W7FG ladder line.
> --
> Email: dalej2@mac.com
>
> Six years already.

587. Re: Horizontal Dipole - zero degrees elevation

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-20 17:03:30 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <3h4q35t7pmponh8ar25b20k4k5fsg8k33t@4ax.com>
Source record: 14599

On Sat, 20 Jun 2009 09:44:14 -0400, greenpjs@neo.rr.com wrote:

>Sure enough, changing to free space instead of a real ground changed
>the pattern to what I would have expected. I would have thought being
>many wavelengths above ground would be just as good as free space, but
>EZNEC doesn't think so. Am I missing something? Does a horizontal
>dipole really have a problem seeing a broadcast TV transmitter out on
>the horizon? Thanks. ...Pat

Hi Pat,

EZNEC is presenting you with lobe characteristics that are at a very great distance (and, yet, it has no sense of skip as that would be tested in the domain of a propagation modeler). Zero degrees up to 10 degrees are minutely examined by those interested in skip, but this is not a TV phenomenon (not to be confused with ducting which can offer similar DX from great distances).

The horizontally polarized transmission has its E-Field parallel to earth. Earth is a conductor (albeit a poor one, but in comparison to free space, it is quite a short circuit). That E-Field's two potentials are being laid across that conductor during the wave propagation to that far point where EZNEC then sums up all field contributions to present you with the lobe characteristic. It stands to reason that at that great distance, the wave will have attenuated considerably - hence the low value.

Removing the short circuit (going to free space) removes this attenuation.

73's
Richard Clark, KB7QHC

588. Re: When will we get rid of this (RF JUNK)??

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-20 17:15:53 UTC
From: Jim-NN7K
Message-ID: <qP8%l.186$cl4.174@flpi150.ffdc.sbc.com>
Source record: 14600

Paul , translators didn't have to move, or change to digital

I am just north of Reno, NV, and tho never could get good pix
from local stations (and still can't get the digi's, the HIGH
power Channel 2 transmitter (I thought) would be off the air,
on the digi conversion day-- Wrong! It is the digi cutover info
channel here, now in Reno. Someone forwarded me a list of the
Channel 2 Transmitters "Nitelighted" And there may be another
not shown, (Detroit?)

http://www.wtfda.org/images/stories/NLch2.JPG

Reason I asked, since 6 Meters is next to Channel 2, and even
with the Vestigial band filter, on channel 2, there is considerable
signal leakage in 6 meters, from this station - noise that should
dissappear after it is finally off the air.

Thanks for comments- Jim NN7K

HB wrote:

> Hi, Jim.
> Didn't look up your QTH, but there is another possible answer.
>
> I live in Central Oregon. We don't have a house TV connected to an
> antenna, I went out to the 5th wheel trailer yesterday to see what
> analog TV was still available to us and discovered more than a dozen
> were still on the air. They were all signals from either repeaters or
> translators located on a mountain to the East of us. The FCC did not
> require any repeaters/translators to go to digital. So some of the
> signals you are noticing may be from this source.
>
> None of the analog TV signals I found were on VHF, however.
>
> Paul, KD7HB

589. Re: When will we get rid of this (RF JUNK)??

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-20 17:22:18 UTC
From: Jim-NN7K
Message-ID: <pV8%l.175$8r.49@nlpi064.nbdc.sbc.com>
Source record: 14451

J. Mc Laughlin wrote:
> Dear Jim NN7K:
>
> In this area, Channel 25 continues to inform those who have yet to convert.
>
> The station in your area that is performing the same service on channel 2
> must be KTVN with an analog station some 39 km from you (and digital signal
> on channel 13 some 33 km from you).
>
> I note that by next month, as many as 12 digital stations might remain on
> channel 2 in the US. FCC records are not clear, but it is expected that the
> actual number will be smaller. What is clear is that many, many mostly low
> power TV stations will continue to use channel 2. Within 200 km of you, a 4
> watt station at 163km (165 degrees) and a 3 kw station at 169 km (284
> degrees) are expected to continue.
>
> It has been a mystery why any TV stations will continue to transmit on
> channels 2-6 and above 51.
>
> 73, Mac N8TT
Mac- here (should be) the list of U.S. TV stations, both former, and
their new channel assignments (in PDF format). As this list shows,
only close Channel 2 left , would be in Flagstaff, AZ.

see:

http://hraunfoss.fcc.gov/edocs_public/attachmatch/FCC-08-72A2.pdf

Note: this doesn't cover translators, nor low power stations.

Jim NN7K

590. Re: Antenna Orientation Question

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-20 17:26:15 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <3n5q359m269g2ncgo6ippg7rjl0ir3gi8o@4ax.com>
Source record: 14452

On Sat, 20 Jun 2009 07:59:07 -0400, "Robert11" <rgsros@xnotme.invalid>
wrote:

>For rabbit ears indoor, what is the theoretical best orientation toward a
>single station ?

Hi Bob,

The rabbit ears should be spread wide and facing the strongest signal
(as if to embrace it).

>e.g., a plane encompassing the two ears would best be pointed toward the
>station,
No.
>or the plane
>should be perpendicular to the direction of the station ?
Yes.

>b. For the UHF loop:
>the plane of the loop of the antenna should be pointed toward the station,
No.
>or perpendicular to it ?
Yes.

The plane should not extend to the source of the strongest signal; it
should be broadside to it as if to catch it all (like a soccer goal).

As for "shoulds" and the shift of emphasis away from station and
towards the "strongest signal." This is obvious from experience until
you add the knowledge of where the station is which may confound
expectation. For indoor operation, the arriving signal may undergo a
lot of reflections in the neighborhood, or within the home
environment. Hence, the relation of the antenna towards the station
may seem to be at odds when that strongest reflection comes from
another angle.

This troubling situation is reduced by raising the antenna so that the
over-the-air transmission is clearly the strongest over all
reflections. That is why we call this mode "line of sight." If you
cannot literally see the station antenna, what you are receiving is
coming to you through a myriad of paths of reflection. Obviously you
are limited in how high you can raise an antenna indoors. No doubt
you are equally experienced with the seeming caprice of aiming an
indoor antenna at a consistent well behaved signal. This is what
drives antennas outdoors and up.

73's
Richard Clark, KB7QHC

591. Re: Horizontal Dipole - zero degrees elevation

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-20 17:27:34 UTC
From: Frank <ve6cbxyz@nospam.telus.net>
Message-ID: <a_8%l.32851$PH1.4098@edtnps82>
Source record: 14453

> The horizontally polarized transmission has its E-Field parallel to
> earth. Earth is a conductor (albeit a poor one, but in comparison to
> free space, it is quite a short circuit). That E-Field's two
> potentials are being laid across that conductor during the wave
> propagation to that far point where EZNEC then sums up all field
> contributions to present you with the lobe characteristic. It stands
> to reason that at that great distance, the wave will have attenuated
> considerably - hence the low value.
>
> Removing the short circuit (going to free space) removes this
> attenuation.
>
> 73's
> Richard Clark, KB7QHC

NEC will calculate "Space wave plus surface wave" if required.

Frank

592. Odd lightning effect

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-20 17:40:52 UTC
From: Bill Ogden <billogden@optonline.net>
Message-ID: <4a3d1ea9$0$22522$607ed4bc@cv.net>
Source record: 14454

It was raining heavily. I was sound asleep at about 2AM when there was a really violent KA-BOOM. It propelled me out of bed and woke me enough to check the house for lightning damage (none) and to switch my antenna to a dummy position (yes, I know this does not do much good, especially after the fact).

You know those "gift bags" (looking like a small shoping bag) that play tunes when a certain spot is squeezed? They usually play "Merry Christmas" or "Happy Birthday". One of these bags was in the bedroom, and had not been touched for months. It started playing (without being touched) just after the KA-BOOM.

A second major KA-BOOM thunder/lightning happened about 10 minutes later. The bag started playing again. Both times, the bag played a normal cycle of the tune and then quit.

There was no damage anywhere in the area and my Orion seems OK.

The OT question is what kind of antenna effect (in the gift bag) would activate it? While it was raining heavily, there was no sense of heavy humidity in the house. No other electronics were affected, as far as I could tell.

Bill
W2WO

593. Re: Odd lightning effect

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-20 17:45:05 UTC
From: Bert Hyman <bert@iphouse.com>
Message-ID: <Xns9C3081B71F76BVeebleFetzer@216.250.184.7>
Source record: 14455

In news:4a3d1ea9$0$22522$607ed4bc@cv.net "Bill Ogden"
<billogden@optonline.net> wrote:

> The OT question is what kind of antenna effect (in the gift bag) would
> activate it?

Maybe not an antenna effect at all, but the pressure wave that produced
the KA-BOOM pushed the switch.

--
Bert Hyman St. Paul, MN bert@iphouse.com

594. using a microwave tester to measuer WiFi EIRP

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-20 17:54:04 UTC
From: "Geoffrey S. Mendelson" <gsm@mendelson.com>
Message-ID: <slrnh3q8c4.ms0.gsm@cable.mendelson.com>
Source record: 14456

I have a microwave leakage tester. It is calibrated for 2450 mHz, so it should be perfect for testing WiFi Network output power. It is calibrated in mw/cm2 (miliwatts per square centimeter). It is also ham related as I am limited to 100mw EIRP on the 2.4gHz ham band.

So I figured that I could use it by measuring the field strength at a specific distance from the antenna, and then applying a conversion factor.

Anyone have any ideas?

Thanks,

Geoff.

--
Geoffrey S. Mendelson, Jerusalem, Israel gsm@mendelson.com N3OWJ/4X1GM

595. Re: Odd lightning effect

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-20 19:01:37 UTC
From: JIMMIE <JIMMIEDEE123@YAHOO.COM>
Message-ID: <8286c3ad-fde8-469f-8662-ca3835665698@f30g2000vbf.googlegroups.com>
Source record: 14457
Body handling: HTML body converted to readable text

On Jun 20, 1:45 pm, Bert Hyman wrote:
> Innews:4a3d1ea9$0$22522$607ed4bc@cv.net"Bill Ogden"
>
> wrote:
> > The OT question is what kind of antenna effect (in the gift bag) would
> > activate it?
>
> Maybe not an antenna effect at all, but the pressure wave that produced
> the KA-BOOM pushed the switch.
>
> --
> Bert Hyman St. Paul, MN b...@iphouse.com

Lightning can do some pretty strange things. I was given a RS color computer years ago after it had been on the receiving end of a lightning strike.
Already having one of these computers I proceded to check it out by replacing the chips in my computer one at a time with the ones in the fried computer(I know, not very smart). Well at the the end of all the chip swapping my computer still worked. Power supply on the damaged computer checked OK. A closer inspection of the circuit board showd that some traces underneath the processor chip had ben vaporized. Repairing these traces yielded a working computer. How the lightning burned out these traces without frying the rest of the computer was beyound my understanding.

Jimmie

596. Re: Horizontal Dipole - zero degrees elevation

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-20 19:28:30 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <UNWdnX6lAqP8paDXnZ2dnUVZ_oVi4p2d@giganews.com>
Source record: 14458

Frank wrote:
>> The horizontally polarized transmission has its E-Field parallel to
>> earth. Earth is a conductor (albeit a poor one, but in comparison to
>> free space, it is quite a short circuit). That E-Field's two
>> potentials are being laid across that conductor during the wave
>> propagation to that far point where EZNEC then sums up all field
>> contributions to present you with the lobe characteristic. It stands
>> to reason that at that great distance, the wave will have attenuated
>> considerably - hence the low value.
>>
>> Removing the short circuit (going to free space) removes this
>> attenuation.
>>
>> 73's
>> Richard Clark, KB7QHC
>
> NEC will calculate "Space wave plus surface wave" if required.
>
> Frank

Have you tried doing this calculation with a horizontally polarized VHF antenna? What did you find?

Roy Lewallen, W7EL

597. Re: using a microwave tester to measuer WiFi EIRP

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-20 19:46:16 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <z5KdnRIxXf0RoaDXnZ2dnUVZ_r6dnZ2d@giganews.com>
Source record: 14459

Geoffrey S. Mendelson wrote:
> I have a microwave leakage tester. It is calibrated for 2450 mHz, so it should
> be perfect for testing WiFi Network output power. It is calibrated in mw/cm2
> (miliwatts per square centimeter). It is also ham related as I am limited to
> 100mw EIRP on the 2.4gHz ham band.
>
> So I figured that I could use it by measuring the field strength at a specific
> distance from the antenna, and then applying a conversion factor.
>
> Anyone have any ideas?
>
> Thanks,
>
> Geoff.

The "near field" analysis feature of EZNEC or other modeling program will tell you what field strength in V/m you should expect from an antenna at any specific point in space, if you're able to model the antenna with the program. Power density (mW/cm^2) will be meaningful only if the observation position is in the far field, which is very little distance away at that frequency, but the "near field" analysis is valid also in the far field. For the conversion, use the relationship that the power in watts = V^2/377 where V is the field strength voltage in volts, or mW/cm^2 = (V/m)^2/3770. Again, this measurement is made in the far field, which is typically any distance greater than a fraction of a wavelength from the antenna. If your antenna is fairly simple, the free demo version of EZNEC is adequate to do the modeling.

Roy Lewallen, W7EL

598. Re: When will we get rid of this (RF JUNK)??

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-20 20:06:51 UTC
From: "J. Mc Laughlin" <jcm@power-net.net>
Message-ID: <ML-dnZoakarF3KDXnZ2dnUVZ_gCdnZ2d@bright.net>
Source record: 14460

Dear Jim NN7K: Actually, channel 2 in Flagstaff has been off the air for
a while. KNAZ Flagstaff is digital on channel 22 and duplicates the
programming of KPNX (digital channel 12).

WJBK Detroit, which was on channel 2, is now digital on channel 7.

Outside of (mostly) low power relay stations, these are the most likely
channel 2 (digital) stations actually on the air:
KREX Grand Junction CO 800 w
WLBZ Bangor ME 3 kw
KNOP North Platte NE 16 kw
KVBC Las Vegas NV 27.7 kw
KOTA Rapid City SD 7.1 kw
KJWY Jackson WY 270 w

Looks as if the station south of you will be the most strong channel 2
source of interference (after KTVN goes off the air)..

73, Mac N8TT

--
J. McLaughlin; Michigan, USA
Home: JCM@power-net.net

"Jim-NN7K" <nn7kexk7zfg@noway.net.> wrote in message
news:pV8%l.175$8r.49@nlpi064.nbdc.sbc.com...
> J. Mc Laughlin wrote:
>> Dear Jim NN7K:
>>
>> In this area, Channel 25 continues to inform those who have yet to
>> convert.
>>
>> The station in your area that is performing the same service on channel 2
>> must be KTVN with an analog station some 39 km from you (and digital
>> signal on channel 13 some 33 km from you).
>>
>> I note that by next month, as many as 12 digital stations might remain on
>> channel 2 in the US. FCC records are not clear, but it is expected that
>> the actual number will be smaller. What is clear is that many, many
>> mostly low power TV stations will continue to use channel 2. Within 200
>> km of you, a 4 watt station at 163km (165 degrees) and a 3 kw station at
>> 169 km (284 degrees) are expected to continue.
>>
>> It has been a mystery why any TV stations will continue to transmit on
>> channels 2-6 and above 51.
>>

>> 73, Mac N8TT
> Mac- here (should be) the list of U.S. TV stations, both former, and
> their new channel assignments (in PDF format). As this list shows,
> only close Channel 2 left , would be in Flagstaff, AZ.
>
> see:
>
> http://hraunfoss.fcc.gov/edocs_public/attachmatch/FCC-08-72A2.pdf
>
> Note: this doesn't cover translators, nor low power stations.
>
> Jim NN7K

599. Re: Horizontal Dipole - zero degrees elevation

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-20 20:13:07 UTC
From: greenpjs@neo.rr.com
Message-ID: <5efq35d4j4vmao6u920e2m97lu8r5funj3@4ax.com>
Source record: 14461

On Sat, 20 Jun 2009 12:28:30 -0700, Roy Lewallen <w7el@eznec.com>
wrote:

>Frank wrote:
>>> The horizontally polarized transmission has its E-Field parallel to
>>> earth. Earth is a conductor (albeit a poor one, but in comparison to
>>> free space, it is quite a short circuit). That E-Field's two
>>> potentials are being laid across that conductor during the wave
>>> propagation to that far point where EZNEC then sums up all field
>>> contributions to present you with the lobe characteristic. It stands
>>> to reason that at that great distance, the wave will have attenuated
>>> considerably - hence the low value.
>>>
>>> Removing the short circuit (going to free space) removes this
>>> attenuation.
>>>
>>> 73's
>>> Richard Clark, KB7QHC
>>
>> NEC will calculate "Space wave plus surface wave" if required.
>>
>> Frank
>
>Have you tried doing this calculation with a horizontally polarized VHF
>antenna? What did you find?
>
>Roy Lewallen, W7EL
I'm not sure what you mean. EZNEC seems to say that a horizontally
polarized dipole seems to have zero gain (-99.99DBi) at zero degrees
elevation regardless of the frequency. So far, I have only tried 14
(the 20 meter example that came with EZNEC) Mhz, 491 Mhz (TV channel
17 center), and 527 MHz (TV channel 23 center). I switched to 527
because I can actually see a channel 23 transmitting antenna from my
window. For those who may not missed my original post, I find it hard
to believe a horizontal dipole tuned to the right frequency (near 1:1
SWR with 75 ohm source) would not be able to hear a signal coming from
zero degrees elevation. In the real world, there are all sorts of
reflections off of all sorts of things that will make it work, but is
it true that there should be no signal if everything was ideal?

Richard explained the attenuation of the E-field. That makes sense to
me, but doesn't really explain the other nulls at 6 degrees elevation
and every 6 degrees above that. There are strong positive lobes at 3
degrees and every 6 above that. The plot looks like a nice flower :-)
I would think that attentuation of the E-Field would explain zero

degrees, but as elevation increased, the attenuation would decrease. The EZNEC plot looks more like it is showing additive and subtractive combining of the signal. Another reply mentioned a different program that calculated ground wave in addition to skywave. Maybe that is what I am missing. I normally think of ground wave as why VLF, LF, and MF signals travel further than line of sight, though. Does ground wave have a significant effect at VHF/UHF?

I'm still confused,
Pat, N8CQV

600. Re: Horizontal Dipole - zero degrees elevation

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-20 21:13:51 UTC
From: Dave <noone@nowhere.com>
Message-ID: <jic%I.245$NF6.208@nwrddc02.gnilink.net>
Source record: 14462

<greenpjs@neo.rr.com> wrote in message
news:5efq35d4j4vmao6u920e2m97lu8r5funj3@4ax.com...
> On Sat, 20 Jun 2009 12:28:30 -0700, Roy Lewallen <w7el@eznec.com>
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>
>>Frank wrote:
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> 17 center), and 527 MHz (TV channel 23 center). I switched to 527
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> to believe a horizontal dipole tuned to the right frequency (near 1:1
> SWR with 75 ohm source) would not be able to hear a signal coming from
> zero degrees elevation. In the real world, there are all sorts of
> reflections off of all sorts of things that will make it work, but is
> it true that there should be no signal if everything was ideal?
>
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> me, but doesn't really explain the other nulls at 6 degrees elevation

> and every 6 degrees above that. There are strong positive lobes at 3
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> what I am missing. I normally think of ground wave as why VLF, LF,
> and MF signals travel further than line of sight, though. Does ground
> wave have a significant effect at VHF/UHF?
>
> I'm still confused,
> Pat, N8CQV
>

what you are missing is the 'real world'. eznec is probably modeling over a perfectly flat infinite surface. In the far field in a perfect world the signal along the surface is a combination of ground wave and sky wave, the ground wave decays rapidly with distance leaving the sky wave which will always be very small along the surface. now remember, the frame of reference is at ground level, not the antenna height, so zero degrees is along the infinite flat surface. And there is nothing in there that models where the other antenna is... it just creates a picture of how the strength of the fields are at a given elevation/azimuth angle from the reference point.

Now, in the real world... the ground is never level, even on the ocean where it may look flat it curves down in every direction... so the horizon is not at zero degrees for any antenna above ground level, over flat ground its always below horizontal, on a hill or from a tower its even more negative, and in a valley it can be way above horizontal. both of those cause those predicted patterns to be changed a bit. Also, if the other antenna is not at ground level then it is at some positive angle above horizontal... or if its far enough away maybe a negative angle. You should also note that many broadcast antennas for TV and FM are designed with a tilt to send the signal down toward the ground, especially if they are on high hills or big towers, they would have weak signals near the tower if they didn't tilt it down... of course they don't care about beyond the horizon stuff anyway.

to confuse things even more on vhf/uhf frequencies signals are easily reflected from hills, buildings, and other objects... they are also bent by changes in air temperature and humidity. So in many cases a vhf/uhf signal sent out toward the horizon may get bent down toward the ground and go beyond the horizon by quite a distance, see 'tropospheric ducting' for more info. hf signals of course get refracted back down toward the ground by the ionosphere, so for very distant stations the arrival angle can still be quite high, and almost never straight from the horizon.

601. Re: Horizontal Dipole - zero degrees elevation

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-20 21:15:22 UTC
From: Dave <noone@nowhere.com>
Message-ID: <Kjc%l.246$NF6.234@nwrddc02.gnilink.net>
Source record: 14463

<greenpjs@neo.rr.com> wrote in message
news:5efq35d4j4vmao6u920e2m97lu8r5funj3@4ax.com...
> On Sat, 20 Jun 2009 12:28:30 -0700, Roy Lewallen <w7el@eznec.com>
> wrote:
>
>>Frank wrote:
>>>> The horizontally polarized transmission has its E-Field parallel to
>>>> earth. Earth is a conductor (albeit a poor one, but in comparison to
>>>> free space, it is quite a short circuit). That E-Field's two
>>>> potentials are being laid across that conductor during the wave
>>>> propagation to that far point where EZNEC then sums up all field
>>>> contributions to present you with the lobe characteristic. It stands
>>>> to reason that at that great distance, the wave will have attenuated
>>>> considerably - hence the low value.
>>>>
>>>> Removing the short circuit (going to free space) removes this
>>>> attenuation.
>>>>
>>>> 73's
>>>> Richard Clark, KB7QHC
>>>
>>> NEC will calculate "Space wave plus surface wave" if required.
>>>
>>> Frank
>>
>>Have you tried doing this calculation with a horizontally polarized VHF
>>antenna? What did you find?
>>
>>Roy Lewallen, W7EL
> I'm not sure what you mean. EZNEC seems to say that a horizontally
> polarized dipole seems to have zero gain (-99.99DBi) at zero degrees
> elevation regardless of the frequency. So far, I have only tried 14
> (the 20 meter example that came with EZNEC) Mhz, 491 Mhz (TV channel
> 17 center), and 527 MHz (TV channel 23 center). I switched to 527
> because I can actually see a channel 23 transmitting antenna from my
> window. For those who may not missed my original post, I find it hard
> to believe a horizontal dipole tuned to the right frequency (near 1:1
> SWR with 75 ohm source) would not be able to hear a signal coming from
> zero degrees elevation. In the real world, there are all sorts of
> reflections off of all sorts of things that will make it work, but is
> it true that there should be no signal if everything was ideal?
>
> Richard explained the attenuation of the E-field. That makes sense to
> me, but doesn't really explain the other nulls at 6 degrees elevation

> and every 6 degrees above that. There are strong positive lobes at 3
> degrees and every 6 above that. The plot looks like a nice flower :-)
> I would think that attentuation of the E-Field would explain zero
> degrees, but as elevation increased, the attenuation would decrease.
> The EZNEC plot looks more like it is showing additive and subtractive
> combining of the signal. Another reply mentioned a different program
> that calculated ground wave in addition to skywave. Maybe that is
> what I am missing. I normally think of ground wave as why VLF, LF,
> and MF signals travel further than line of sight, though. Does ground
> wave have a significant effect at VHF/UHF?
>
> I'm still confused,
> Pat, N8CQV
>

p.s. you want to see more real world get one of the terrain analysis
programs that lets you place real antennas over real non-flat ground and see
where the signals really go.

602. Re: using a microwave tester to measuer WiFi EIRP

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-20 21:25:09 UTC
From: Jeff Liebermann <jeffl@cruzio.com>
Message-ID: <c9jq35dh2bkahsa1resbrgo5sa5sfn6qi4@4ax.com>
Source record: 14464

On Sat, 20 Jun 2009 17:54:04 +0000 (UTC), "Geoffrey S. Mendelson"
<gsm@mendelson.com> wrote:

>I have a microwave leakage tester. It is calibrated for 2450 mHz, so it should
>be perfect for testing WiFi Network output power. It is calibrated in mw/cm2
>(miliwatts per square centimeter). It is also ham related as I am limited to
>100mw EIRP on the 2.4gHz ham band.
>
>So I figured that I could use it by measuring the field strength at a specific
>distance from the antenna, and then applying a conversion factor.

See if you can get your money back. I had the same idea a few years
ago and purchased a Safeea Inc MD-2000 tester:
<http://www.allproducts.com/ee/safeea/md-2000.html>
Of course, the first thing I did was rip it apart:
<http://802.11junk.com/jeffl/pics/Microwave%20Leakage%20Detector/index.html>
The diode D1 (labelled C2) is the detector. The apparently random
circuit board traces nearby is the "antenna".

The sensitivity sucks. I'm only able to get an indication when it's a
few cm from the antenna of my access point. Worse, the indication
varies radically from zilch to tilt (9.9mw/cm^2). There's no stable
indication. At the microwave oven leak test distance of 2 inches, it
barely indicates anything, even when I generate continuous traffic
with my iPod Touch. If there were some way to generate a CW carrier
from the access point, perhaps it might deliver a better and more
stable indication.

The problem is that the duty cycle of Wi-Fi transmissions are not
constant. The MD-2000 microwave leak detector works nicely with the
constant duty cycle of the oven controller, but doesn't do as well
with the widely varying duty cycle of Wi-Fi. Also, the duty cycle of
just the beacon transmissions is very low, resulting in a very low
indication.

I also have several analog oven leak detectors, which produce similar
disgusting results.

Topic Drift: Think your microwave oven is well shielded? Put your
2.4GHz cordless phone handset inside the microwave oven. Close the
door. Hit the "page" button on the phone base and see if the phone
rings. It probably will. So much for shielding.

--
Jeff Liebermann jeffl@cruzio.com
150 Felker St #D http://www.LearnByDestroying.com

Santa Cruz CA 95060 http://802.11junk.com
Skype: JeffLiebermann AE6KS 831-336-2558

603. Re: using a microwave tester to measuer WiFi EIRP

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-20 21:39:05 UTC
From: "Geoffrey S. Mendelson" <gsm@mendelson.com>
Message-ID: <slrnh3qlen.bs8.gsm@cable.mendelson.com>
Source record: 14465

Jeff Liebermann wrote:

>
> See if you can get your money back. I had the same idea a few years
> ago and purchased a Safeea Inc MD-2000 tester:

I bought it about 10 years ago. I doubt they would do any thing now.
>
> The sensitivity sucks. I'm only able to get an indication when it's a
> few cm from the antenna of my access point. Worse, the indication
> varies radically from zilch to tilt (9.9mw/cm^2).

Mine also read close up, but was relatively stable. I was downloading a large
file at the time, so there was plenty of traffic.

> Topic Drift: Think your microwave oven is well shielded? Put your
> 2.4GHz cordless phone handset inside the microwave oven. Close the
> door. Hit the "page" button on the phone base and see if the phone
> rings. It probably will. So much for shielding.

Same here, except mine are 1.8gHz.

Geoff.

--
Geoffrey S. Mendelson, Jerusalem, Israel gsm@mendelson.com N3OWJ/4X1GM

604. Re: using a microwave tester to measuer WiFi EIRP

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-20 21:47:45 UTC
From: Owen Duffy <none@no.where>
Message-ID: <Xns9C314F4E22250nonenowhere@61.9.191.5>
Source record: 14466

"Geoffrey S. Mendelson" <gsm@mendelson.com> wrote in
news:slrnh3q8c4.ms0.gsm@cable.mendelson.com:

> I have a microwave leakage tester. It is calibrated for 2450 mHz, so
> it should be perfect for testing WiFi Network output power. It is
> calibrated in mw/cm2 (miliwatts per square centimeter). It is also ham
> related as I am limited to 100mw EIRP on the 2.4gHz ham band.

Is the power specified as pX, pY, or pZ?

What does the 'instrument' indicate? At best it is probably pX, pY, and pZ
on an unmodulated carrier, but none of them on a WiFi signal.

Owen

605. Re: Horizontal Dipole - zero degrees elevation

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-20 21:59:17 UTC
From: greenpjs@neo.rr.com
Message-ID: <uilq359f0dk7agflgon49mefk3rvv67j1e@4ax.com>
Source record: 14467

On Sat, 20 Jun 2009 21:13:51 GMT, "Dave" <noone@nowhere.com> wrote:

>>
>what you are missing is the 'real world'. eznec is probably modeling over a
>perfectly flat infinite surface. In the far field in a perfect world the
>signal along the surface is a combination of ground wave and sky wave, the
>ground wave decays rapidly with distance leaving the sky wave which will
>always be very small along the surface. now remember, the frame of
>reference is at ground level, not the antenna height, so zero degrees is
>along the infinite flat surface. And there is nothing in there that models
>where the other antenna is... it just creates a picture of how the strength
>of the fields are at a given elevation/azimuth angle from the reference
>point.
>
Dave,
Your paragraph above helped. For VHF and above, in the real world, am
I better off using EZNEC's "free space" setting instead of real
ground? I know at HF frequencies, where antennas are often close to
the ground, it makes a big difference, but could free space be a
better approximation of VHF antenna many wavelengths off the ground?

Pat

606. Re: MFJ autuner review, was Re: Coax + Ladder Line

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-20 22:44:56 UTC
From: Mike Coslo <mjc5@psu.edu>
Message-ID: <h1jop2$9s6a$2@tr22n12.aset.psu.edu>
Source record: 14468

J. Mc Laughlin wrote:
> Dear N3LI: Might the MFJ model be 993?

Sorry, Germs, I typo'd. It is indeed a 993.

- 73 de Mike N3LI -

607. Re: question about dipole antenna height

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-20 23:12:15 UTC
From: "J. Mc Laughlin" <jcm@power-net.net>
Message-ID: <J4SdnboIE8xR8aDXnZ2dnUVZ_uednZ2d@bright.net>
Source record: 14469

Dear Dale K9VUJ:

I am obliged to you for the information on the BT-1500A's lower frequency.

It has long been rumored that the KW version of the Matchbox did not have as broad a tuning range as that of the 275 watt Matchbox. You have reinforced that notion.

Thanks. 73, Mac N8TT
--
J. McLaughlin; Michigan, USA
Home: JCM@power-net.net
"Dale j." <nospam@dot.invalid> wrote in message
news:nospam-351BAC.12564620062009@news.giganews.com...
> In article <b7WdnQb-rbAGlqDXnZ2dnUVZ_oydnZ2d@bright.net>,
> "J. Mc Laughlin" <jcm@power-net.net> wrote:
>
>> Dear Dale J. (no call sign):
>>
>> A real Matchbox ("275 watt") will "tune" such an antenna from roughly 2.9
>> MHz to 4.9 MHz when set to the 80 meter position.
>> I am interested to learn what the tuning range of the BT-1500A is.
>>
>> Regards, Mac N8TT
>
> The BT1500 will reach 3.0 Mc. thats with 128 ft of doublet and 90 feet
> of W7FG open wire line. The Johnson KW won't get that far down, I have
> one of those too.
>
> Go to Palstar website for the specs on the BT-1500A. It's a double L
> tuner, Measures came up with a similar tuner some years ago.
>
> 73
> Dale, K9VUJ
> 50TH year in ham radio
>
>
>
>
>> --
>> J. McLaughlin; Michigan, USA
>> Home: JCM@power-net.net
>>
>> "Dale j." <nospam@dot.invalid> wrote in message
>> news:nospam-256C77.10000220062009@news.giganews.com...

>> > In article <u23%l.152$NF6.72@nwrddc02.gnilink.net>,
>> > "Dave" <noone@nowhere.com> wrote:
>> >
>> >> "Dale j." <nospam@dot.invalid> wrote in message
>> >> news:nospam-27E266.02375920062009@news.giganews.com...
>> >> > In article <Xns9C3077DC7288Fnonenowhere@61.9.191.5>,
>> >> > Owen Duffy <none@no.where> wrote:
>> >> >
>> >> >> "Dale j." <nospam@dot.invalid> wrote in
>> >> >> news:nospam-BA60D4.18394719062009
>> >> >> @news.giganews.com:
>> >> >>
>> >> >> > I have a dipole which the ends are up 30 feet above ground. If I
>> >> >> > lower
>> >> >> > the ends to say 20 feet will that have much affect on the
>> >> >> > performance
>> >> >> > of
>> >> >> > the antenna. The center is at about 30 feet. Will 10 feet make
>> >> >> > any
>> >> >> > difference on 75 meter band? I feed it with 600 ohm open wire
>> >> >> > and
>> >> >> > it's
>> >> >> > tuned with a matchbox tuner.
>> >> >>
>> >> >> Lowering the ends as you describe will have only a small effect on
>> >> >> the
>> >> >> band
>> >> >> you mention. You can expect the feedpoint impedance to change a
>> >> >> little
>> >> >> (and
>> >> >> that might be in our favour).
>> >> >>
>> >> >> Owen
>> >> >
>> >> > Some tree limbs are starting to get close to the doublet and
>> >> > lowering
>> >> > it
>> >> > by ten feet will help that situation. Also I need to make it a bit
>> >> > longer to reach a MARS freq. So lowering it will serve two
>> >> > purposes,
>> >> > but I'm still considering and appreciate the input.
>> >> >
>> >> > I wish I had 20 acres.
>> >> > --
>> >> > Email: dalej2@mac.com
>> >> >
>> >> > Six years already.
>> >>
>> >> if its tuned with a matchbox already you don't need to make it a bit
>> >> longer

>> >> to reach the mars frequency. the 'bit' longer probably won't improve
>> >> the
>> >> performance any more than lowering it will hurt the performance as
>> >> long
>> >> as
>> >> the rig is happy with the match from the tuner.
>> >
>> > My BT-1500A won't quite make it. It's a 128 feet long fed with about
>> > 90
>> > feet of W7FG ladder line.
>> > --
>> > Email: dalej2@mac.com
>> >
>> > Six years already.
> --
> Email: dalej2@mac.com
>
> Six years already.

608. Re: Horizontal Dipole - zero degrees elevation

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-20 23:26:56 UTC
From: Dave <noone@nowhere.com>
Message-ID: <4fe%l.276$NF6.275@nwrddc02.gnilink.net>
Source record: 14470

<greenpjs@neo.rr.com> wrote in message
news:uilq359f0dk7agflgon49mefk3rvv67j1e@4ax.com...
> On Sat, 20 Jun 2009 21:13:51 GMT, "Dave" <noone@nowhere.com> wrote:
>
>>>
>>what you are missing is the 'real world'. eznec is probably modeling over
>>a
>>perfectly flat infinite surface. In the far field in a perfect world the
>>signal along the surface is a combination of ground wave and sky wave, the
>>ground wave decays rapidly with distance leaving the sky wave which will
>>always be very small along the surface. now remember, the frame of
>>reference is at ground level, not the antenna height, so zero degrees is
>>along the infinite flat surface. And there is nothing in there that
>>models
>>where the other antenna is... it just creates a picture of how the
>>strength
>>of the fields are at a given elevation/azimuth angle from the reference
>>point.
>>
> Dave,
> Your paragraph above helped. For VHF and above, in the real world, am
> I better off using EZNEC's "free space" setting instead of real
> ground? I know at HF frequencies, where antennas are often close to
> the ground, it makes a big difference, but could free space be a
> better approximation of VHF antenna many wavelengths off the ground?
>
> Pat

yes, it will probably be a better approximation, especially if the two
antennas are in sight of each other. the ground effect is mostly
appropriate for hf and at very long distance. vhf has many other effects
that cause reflections and ducting that kind of over ride the ground image
model that most modeling programs use.

609. Re: Horizontal Dipole - zero degrees elevation

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-20 23:41:01 UTC
From: Jerry <jerrymartes@verizon.net>
Message-ID: <hse%I.226$9I4.11@nwrddc01.gnilink.net>
Source record: 14471

<greenpjs@neo.rr.com> wrote in message
news:uilq359f0dk7agflgon49mefk3rvv67j1e@4ax.com...
> On Sat, 20 Jun 2009 21:13:51 GMT, "Dave" <noone@nowhere.com> wrote:
>
>>>
>>what you are missing is the 'real world'. eznec is probably modeling over
>>a
>>perfectly flat infinite surface. In the far field in a perfect world the
>>signal along the surface is a combination of ground wave and sky wave, the
>>ground wave decays rapidly with distance leaving the sky wave which will
>>always be very small along the surface. now remember, the frame of
>>reference is at ground level, not the antenna height, so zero degrees is
>>along the infinite flat surface. And there is nothing in there that
>>models
>>where the other antenna is... it just creates a picture of how the
>>strength
>>of the fields are at a given elevation/azimuth angle from the reference
>>point.
>>
> Dave,
> Your paragraph above helped. For VHF and above, in the real world, am
> I better off using EZNEC's "free space" setting instead of real
> ground? I know at HF frequencies, where antennas are often close to
> the ground, it makes a big difference, but could free space be a
> better approximation of VHF antenna many wavelengths off the ground?
>
> Pat

Hi Pat

I recently re-entered the Ham community after being away from electronics
for 40 years. I was extreemely resistant to accepting the accuracy of
computer modeling. As I have become more familiar with computer modeling
data, I now respect its value very much.
Before acceptance of the accuracy of computer modeling, I recently made my
own complex impedance measurement equipment for 2 meters. I also made
actual radiation pattern measurements using polar orbiting satellites at the
"range illuminator".
Your question about how well the data from EZNEC matches "actual"
radiation pattern is probably related to our not being able to feed the
appropriate information into the computer modeling program.

You are probably interested in 'just learning' how accurate EZNEC is.for
predicting antenna sensitivity toward the horizon when the signal is
horizontally polarized. But, if you want to get actual radiation pattern

data from any given antenna at VHF where polar orbiting satellites are sending a beacon signal, you can simply record the receiver RSSI while the satellite passes overhead.
I have some EZNEC and actual patterns measured using the 137 MHz signals from NOAA satellites. My data wont convince you that EZNEC is quite valuable for predicting the performance of YOUR dipole. But, if you have interest in knowing more about what I have done for recording antenna pattern data using polar orbiting satellites, contact me. I suspect you already know more about what you need than anything I can add.

Jerry KD6JDJ

610. Re: Horizontal Dipole - zero degrees elevation

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-20 23:55:06 UTC
From: tom <news4792@taring.org>
Message-ID: <4a3d76ce$0$18864$8046368a@newsreader.iphouse.net>
Source record: 14472

Roy Lewallen wrote:
>
> Have you tried doing this comre it before.

I ran this with a 15' 9" boom 6m beam at 20 feet over real high accuracy ground, which is at a typical height for a height for a home TV antenna.

The vertically polarized version had a peak of 11.5 dBi at 9 degrees while the horizontal had 16.0 at 13 degrees. At 9 degrees the horizontal still had 15.0 dBi, clearly the winner.

Given that this was very close to the ground in terms of wavelength, it may not be a good example.

tom
K0TAR

611. Re: Horizontal Dipole - zero degrees elevation

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-21 00:00:00 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <2NOdnZtVA-Ge5aDXnZ2dnUVZ_vudnZ2d@giganews.com>
Source record: 14473

tom wrote:
> Roy Lewallen wrote:
>>
>> Have you tried doing this comre it before.

For the record, I did not write that. I always comre it after.

Roy Lewallen, W7EL

> I ran this with a 15' 9" boom 6m beam at 20 feet over real high accuracy
> ground, which is at a typical height for a height for a home TV antenna.
>
> The vertically polarized version had a peak of 11.5 dBi at 9 degrees
> while the horizontal had 16.0 at 13 degrees. At 9 degrees the
> horizontal still had 15.0 dBi, clearly the winner.
>
> Given that this was very close to the ground in terms of wavelength, it
> may not be a good example.
>
> tom
> K0TAR

612. Re: Horizontal Dipole - zero degrees elevation

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-21 00:08:25 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <drtq35p76v4err7pct4vhdm0v8cehd8fnf@4ax.com>
Source record: 14474

On Sat, 20 Jun 2009 16:13:07 -0400, greenpjs@neo.rr.com wrote:

>I switched to 527
>because I can actually see a channel 23 transmitting antenna from my
>window.

Hi Pat,

If you think this experience contradicts EZNEC (or conventional teachings which it concurs with), then the confusion comes from the sense of "very far away." Truly, if you can see the Channel 23 transmitting antenna, then it is not that far away in the scheme of things. It merely points out that you have not correctly modeled your experience.

>For those who may not missed my original post, I find it hard
>to believe a horizontal dipole tuned to the right frequency (near 1:1
>SWR with 75 ohm source) would not be able to hear a signal coming from
>zero degrees elevation. In the real world, there are all sorts of
>reflections off of all sorts of things that will make it work, but is
>it true that there should be no signal if everything was ideal?

What is going to be a reflector to a source that is bore-sight with the horizon?

>Richard explained the attenuation of the E-field. That makes sense to
>me, but doesn't really explain the other nulls at 6 degrees elevation
>and every 6 degrees above that.

You didn't ask about that.

>There are strong positive lobes at 3
>degrees and every 6 above that. The plot looks like a nice flower :-)
>I would think that attentuation of the E-Field would explain zero
>degrees, but as elevation increased, the attenuation would decrease.

You have, again, lost sight of the meaning of "very far away."

>The EZNEC plot looks more like it is showing additive and subtractive
>combining of the signal.

It is. What you see is called the Fresnel Zone if you were line of sight.

Here, even if you can "see" the Channel 23 transmitting antenna, then its various reflections could add up to ZERO. This, again, confounds expectation, but it is the experience of every mobile operator who encounters "picket fencing."

> Another reply mentioned a different program
>that calculated ground wave in addition to skywave. Maybe that is
>what I am missing. I normally think of ground wave as why VLF, LF,
>and MF signals travel further than line of sight, though. Does ground
>wave have a significant effect at VHF/UHF?

Yes, it is dead within a mile for Channel 23.

>I'm still confused,

and so are a number of your respondents.

73's
Richard Clark, KB7QHC

613. Re: Horizontal Dipole - zero degrees elevation

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-21 00:18:17 UTC
From: tom <news4792@taring.org>
Message-ID: <4a3d7c93$0$92353$8046368a@newsreader.iphouse.net>
Source record: 14475

Roy Lewallen wrote:
> tom wrote:
>> Roy Lewallen wrote:
>>>
>>> Have you tried doing this comre it before.
>
> For the record, I did not write that. I always comre it after.
>
> Roy Lewallen, W7EL
>

I noticed that after I sent it. I have no idea what I may or may not
(this being Windows after all) have done to make that weird edit occur.

Sorry Roy.

tom
K0TAR

614. Re: Horizontal Dipole - zero degrees elevation

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-21 00:33:19 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <LvGdnXSdupBO4qDXnZ2dnUVZ_sidnZ2d@giganews.com>
Source record: 14476

greenpjs@neo.rr.com wrote:
>> Frank wrote:
>>>
>>> NEC will calculate "Space wave plus surface wave" if required.
>>>
>>> Frank
>> Have you tried doing this calculation with a horizontally polarized VHF
>> antenna? What did you find?
>>
>> Roy Lewallen, W7EL

> I'm not sure what you mean.

My comment was directed to Frank. I'm hoping he'll try running the calculation, or has already. He'll discover that:

1. A horizontally polarized wave does not propagate via a surface wave, and
2. The attenuation of surface waves increases with frequency. At VHF, it's essentially zero at any useful distance.

Either of these is adequate to explain the result he'll see, or has seen, that the result with surface wave is the same as the result without surface wave, for this situation.

Richard and Dave have answered your question -- the reason for the zero field at zero elevation angle EZNEC result is that the model ground is perfectly flat and infinite in extent, and the observation point is essentially at an infinite distance. This is useful for evaluating sky wave propagation at long distances, but not for line-of-sight propagation where Earth curvature can be a factor. Free space analysis is better for this. Programs which calculate reflection coefficients for various ground shapes aren't very useful at VHF and above, because local features, especially in an urban environment, cause reflections that are often much more significant than the ones calculated by the program. All you can do with these programs in a situation like yours is to get a general idea of what's happening.

> EZNEC seems to say that a horizontally
> polarized dipole seems to have zero gain (-99.99DBi) at zero degrees
> elevation regardless of the frequency. So far, I have only tried 14
> (the 20 meter example that came with EZNEC) Mhz, 491 Mhz (TV channel
> 17 center), and 527 MHz (TV channel 23 center). I switched to 527
> because I can actually see a channel 23 transmitting antenna from my
> window. For those who may not missed my original post, I find it hard
> to believe a horizontal dipole tuned to the right frequency (near 1:1
> SWR with 75 ohm source) would not be able to hear a signal coming from

> zero degrees elevation. In the real world, there are all sorts of
> reflections off of all sorts of things that will make it work, but is
> it true that there should be no signal if everything was ideal?

If by ideal you mean that the ground is perfectly flat and infinite in
extent, yes.

> Richard explained the attenuation of the E-field. That makes sense to
> me, but doesn't really explain the other nulls at 6 degrees elevation
> and every 6 degrees above that. There are strong positive lobes at 3
> degrees and every 6 above that. The plot looks like a nice flower :-)
> I would think that attentuation of the E-Field would explain zero
> degrees, but as elevation increased, the attenuation would decrease.
> The EZNEC plot looks more like it is showing additive and subtractive
> combining of the signal.

That's exactly what EZNEC is doing. It calculates the sum of two "rays"
-- idealized straight line radiation from the antenna. One is the
"direct ray", which goes directly from the antenna to the observation
point. (Actually, the fields from all segments are individually
calculated and summed.) The second is the "reflected ray", which
reflects from the ground plane to arrive at the same distant point. Some
geometric investigation will show that the reflected ray at an elevation
angle of -x degrees will add to the direct ray at an elevation angle of
+x degrees at the distant point. The reflection coefficient of the
ground, which is determined by the frequency, wave polarization, and
ground conductivity and permittivity, is used to determine the amplitude
and phase of the reflected ray. The reflection coefficient of low angle
horizontally polarized waves is nearly -1 for any reasonable ground
characteristics, so the low angle pattern is nearly the same for a
horizontally polarized antenna over the Earth as for one over a
perfectly conducting ground. If you look the the distance from the
antenna to a distant point via the direct route and compare it to the
distance to the same point via the reflected route, you'll see that the
difference between the two routes (that is, the distances traversed by
the two "rays") monotonically increases with increasing elevation angle.
At zero elevation angle, the two distances are the same. Since the
reflected ray undergoes a phase reversal (as Richard explained),
expressed as a -1 reflection coefficient, the direct and reflected rays
cancel at the distant point, resulting in zero field strength. As the
elevation angle increases, the difference between the two two ray paths
increases, resulting in imperfect cancellation. At some elevation angle,
assuming the antenna is high enough off the ground, the difference in
path lengths will be exactly a half wavelength. At this angle, the two
rays will reinforce at the distant point. At a higher angle, they'll be
exactly one wavelength different, and the rays will cancel again. And so
forth. The path distance difference goes from zero at zero elevation
angle to a maximum straight up of twice the antenna height above ground,
so the number of "flower petals" you see depends on the height, in
wavelengths, of the antenna above ground.

> Another reply mentioned a different program
> that calculated ground wave in addition to skywave. Maybe that is
> what I am missing. I normally think of ground wave as why VLF, LF,
> and MF signals travel further than line of sight, though. Does ground
> wave have a significant effect at VHF/UHF?

No, it doesn't. Which is why I posted the query to Frank.
>
> I'm still confused,
> Pat, N8CQV

Hope this helps. There's additional information in the _ARRL Antenna Book_ and other sources which explains how the patterns of antennas are affected by ground.

Roy Lewallen, W7EL

615. 80m/160m trap dipole

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-21 00:43:05 UTC
From: maxpower <maxpowervk@yahoo.com.au>
Message-ID: <556040d2-41cb-4358-baf5-7f2587b0bfd0@a5g2000pre.googlegroups.com>
Source record: 14477

Hello All,
I have an 80m dipole that I wish to use on 160m as well. I am considering using traps on the existing dipole. I have searched the web and have not found any 80m/160m trap dipoles. Has anyone added traps to their 80m dipole to make it usable on 160m? Or could anyone point me in the right direction towards homebrewing traps to suit. I have made traps in the past for 40m/80m dipoles but I am unsure what dimensions, length, turns etc I would need for homebrewing a trap to make my 80m dipole useable on 80m and 160m.
Thank You.
Cheers
Max

616. Re: Horizontal Dipole - zero degrees elevation

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-21 00:50:59 UTC
From: greenpjs@neo.rr.com
Message-ID: <emvq35hdev29oofvdel9hne2veopp13v1r@4ax.com>
Source record: 14478

Hi, Richard. Thanks for sticking with me throught this. I have added comment and more questions below. 73, Pat

On Sat, 20 Jun 2009 17:08:25 -0700, Richard Clark <kb7qhc@comcast.net> wrote:

>On Sat, 20 Jun 2009 16:13:07 -0400, greenpjs@neo.rr.com wrote:
>
>>I switched to 527
>>because I can actually see a channel 23 transmitting antenna from my
>>window.
>
>Hi Pat,
>
>If you think this experience contradicts EZNEC (or conventional
>teachings which it concurs with), then the confusion comes from the
>sense of "very far away." Truly, if you can see the Channel 23
>transmitting antenna, then it is not that far away in the scheme of
>things. It merely points out that you have not correctly modeled your
>experience.
So,EZNEC models "very far away" and, in my example, the channel 23 tower is 5.1 miles away (about 10,000 wavelengths) so I need a different model? A different program? I think you are correct in saying that is my main confusion.

>
>>For those who may not missed my original post, I find it hard
>>to believe a horizontal dipole tuned to the right frequency (near 1:1
>>SWR with 75 ohm source) would not be able to hear a signal coming from
>>zero degrees elevation. In the real world, there are all sorts of
>>reflections off of all sorts of things that will make it work, but is
>>it true that there should be no signal if everything was ideal?
>
>What is going to be a reflector to a source that is bore-sight with
>the horizon?
>
>>Richard explained the attenuation of the E-field. That makes sense to
>>me, but doesn't really explain the other nulls at 6 degrees elevation
>>and every 6 degrees above that.
>
>You didn't ask about that.
Sorry about that. The null at zero degrees is what surprised me so I figured that if I understood it, the rest would make sense.
>
>>There are strong positive lobes at 3

>>degrees and every 6 above that. The plot looks like a nice flower :-)
>>I would think that attentuation of the E-Field would explain zero
>>degrees, but as elevation increased, the attenuation would decrease.
>
>You have, again, lost sight of the meaning of "very far away."
I don't doubt that!
>
>>The EZNEC plot looks more like it is showing additive and subtractive
>>combining of the signal.
>
>It is. What you see is called the Fresnel Zone if you were line of
>sight.
>
>Here, even if you can "see" the Channel 23 transmitting antenna, then
>its various reflections could add up to ZERO. This, again, confounds
>expectation, but it is the experience of every mobile operator who
>encounters "picket fencing."
Good example. I started in this hobby 41 years ago on 6 meter AM.
However, I always thought that picket fencing was caused by
reflections from various objects (power lines, airplanes, metal
fences, water towers, etc,etc) rather than the radiation patterns of
the antennas.

>
>> Another reply mentioned a different program
>>that calculated ground wave in addition to skywave. Maybe that is
>>what I am missing. I normally think of ground wave as why VLF, LF,
>>and MF signals travel further than line of sight, though. Does ground
>>wave have a significant effect at VHF/UHF?
>
>Yes, it is dead within a mile for Channel 23.
>
>>I'm still confused,
>
>and so are a number of your respondents.

That may be true, but I appeciate them trying to help.

Since my last post, I changed the polarization of my EZNEC dipole to
virtical. I expected a nice donut shaped pattern, but instead saw
another flower shaped pattern with deep nulls at various elevations
including zero degrees. When I select free space, I get the donut.

I truely believe EZNEC gives valid results when provided with a proper
model. So, either I am not providing a good model to EZNEC (likely)
or a simple virtical dipole radiates very little at zero degrees
(-90dBi) and a lot at one degree (7.33 dBi), etc, etc (which seems
less likely to me).
>
>73's
>Richard Clark, KB7QHC

617. Re: Horizontal Dipole - zero degrees elevation

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-21 01:08:43 UTC
From: Frank <ve6cbxyz@nospam.telus.net>
Message-ID: <vKf%l.32883$PH1.12356@edtnps82>
Source record: 14479

```
>> NEC will calculate "Space wave plus surface wave" if required.
>>
>> Frank
>
> Have you tried doing this calculation with a horizontally polarized VHF
> antenna? What did you find?
>
> Roy Lewallen, W7EL
```

As an example I tried the following:

```
CM Horizontal Dipole
CE
GW 1 11 0 0 3 0 1.5 3 0.01
GE 1 -1 0
GN 2 0 0 0 13.0000 0.0050
FR 0 1 0 0 100 1
EX 0 1 6 0 1 0
RP 1 1 360 0000 3 0 1.00000 1.00000 10000
EN
```

At 10,000 meters, 3 meters off the ground:
E(theta) is maximum off the ends at 3.5E-8 V/m
E(phi) is maximum off the sides at 2.6E-7 V/m

This agrees with the expected horizontal polarization off
the sides, and vertical polarization off the ends.

Frank, VE6CB

618. Re: 80m/160m trap dipole

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-21 01:10:58 UTC
From: Ed <Huckleberry_REMOVE_@bigvalley.net>
Message-ID: <Xns9C30B8F88F592Huckleberrybigvalley@198.186.192.196>
Source record: 14480

> . . . . I have searched the
> web and have not found any 80m/160m trap dipoles. Has anyone added
> traps to their 80m dipole to make it usable on 160m? Or could anyone
> point me in the right direction towards homebrewing traps to suit. I
> have made traps in the past for 40m/80m dipoles but I am unsure what
> dimensions, length, turns etc I would need for homebrewing a trap to
> make my 80m dipole useable on 80m and 160m.

I'll leave the home-brewing to others... its relatively easy, but if
you want to take the simple but more expensive route, there are traps
available commercially... Amateur Radio Electronics carries a fine line
made by Reyco. Their 75 and 80 meter traps sell for $53.00 a pair. I
just sold a pair of 75M traps a few months ago on EHam for $25.00.

Ed K7AAT

619. Re: Horizontal Dipole - zero degrees elevation

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-21 01:38:53 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <8uCdnWmO1PKtEqDXnZ2dnUVZ_j5i4p2d@giganews.com>
Source record: 14481

```
Frank wrote:
>>> NEC will calculate "Space wave plus surface wave" if required.
>>>
>>> Frank
>> Have you tried doing this calculation with a horizontally polarized VHF
>> antenna? What did you find?
>>
>> Roy Lewallen, W7EL
>
> As an example I tried the following:
>
> CM Horizontal Dipole
> CE
> GW 1 11 0 0 3 0 1.5 3 0.01
> GE 1 -1 0
> GN 2 0 0 0 13.0000 0.0050
> FR 0 1 0 0 100 1
> EX 0 1 6 0 1 0
> RP 1 1 360 0000 3 0 1.00000 1.00000 10000
> EN
>
> At 10,000 meters, 3 meters off the ground:
> E(theta) is maximum off the ends at 3.5E-8 V/m
> E(phi) is maximum off the sides at 2.6E-7 V/m
>
> This agrees with the expected horizontal polarization off
> the sides, and vertical polarization off the ends.
>
> Frank, VE6CB

Now what's the result without the surface wave?

Roy Lewallen, W7EL
```

620. Re: 80m/160m trap dipole

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-21 01:44:56 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <S5ednXP5rtkGDaDXnZ2dnUVZ_uydnZ2d@giganews.com>
Source record: 14482

maxpower wrote:
> Hello All,
> I have an 80m dipole that I wish to use on 160m as well. I am
> considering using traps on the existing dipole. I have searched the
> web and have not found any 80m/160m trap dipoles. Has anyone added
> traps to their 80m dipole to make it usable on 160m? Or could anyone
> point me in the right direction towards homebrewing traps to suit. I
> have made traps in the past for 40m/80m dipoles but I am unsure what
> dimensions, length, turns etc I would need for homebrewing a trap to
> make my 80m dipole useable on 80m and 160m.
> Thank You.
> Cheers
> Max

The function of a trap is to automatically shorten an antenna for use on higher frequencies. For example, 80 meter traps can be added to a 160 meter dipole to make it usable on 80 meters. But it doesn't work in reverse -- traps won't make your 80 meter dipole work on 160.

You can add loading coils to an 80 meter antenna to make it work after a fashion on 160. But then it won't work on 80 unless you have some way to switch the traps out.

Roy Lewallen, W7EL

621. Re: Horizontal Dipole - zero degrees elevation

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-21 01:45:21 UTC
From: greenpjs@neo.rr.com
Message-ID: <v73r35hpeltdcbnbncccvhqsuec2nc6aml@4ax.com>
Source record: 14483

On Sat, 20 Jun 2009 17:33:19 -0700, Roy Lewallen <w7el@eznec.com>
wrote:
<snip>
>Richard and Dave have answered your question -- the reason for the zero
>field at zero elevation angle EZNEC result is that the model ground is
>perfectly flat and infinite in extent, and the observation point is
>essentially at an infinite distance. This is useful for evaluating sky
>wave propagation at long distances, but not for line-of-sight
>propagation where Earth curvature can be a factor. Free space analysis
>is better for this. Programs which calculate reflection coefficients for
>various ground shapes aren't very useful at VHF and above, because local
>features, especially in an urban environment, cause reflections that are
>often much more significant than the ones calculated by the program. All
>you can do with these programs in a situation like yours is to get a
>general idea of what's happening.

I think I understand now.
>
<snip>
>> but is it true that there should be no signal if everything was ideal?
>
>If by ideal you mean that the ground is perfectly flat and infinite in
>extent, yes.
Got it
>
<snip>
>> The EZNEC plot looks more like it is showing additive and subtractive
>> combining of the signal.
>
>That's exactly what EZNEC is doing. It calculates the sum of two "rays"
>-- idealized straight line radiation from the antenna. One is the
>"direct ray", which goes directly from the antenna to the observation
>point. (Actually, the fields from all segments are individually
>calculated and summed.) The second is the "reflected ray", which
>reflects from the ground plane to arrive at the same distant point. Some
>geometric investigation will show that the reflected ray at an elevation
>angle of -x degrees will add to the direct ray at an elevation angle of
>+x degrees at the distant point. The reflection coefficient of the
>ground, which is determined by the frequency, wave polarization, and
>ground conductivity and permittivity, is used to determine the amplitude
>and phase of the reflected ray. The reflection coefficient of low angle
>horizontally polarized waves is nearly -1 for any reasonable ground
>characteristics, so the low angle pattern is nearly the same for a
>horizontally polarized antenna over the Earth as for one over a

>perfectly conducting ground. If you look the the distance from the
>antenna to a distant point via the direct route and compare it to the
>distance to the same point via the reflected route, you'll see that the
>difference between the two routes (that is, the distances traversed by
>the two "rays") monotonically increases with increasing elevation angle.
>At zero elevation angle, the two distances are the same. Since the
>reflected ray undergoes a phase reversal (as Richard explained),
>expressed as a -1 reflection coefficient, the direct and reflected rays
>cancel at the distant point, resulting in zero field strength. As the
>elevation angle increases, the difference between the two two ray paths
>increases, resulting in imperfect cancellation. At some elevation angle,
>assuming the antenna is high enough off the ground, the difference in
>path lengths will be exactly a half wavelength. At this angle, the two
>rays will reinforce at the distant point. At a higher angle, they'll be
>exactly one wavelength different, and the rays will cancel again. And so
>forth. The path distance difference goes from zero at zero elevation
>angle to a maximum straight up of twice the antenna height above ground,
>so the number of "flower petals" you see depends on the height, in
>wavelengths, of the antenna above ground.
I noticed that. It makes sense now.
<snip>

>
>Hope this helps.
>Roy Lewallen, W7EL
It did. Richards and the others helped a lot, but your explanation
made the light bulb turn on ;-) It also explains why I saw a similar
result with a virtical dipole.

Thanks again to all who helped.

73,
Pat

622. Re: Horizontal Dipole - zero degrees elevation

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-21 02:08:20 UTC
From: Frank <ve6cbxyz@nospam.telus.net>
Message-ID: <oCg%I.32888$PH1.1932@edtnps82>
Source record: 14484

```
>> At 10,000 meters, 3 meters off the ground:
>> E(theta) is maximum off the ends at 3.5E-8 V/m
>> E(phi) is maximum off the sides at 2.6E-7 V/m
>>
>> This agrees with the expected horizontal polarization off
>> the sides, and vertical polarization off the ends.
>>
>> Frank, VE6CB
>
> Now what's the result without the surface wave?
>
> Roy Lewallen, W7EL
```

Good point: E(theta) off the ends 1.25E-7 V/m
E(phi) off the sides 1.04E-7 V/m

Frank

623. Re: Horizontal Dipole - zero degrees elevation

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-21 02:59:04 UTC
From: tom <news4792@taring.org>
Message-ID: <4a3da241$0$92352$8046368a@newsreader.iphouse.net>
Source record: 14485

Frank wrote:
>>> At 10,000 meters, 3 meters off the ground:
>>> E(theta) is maximum off the ends at 3.5E-8 V/m
>>> E(phi) is maximum off the sides at 2.6E-7 V/m
>>>
>>> This agrees with the expected horizontal polarization off
>>> the sides, and vertical polarization off the ends.
>>>
>>> Frank, VE6CB
>> Now what's the result without the surface wave?
>>
>> Roy Lewallen, W7EL
>
> Good point: E(theta) off the ends 1.25E-7 V/m
> E(phi) off the sides 1.04E-7 V/m
>
> Frank
>
>

Ok, how do I get those, and select those, results? I looked for it, but
couldn't find it in EZNEC.

tom
K0TAR

624. Re: Horizontal Dipole - zero degrees elevation

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-21 03:08:24 UTC
From: Frank <ve6cbxyz@nospam.telus.net>
Message-ID: <luh%l.32894$PH1.19415@edtnps82>
Source record: 14486

"tom" <news4792@taring.org> wrote in message
news:4a3da241$0$92352$8046368a@newsreader.iphouse.net...
> Frank wrote:
>>>> At 10,000 meters, 3 meters off the ground:
>>>> E(theta) is maximum off the ends at 3.5E-8 V/m
>>>> E(phi) is maximum off the sides at 2.6E-7 V/m
>>>>
>>>> This agrees with the expected horizontal polarization off
>>>> the sides, and vertical polarization off the ends.
>>>>
>>>> Frank, VE6CB
>>> Now what's the result without the surface wave?
>>>
>>> Roy Lewallen, W7EL
>>
>> Good point: E(theta) off the ends 1.25E-7 V/m
>> E(phi) off the sides 1.04E-7 V/m
>>
>> Frank
>
> Ok, how do I get those, and select those, results? I looked for it, but
> couldn't find it in EZNEC.
>
> tom
> K0TAR

It comes from the "RP" card; line 8 below. I do not know how to
implement this line of code in EZNEC. I am sure there are
plenty of people In this group that know how to do it.

Frank
VE6CB

```
CM Horizontal Dipole
CE
GW 1 11 0 0 3 0 1.5 3 0.01
GE 1 -1 0
GN 2 0 0 0 13.0000 0.0050
FR 0 1 0 0 100 1
EX 0 1 6 0 1 0
RP 1 1 360 0000 3 0 1.00000 1.00000 10000
EN
```

625. Re: 80m/160m trap dipole

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-21 05:19:37 UTC
From: Jim Lux <jimlux@earthlink.net>
Message-ID: <d21c15d9-9323-4cc1-b252-c93b8e7dc2a3@v23g2000pro.googlegroups.com>
Source record: 14487

> maxpower wrote:
> > Hello All,
> > I have an 80m dipole that I wish to use on 160m as well. I am
> > considering using traps on the existing dipole. I have searched the
> > web and have not found any 80m/160m trap dipoles. Has anyone added
> > traps to their 80m dipole to make it usable on 160m? Or could anyone
> > point me in the right direction towards homebrewing traps to suit. I
> > have made traps in the past for 40m/80m dipoles but I am unsure what
> > dimensions, length, turns etc I would need for homebrewing a trap to
> > make my 80m dipole useable on 80m and 160m.
> > Thank You.
> > Cheers
> > Max
>
Would a switchable network at the feedpoint work for you? You could
send power to operate a relay up the feedline. The gain/efficiency of
a half length dipole (e.g. 40 m long for use on 160m) isn't all that
bad compared to full size. It's only when you get down in the tenth
of a wavelength or less that you start seeing big changes.

626. Re: using a microwave tester to measuer WiFi EIRP

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-21 05:39:10 UTC
From: Jim Lux <jimlux@earthlink.net>
Message-ID: <8c71124e-afda-4ddd-afe7-fd57e191f4ed@y34g2000prb.googlegroups.com>
Source record: 14488

On Jun 20, 2:47 pm, Owen Duffy <n...@no.where> wrote:
> "Geoffrey S. Mendelson" <g...@mendelson.com> wrote
innews:slrnh3q8c4.ms0.gsm@cable.mendelson.com:
>
> > I have a microwave leakage tester. It is calibrated for 2450 mHz, so
> > it should be perfect for testing WiFi Network output power. It is
> > calibrated in mw/cm2 (miliwatts per square centimeter). It is also ham
> > related as I am limited to 100mw EIRP on the 2.4gHz ham band.
>

There's probably some standard orientation and test conditions for
these oven leak testers. They're not a "Narda ball" with carefully
designed broadband sensors for all three axes. I'd guess it's
basically a dipole across the end of the business end of the sensor (E
field horizontal, if the meter is laying on the table) with a single
diode and meter. Why do anything more sophisticated.

The shielding in an oven doesn't have to be all that wonderful to meet
the 2mW/cm2 level, either.

For a ballpark, let's say that you've got 1kW spread evenly out on the
inside of the oven. About 30x40x40 cm, or 48,000 cm2. So, in round
numbers 1E6 mW/50E3 cm2 or 20 mW/cm2.. all you need is 10 dB of
attenuation to get down to 2mW/cm2 Obviously, the power density
really isn't even, and you actually worry more about seams, but the
point is that you don't need exotic gaskets and such.

They do make a nifty $100-200 or so WiFi spectrum analyzer which has a
calibrated receiver. And, if you have a wifi card with an exernal
antenna, you can do even better.

627. Re: i am going to put a tv ant on my 100ft tower

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-21 05:44:28 UTC
From: "Sal M. Onella" <salmonella@food.poisoning.org>
Message-ID: <1Nj%l.874$Zc7.813@newsfe22.iad>
Source record: 14489

"John Bose" <pirateham4400@webtv.net> wrote in message
news:12658-4A3CEB63-1266@storefull-3172.bay.webtv.net...
> i going to expermint with this just to see how many dtv i can dx and fm
> also not shure what kind of ant i should try i was thinking to yagi ant
> side by side or the big uhf bay looking type also a channel
> master amp
>

If you have the money, a yagi antenna for VHF channels 7 - 13 would be my recommendation for TV. There are also FM yagis. I don't beleive any so-called "All Channel" antenna will peform as well as an antenna intended for a limited band.

UHF TV is tricky and unreliable. About the only thing to recommend it is the high gain antennas tou can build on a smaller boom. In my opinion, VHF 7 - 13 is a better hunting ground.

628. Re: Odd lightning effect

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-21 06:00:33 UTC
From: "Sal M. Onella" <salmonella@food.poisoning.org>
Message-ID: <60k%I.1262$W_2.980@newsfe02.iad>
Source record: 14490

"Bill Ogden" <billogden@optonline.net> wrote in message
news:4a3d1ea9$0$22522$607ed4bc@cv.net...
> It was raining heavily. I was sound asleep at about 2AM when there was a
> really violent KA-BOOM. It propelled me out of bed and woke me enough to
> check the house for lightning damage (none) and to switch my antenna to a
> dummy position (yes, I know this does not do much good, especially after
the
> fact).
>
> You know those "gift bags" (looking like a small shoping bag) that play
> tunes when a certain spot is squeezed? They usually play "Merry
Christmas"
> or "Happy Birthday". One of these bags was in the bedroom, and had not
been
> touched for months. It started playing (without being touched) just after
> the KA-BOOM.
>
> A second major KA-BOOM thunder/lightning happened about 10 minutes later.
> The bag started playing again. Both times, the bag played a normal cycle
of
> the tune and then quit.
>
> There was no damage anywhere in the area and my Orion seems OK.
>
> The OT question is what kind of antenna effect (in the gift bag) would
> activate it? While it was raining heavily, there was no sense of heavy
> humidity in the house. No other electronics were affected, as far as I
could
> tell.

Could just have been the strong RF in the air. I had something related happen to me. We have a Teddy Bear that sings "We Wish You a Merry Christmas" for 20 seconds whenever you press a button on it. We don't take out the batteries before stowing it overhead in the garage.

In March, I was experimenting with a 40m wire antenna draped over the garage roof. Do I have to tell you what happened whenever I keyed up?
(Eventually, I climbed the ladder and took out the bear's batteries.)

"Sal"

629. Re: using a microwave tester to measuer WiFi EIRP

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-21 06:19:03 UTC
From: "Geoffrey S. Mendelson" <gsm@mendelson.com>
Message-ID: <slrnh3rk0n.pfi.gsm@cable.mendelson.com>
Source record: 14491

Jim Lux wrote:
> They do make a nifty $100-200 or so WiFi spectrum analyzer which has a
> calibrated receiver. And, if you have a wifi card with an exernal
> antenna, you can do even better.

First of all, a $100 item in the US is $200-$300 here (or more, depending upon the regulation required to get it in, the rarity, etc). For example, cheap MP3 players are around 25% more expensive, an iPod is double.

Second, I have never seen a real meaningfull number from a computer. Whether it is MacOS, Linux, or Windows XP, they all give some sort of relative number, for signal strength.

In some cases it has been useful, for example using Kismac, I found that the signal strength as measured by my WiFi card in my Mac, was in the mid 50's with a bluetooth dongle on the computer, and in the 60's without one.

No matter what the number really is 50 is about where it gives up completely.

However, it does not really help me. What I need is to be able to place a device at a specific distance from a 2.4 gHz antenna and read the EIRP.

I can assume that a 100mW signal into the little whip on the back of a router, produces and EIRP of 100mW, which makes all gain antennas illegal. Or I can make an attempt at measuring it. It does not have to be 100% accurate, 10% or even 25% off would be good enough.

For example, I found that placing my meter at about 1 inch from a WiFi router running "full tilt" produced a reading of .36mv/cm2 on the meter. However the only real information I can get from that is yes, the router is transmitting a signal, and yes, I can read it, but no, I have absolutely no clue as to what it means.

I may be asking the impossible, but what I would like to get is a number for example, if I hold the meter an inch from the antenna, 100mW EIRP is 1 mv/cm2. Then I can do something useful with it, as I already know how to compensate for distance. :-)

Geoff.

--
Geoffrey S. Mendelson, Jerusalem, Israel gsm@mendelson.com N3OWJ/4X1GM

630. Re: Horizontal Dipole - zero degrees elevation

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-21 06:19:34 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <efdr35h7m3hbh33ntkub5d376emh6e6o80@4ax.com>
Source record: 14492

On Sat, 20 Jun 2009 20:50:59 -0400, greenpjs@neo.rr.com wrote:

>So,EZNEC models "very far away" and, in my example, the channel 23
>tower is 5.1 miles away (about 10,000 wavelengths) so I need a
>different model? A different program? I think you are correct in
>saying that is my main confusion.

Hi Pat,

You can use the "near field" table to then build a second antenna (representing your own at the proper distance) with a load, and then look at the power developed to that load to see how things perform. This goes beyond the normal use, but for those who will slog through it, there's a way.

>>Here, even if you can "see" the Channel 23 transmitting antenna, then
>>its various reflections could add up to ZERO. This, again, confounds
>>expectation, but it is the experience of every mobile operator who
>>encounters "picket fencing."
>Good example. I started in this hobby 41 years ago on 6 meter AM.
>However, I always thought that picket fencing was caused by
>reflections from various objects (power lines, airplanes, metal
>fences, water towers, etc,etc) rather than the radiation patterns of
>the antennas.

A combination of both, naturally.

>Since my last post, I changed the polarization of my EZNEC dipole to
>virtical. I expected a nice donut shaped pattern, but instead saw
>another flower shaped pattern with deep nulls at various elevations
>including zero degrees. When I select free space, I get the donut.

This is the contribution of ground reflections (which occurs for the horizontal as well).

>I truely believe EZNEC gives valid results when provided with a proper
>model. So, either I am not providing a good model to EZNEC (likely)

It takes discipline to look at the situation without the filter of expectation driving you.

>or a simple virtical dipole radiates very little at zero degrees
>(-90dBi) and a lot at one degree (7.33 dBi), etc, etc (which seems
>less likely to me).

You now enter into the realm of the "Brewster Angle." This is a phenomenon specific to vertical polarization (originally from the field of optics) when an incident ray of radiation meets an interface

and is wholly absorbed by the second media (earth in our case) without any reflection possible, but only for a "critical angle" (another name for this) or less. If you were to change the characteristic of the earth's conductivity (accessible in EZNEC), then you would find you can shift that angle. Selecting a "perfect" ground will present you with a total absence of the Brewster effect, and as high a zero angle response as you might ever want to see.

73's
Richard Clark, KB7QHC

631. Re: Horizontal Dipole - zero degrees elevation

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-21 10:19:02 UTC
From: greenpjs@neo.rr.com
Message-ID: <j22s35df12r7pje4rr8q7206b3i7ejuabk@4ax.com>
Source record: 14493

On Sat, 20 Jun 2009 23:19:34 -0700, Richard Clark <kb7qhc@comcast.net>
wrote:

>On Sat, 20 Jun 2009 20:50:59 -0400, greenpjs@neo.rr.com wrote:
>
>>So,EZNEC models "very far away" and, in my example, the channel 23
>>tower is 5.1 miles away (about 10,000 wavelengths) so I need a
>>different model? A different program? I think you are correct in
>>saying that is my main confusion.
>
>Hi Pat,
>
>You can use the "near field" table to then build a second antenna
>(representing your own at the proper distance) with a load, and then
>look at the power developed to that load to see how things perform.
>This goes beyond the normal use, but for those who will slog through
>it, there's a way.
>
<snip>

>73's
>Richard Clark, KB7QHC

Thanks again, Richard. I just purchased an EZNEC license so I will
try that to further my learning. (I had been using the demo version).

73,
Pat

632. From OP: Thanks. Re: Antenna Orientation Question

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-21 11:29:59 UTC
From: Robert11 <rgsros@xnotme.invalid>
Message-ID: <h1l5k0$7jn$1@news.eternal-september.org>
Source record: 14494

Hi,

Just a quick thanks for the info; appreciate it.

Bob

"Robert11" <rgsros@xnotme.invalid> wrote in message
news:h1iiucfhb1@news.eternal-september.org...
> Hi,
>
> Figure that if anyone would know, it would be you folks.
>
> Seem to get contradictory results, so I thought I'd ask you experts out
> there. For receiving digital TV with a a simple, cheap, R/S indoor rabbit
> ear antenna
> Works fairly well.
>
> For rabbit ears indoor, what is the theoretical best orientation toward a
> single station ?
>
> e.g., a plane encompassing the two ears would best be pointed toward the
> station, or the plane
> should be perpendicular to the direction of the station ?
>
> b. For the UHF loop:
> the plane of the loop of the antenna should be pointed toward the station,
> or perpendicular to it ?
>
> I realize it might be hard to visualize the plane that I refer to, but
> frankly don't know any other way of
> describing orientation.
>
> Perhaps one way would be to say if the rabbit ears are both the exact same
> distance to the antenna,
> or if they are in a line with one right behind the other ponting to it ?
>
> Would be more or less the same kind of description I guess for the UHF
> loop (parallel to the rabbit ears plane, or at 90 deg. to the rabbit ear
> plane) ?
>
> Perhaps you know of a pix on a website that answers my question by showing
> a
> pix of how it should be pointed ?
>
> Much thanks,

> Bob
>
>

633. Re: 80m/160m trap dipole

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-21 13:06:04 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <5fq%l.28319$mX2.4752@newsfe05.iad>
Source record: 14495

maxpower wrote:
> Hello All,
> I have an 80m dipole that I wish to use on 160m as well. I am
> considering using traps on the existing dipole. I have searched the
> web and have not found any 80m/160m trap dipoles. Has anyone added
> traps to their 80m dipole to make it usable on 160m? Or could anyone
> point me in the right direction towards homebrewing traps to suit. I
> have made traps in the past for 40m/80m dipoles but I am unsure what
> dimensions, length, turns etc I would need for homebrewing a trap to
> make my 80m dipole useable on 80m and 160m.
> Thank You. Cheers Max

It is not clear to me whether you are talking about:

1. Increasing the length of your dipole to ~246 feet
and adding 80m traps or

2. "Making your" existing ~123 foot "80m dipole usable
on 160m" by adding 160m loading coils.
--
73, Cecil, IEEE, OOTC, http://www.w5dxp.com

634. Re: 80m/160m trap dipole

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-21 13:18:02 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <fqq%l.28320$mX2.2309@newsfe05.iad>
Source record: 14496

maxpower wrote:
> I have an 80m dipole that I wish to use on 160m as well.

Something else to consider is shorting the transmission
line at the tuner and feeding the 80m dipole as a single
wire against ground on 160m where "ground" is ideally a
good radial system.
--
73, Cecil, IEEE, OOTC, http://www.w5dxp.com

635. Re: 80m/160m trap dipole

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-21 13:52:47 UTC
From: Dave <noone@nowhere.com>
Message-ID: <PWq%I.276$9I4.96@nwrddc01.gnilink.net>
Source record: 14497

"maxpower" <maxpowervk@yahoo.com.au> wrote in message
news:556040d2-41cb-4358-baf5-7f2587b0bfd0@a5g2000pre.googlegroups.com...
> Hello All,
> I have an 80m dipole that I wish to use on 160m as well. I am
> considering using traps on the existing dipole. I have searched the
> web and have not found any 80m/160m trap dipoles. Has anyone added
> traps to their 80m dipole to make it usable on 160m? Or could anyone
> point me in the right direction towards homebrewing traps to suit. I
> have made traps in the past for 40m/80m dipoles but I am unsure what
> dimensions, length, turns etc I would need for homebrewing a trap to
> make my 80m dipole useable on 80m and 160m.
> Thank You.
> Cheers
> Max

'traps' are normally meant to cut up a big antenna into smaller pieces for user on higher frequency bands. that is, if you had a 160m dipole you could put 80m traps in it to make the inner part resonant on 80m. to get an 80m dipole to resonate on 160m you need to add loading coils to make it look longer, that will of course make it not resonant on 80m. with some more complex loading and trapping combined you could probably make something that would force it to resonate on 160m and 80m... but its probably easier to just put a tuner at the radio end and got with that.

636. Re: Horizontal Dipole - zero degrees elevation

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-21 18:03:38 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <6fts35l7snmd3o4h02s99k3afngn5a7pus@4ax.com>
Source record: 14498

On Sun, 21 Jun 2009 06:19:02 -0400, greenpjs@neo.rr.com wrote:

>Thanks again, Richard. I just purchased an EZNEC license so I will
>try that to further my learning. (I had been using the demo version).

Have fun, Pat.

73's
Richard Clark, KB7QHC

637. Re: using a microwave tester to measuer WiFi EIRP

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-21 18:06:31 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <ajts35p7uaru6hkjf7nefb094doe3p1et4@4ax.com>
Source record: 14499

On Sun, 21 Jun 2009 06:19:03 +0000 (UTC), "Geoffrey S. Mendelson"
<gsm@mendelson.com> wrote:

>What I need is to be able to place a
>device at a specific distance from a 2.4 gHz antenna and read the EIRP.

Take a leadless 366 Ohm resistor, and coat it with temperature
sensitive dichroic.

73's
Richard Clark, KB7QHC

638. Re: has anyone built the coat hanger ant for dtv yet?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-22 01:45:53 UTC
From: Gordon <gonzo@alltomyself.com>
Message-ID: <Xns9C31BEDBD7784greederxprtnet@194.177.98.144>
Source record: 14500

pirateham4400@webtv.net (John Bose) wrote in news:12654-4A3CE8D7-7347
@storefull-3172.bay.webtv.net:

> i keep seeing the high tech version ant on you tube and pbs .
>
>

Everyone seems to love that silly thing. And it seems to work
in spite of itself.

I tried a version of it, but it didn't work any better than
two bowties on a stick. Here:
http://mysite.verizon.net/g_reeder/Content/DTV_antenna.html

Mine looks better.

639. Re: i am going to put a tv ant on my 100ft tower

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-22 02:03:56 UTC
From: pirateham4400@webtv.net
Message-ID: <7871-4A3EE68C-760@storefull-3172.bay.webtv.net>
Source record: 14402

ok thanks for the tip

640. Re: lightning protection Re: Coax + Ladder Line

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-22 02:11:19 UTC
From: Dave Oldridge <doldridg@leavethisoutshaw.ca>
Message-ID: <Xns9C31C330CE95Cdoldridgsprintca@69.16.185.250>
Source record: 14401

Jim Lux <james.p.lux@jpl.nasa.gov> wrote in
news:h1eilk$u3q$1@news.jpl.nasa.gov:

>Dave Oldridge wrote:
>> "Kash J. Rangan" <kjrangan@yahoo.com> wrote in
>
>>
>> If your antenna is balanced, it would probably be better to simply
>> split the ladder line onto the center conducters of two identical
>> short coaxes and then run ladder line inside to your tuner. If you
>> MUST ground the shields that's OK and you can use lightning arrestors
>> on both coaxes. But remember, no lighning arrestor is as good for
>> protecting equipment as a foot or two of air. Disconnecting during
>> thunderstorms is solid policy!
>>
>
>If you have a direct hit, a one foot air gap isn't necessarily going to
>do you much good, unless the antenna end of the gap is on the ground
>surface. (i.e. the wire going from where the coax ends to your
>lightning dissipation ground has some non-zero inductance/resistance)
>
>If you're worried about induced voltages from adjacent strikes, then a
>good transient suppressor will help, but almost all suppressors have
>"let through" voltage that is above the damage threshold for, say, a
>FET front end. Depends on what your equipment sensitivity is.
>
>Shorting the input of the radio and tying it to chassis ground.. that
>WILL protect the radio.

I have been through some VERY violent storms. I always disconnected all antenna and power leads from the radio. Outside arrestors will help keep it out of the house but you need airspace to protect receiver front ends. Also disconnect any ethernet runs.

Surge protection can only do so much. I learned the hard way about disconnecting stuff. My neighbour across the street had a direct hit and it danced across the phone lines into my equipment. I lost several modems, a couple of ethernet cards and a monitor and considered myself lucky that none of the computers was totalled. But my radios were disconnected and unscathed.

Now the coast station I worked for had a direct hit on our Nautel 500khz transmitter's tower. Blew out half the solid state final modules but the damn thing kept right on ticking on the others!

--
Dave Oldridge+
ICQ 454777283
VA7CZ

641. Can you ID this antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-22 12:11:09 UTC
From: Gary KW4Z <gkendric@gmail.com>
Message-ID: <0826ec54-8e88-4b30-a12a-f849889eefd3@l8g2000vbp.googlegroups.com>
Source record: 14403

The other day, while passing the local Reserves building, I noticed a new antenna mounted to their tower. It was in an inverted Vee form but had approximately three white insulators that were around 6 to 8 inches in length running between the two wires of this antenna. The antenna was fed, via coax, from the bottom by what appeared to be a balun. The wire proceeded out from the balun past the bottom of the three (per side) insulators and at each end appeared to either double back, upon itself, or be attached to the top wire which was connected to the bottom wire at each end then passed through the top of each of the three (per side) insulators and ended up meeting the other sides, top wire, at, what appeared to be, a plastic mounting plate that served as a fastening point for each of the top wires and also as a top support for the antenna's middle to be connected via rope, wire, etc to either a tower or mast. The top (middle) of the antenna had no contact with the bottom middle (of the antenna), where it was fed from, but the top and bottom wires (isolated from each other as it ran from the middle to end, by three white insulators approx 6-8 inches in length) The only contact of the top wire to the bottom wire was at the extreme ends of this inverted vee type antenna where the top and bottom wires were attached to each other then each end mounted, via insulator, to some connecting point to support the height of the ends of this antenna.

I've just never seen this type antenna and would love to build one. If you know the type, from the description I have given, please share the name of it and where I might be able to obtain the forumulas for calculating length. What bands does it work? Is it homebrew or commercial?

Any input would be appreciated.

642. Re: Can you ID this antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-22 12:20:49 UTC
From: JIMMIE <JIMMIEDEE123@YAHOO.COM>
Message-ID: <0df7d39e-f56d-4714-b5d3-00ef11326315@q14g2000vbn.googlegroups.com>
Source record: 14404

On Jun 22, 8:11 am, Gary KW4Z <gkend...@gmail.com> wrote:
> The other day, while passing the local Reserves building, I noticed a
> new antenna mounted to their tower. It was in an inverted Vee form
> but had approximately three white insulators that were around 6 to 8
> inches in length running between the two wires of this antenna. The
> antenna was fed, via coax, from the bottom by what appeared to be a
> balun. The wire proceeded out from the balun past the bottom of the
> three (per side) insulators and at each end appeared to either double
> back, upon itself, or be attached to the top wire which was connected
> to the bottom wire at each end then passed through the top of each of
> the three (per side) insulators and ended up meeting the other sides,
> top wire, at, what appeared to be, a plastic mounting plate that
> served as a fastening point for each of the top wires and also as a
> top support for the antenna's middle to be connected via rope, wire,
> etc to either a tower or mast. The top (middle) of the antenna had no
> contact with the bottom middle (of the antenna), where it was fed
> from, but the top and bottom wires (isolated from each other as it ran
> from the middle to end, by three white insulators approx 6-8 inches in
> length) The only contact of the top wire to the bottom wire was at
> the extreme ends of this inverted vee type antenna where the top and
> bottom wires were attached to each other then each end mounted, via
> insulator, to some connecting point to support the height of the ends
> of this antenna.
>
> I've just never seen this type antenna and would love to build one.
> If you know the type, from the description I have given, please share
> the name of it and where I might be able to obtain the forumulas for
> calculating length. What bands does it work? Is it homebrew or
> commercial?
>
> Any input would be appreciated.

Totally lost in the discription, Can you supply a picture.

643. Re: Can you ID this antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-22 12:31:46 UTC
From: JIMMIE <JIMMIEDEE123@YAHOO.COM>
Message-ID: <8be9a646-3501-4ffc-a35e-a86d3b2fd5c4@q37g2000vbi.googlegroups.com>
Source record: 14405

On Jun 22, 8:20 am, JIMMIE <JIMMIEDEE...@YAHOO.COM> wrote:
> On Jun 22, 8:11 am, Gary KW4Z <gkend...@gmail.com> wrote:
>
>
>
>
>
> > The other day, while passing the local Reserves building, I noticed a
> > new antenna mounted to their tower. It was in an inverted Vee form
> > but had approximately three white insulators that were around 6 to 8
> > inches in length running between the two wires of this antenna. The
> > antenna was fed, via coax, from the bottom by what appeared to be a
> > balun. The wire proceeded out from the balun past the bottom of the
> > three (per side) insulators and at each end appeared to either double
> > back, upon itself, or be attached to the top wire which was connected
> > to the bottom wire at each end then passed through the top of each of
> > the three (per side) insulators and ended up meeting the other sides,
> > top wire, at, what appeared to be, a plastic mounting plate that
> > served as a fastening point for each of the top wires and also as a
> > top support for the antenna's middle to be connected via rope, wire,
> > etc to either a tower or mast. The top (middle) of the antenna had no
> > contact with the bottom middle (of the antenna), where it was fed
> > from, but the top and bottom wires (isolated from each other as it ran
> > from the middle to end, by three white insulators approx 6-8 inches in
> > length) The only contact of the top wire to the bottom wire was at
> > the extreme ends of this inverted vee type antenna where the top and
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> > I've just never seen this type antenna and would love to build one.
> > If you know the type, from the description I have given, please share
> > the name of it and where I might be able to obtain the forumulas for
> > calculating length. What bands does it work? Is it homebrew or
> > commercial?
>
> > Any input would be appreciated.
>
> Totally lost in the discription, Can you supply a picture.- Hide quoted text -
>
> - Show quoted text -

Maybe an orthogonal antenna.

644. Re: Can you ID this antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-22 13:07:43 UTC
From: Dale Parfitt <parinc1@verizon.net>
Message-ID: <zmL%l.585$NF6.501@nwrddc02.gnilink.net>
Source record: 14406

"Gary KW4Z" <gkendric@gmail.com> wrote in message
news:0826ec54-8e88-4b30-a12a-f849889eefd3@l8g2000vbp.googlegroups.com...
> The other day, while passing the local Reserves building, I noticed a
> new antenna mounted to their tower. It was in an inverted Vee form
> but had approximately three white insulators that were around 6 to 8
> inches in length running between the two wires of this antenna. The
> antenna was fed, via coax, from the bottom by what appeared to be a
> balun. The wire proceeded out from the balun past the bottom of the
> three (per side) insulators and at each end appeared to either double
> back, upon itself, or be attached to the top wire which was connected
> to the bottom wire at each end then passed through the top of each of
> the three (per side) insulators and ended up meeting the other sides,
> top wire, at, what appeared to be, a plastic mounting plate that
> served as a fastening point for each of the top wires and also as a
> top support for the antenna's middle to be connected via rope, wire,
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> contact with the bottom middle (of the antenna), where it was fed
> from, but the top and bottom wires (isolated from each other as it ran
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> length) The only contact of the top wire to the bottom wire was at
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> bottom wires were attached to each other then each end mounted, via
> insulator, to some connecting point to support the height of the ends
> of this antenna.
>
>
> I've just never seen this type antenna and would love to build one.
> If you know the type, from the description I have given, please share
> the name of it and where I might be able to obtain the forumulas for
> calculating length. What bands does it work? Is it homebrew or
> commercial?
>
> Any input would be appreciated.

Sounds very much like B&W's "folded dipole". I use quotes because in their
version they have a resistor at the center of the unfed wire that absorbs
power and smooths out the VSWR.
http://www.bwantennas.com/ama/amaindex.htm
Dale W4OP

645. Re: lightning protection Re: Coax + Ladder Line

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-22 14:49:14 UTC
From: Rick <ricknj10@hotmail.com>
Message-ID: <KRM%I.598$NF6.167@nwrddc02.gnilink.net>
Source record: 14407

>>> MUST ground the shields that's OK and you can use lightning arrestors
>>> on both coaxes.

This is probably not going to work in most cases. Remember an open wire
feedline can have
rather high voltages on it compared to a matched coax liine. This is
because they are often
mismatched at the antenna.
If a voltage peak should happen to occur at the place where you have the
arrestor, it can fire
the gas tube because of the rf voltage.
For example, a gas tube arrestor made for legal limit typically has a firing
voltage of about 800 volts. In a matched
50 ohm system, even with a full 1500 watts into 50 ohms the peak rf voltage
is in the neighborhood of
600 volts. But even a moderate power into a high impedance open line could
be enough to fire
the gas tubes. Neither the transmitter nor the gas tube would be happy with
this situation.

Rick K2XT

646. Detecting the HDTV for the Google Lunar X Prize, applications to the SETI search.

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-22 16:07:59 UTC
From: Robert Clark <rgregoryclark@yahoo.com>
Message-ID: <454ccf3d-4e5e-4aa6-8f27-edd6479d5986@j18g2000yql.googlegroups.com>
Source record: 14408
Cross-posted to: sci.astro,rec.radio.amateur.space,rec.radio.amateur.antenna,sci.astro.seti,sci.physics

On Jun 20, 10:45 am, Jim Lux <jim...@earthlink.net> wrote:
> On Jun 19, 11:20 am, Robert Clark <rgregorycl...@yahoo.com> wrote:
>
> > On Jun 16, 6:57 pm, Robert Clark <rgregorycl...@yahoo.com> wrote:
>
> > > From: rgcl...@my-deja.com (Robert Clark)
> > > Date: 23 May 2001 11:15:06 -0700
> > > Subject: Will amateur radio astronomers be the first to directly
> > > detect extrasolar planets?
> > > Newsgroups: rec.radio.amateur.space, rec.radio.amateur.antenna,
> > > sci.astro, sci.astro.seti,
sci.space.policyhttp://groups.google.com/group/sci.astro.seti/browse_frm/thread/c0018...
>
> > > The long wavelengths should make the requirements for accurate
> > > distance information and timing synchrony between the separate
> > > detectors easy to manage even for amateur systems.
>
> Not easy, not for the precision required.
> You need not only precise time (straightforward), but also precise
> location (not so straightforward)
>
> You're interested in roughly 20MHz, as I recall. Wavelength of 15
> meters. In time, about 45 nanoseconds.
>
> Let's start with a real relaxed requirement, comparable to the mirror
> flatness for a telescope of lambda/14. That means a time knowledge
> of about 3 ns and a position knowledge of 1 meter, in absolute terms.
>
> Typical GPS receivers that have a 1pps output are good to about 20-30
> nanoseconds. Using that to discipline a quartz oscillator, you can do
> a bit better, but it's non trivial to get to the 1-2 ns range.
> Remember, you're also planning on integrating over time, so you have
> to hold that tolerance for a long time.
>
> It would be difficult to determine your position to an absolute
> accuracy of 1 meter, much less the phase center of the antenna (which
> will change as a function of the angle of incidence, quite
> substantially, unless you're putting those dipoles up 100s of feet in
> the air.
>
> Using this method
>

> > > might make the detection achievable even if the power or transmitting
> > > antenna size requirements are not practical for a low cost, low weight
> > > lander on the Moon for an individual detector on Earth.
> > > The recent achievement of real-time very long baseline interferometry
> > > should make it possible to integrate these separate detector signals
> > > in real-time as well:
>
> <snip>
>
> You need to go beyond looking at press releases from radio
> astronomers.
>
> > However, instead of using the satellite TV dishes, we could use
> > individual dipole antennas attached to each house. You would need to
> > communicate high data rates for the signals detected so you would need
> > broadband internet access for this.
> > These dipole antennas as per the Radio JOVE project are just simple
> > vertical wires so could be attached to the house when the installer is
> > connecting the wiring for the broadband. Possibly you could use the
> > same external wiring as for the broadband but that might cause
> > interference with the internet signals.
>
> Radio Jove uses a pair of horizontal dipoles connected together to
> create a single narrower lobe pointing up.
>
> > As shown on the Radio JOVE page the receivers for these dipole
> > antennas are quite simple so would contribute minimally to the cost of
> > installation.
>
> Who's paying, and how minimal? I don't think so.
>
> You do need accurate positional determination and timing
>
> > synchrony for each receiving system to do the very long baseline
> > interferometry, but at these decametric wavelengths this would be easy
> > to do with GPS receivers carried by the installers.
>
> No they can't. You need position accuracy of sub-1 meter accuracy,
> and that isn't achievable by simple handheld devices, like your Garmin
> E-trex, etc. A surveyor using a survey GPS system can get there,
> although absolute position (relative to, say, the center of the earth,
> or some standard datum) to 1 meter would be very challenging.
>
> There's also the not so little problem of tidal bulge. Your position
> changes in absolute (relative to a stellar reference) terms several
> tens of cm. On top of that, tectonic plate movement is on the order of
> several cm/year, which is in the same general ballpark as your
> accuracy requirement.
>
> ...

The NASA Global Differential GPS System.
"The NASA Global Differential GPS (GDGPS) System is a complete, highly accurate, and extremely robust real-time GPS monitoring and augmentation system.
"Employing a large ground network of real-time reference receivers, innovative network architecture, and award-winning real-time data processing software, the GDGPS System provides decimeter (10 cm) positioning accuracy and sub-nanosecond time transfer accuracy anywhere in the world, on the ground, in the air, and in space, independent of local infrastructure."
http://www.gdgps.net/

This would be enough for the positional accuracy at this wavelength. This type of highly accurate receiver would probably have to be used only by the installers as they are likely to be expensive. Perhaps the positional accuracy could be maintained over time by referring to a satellite signal.
The "time transfer" accuracy mentioned apparently does mean the many different sites can be put in time synchrony to within sub-nanosecond precision by reference to the atomic clocks on several GPS satellites at the same time:

Global Positioning System.
2.) Basic concept of GPS
* 2.1 Position calculation introduction
* 2.2 Correcting a GPS receiver's clock
http://en.wikipedia.org/wiki/Global_Positioning_System#Basic_concept_of_GPS

Innovation: GPS Time Transfer.
Using Precise Point Positioning for Clock Comparisons.
Nov 1, 2006
By: François Lahaye, Diego Orgiazzi, Patrizia Tavella, Giancarlo Cerretto.
GPS World
http://www.gpsworld.com/gpsworld/Innovation-GPS-Time-Transfer/ArticleStandard/Article/detail/383189

However, JPL radio astronomer Dr. Dayton Jones responded to my question about the required timing accuracy at such long wavelengths, suggesting it might only have to be only at the ten's of nanoseconds to even microseconds range, depending on the bandwidth being detected:

Newsgroups: rec.radio.amateur.space, rec.radio.amateur.antenna, sci.astro, sci.astro.seti, sci.space.policy
From: rgcl...@my-deja.com (Robert Clark)
Date: 18 Jun 2001 10:26:50 -0700
Subject: Re: Will amateur radio astronomers be the first to directly detect extrasolar planets?
http://groups.google.com/group/sci.astro.seti/msg/8a56d6bc52a09590

Note that with the Radio JOVE system the bandwidth being detected is usually quite small at the tens to hundreds of khz range, as the emissions consist of short pulses. This would only require timing

accuracy at the microsecond range.
For the cost, note that for cable, DSL, satellite, internet and/or TV service typically the receivers, modems, routers, etc are only "rented" where you pay a nominal fee every month. If the cost for the dipole and receivers were in the range of $100 dollars per installation then this could be amortized over the life of that broadband internet system, at say $1 dollar a month or even 50 cents a month.

Bob Clark

647. Re: using a microwave tester to measuer WiFi EIRP

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-22 16:34:28 UTC
From: Jim Lux <james.p.lux@jpl.nasa.gov>
Message-ID: <h1obqk$d1k$1@news.jpl.nasa.gov>
Source record: 14409

Geoffrey S. Mendelson wrote:
> Jim Lux wrote:
>> They do make a nifty $100-200 or so WiFi spectrum analyzer which has a
>> calibrated receiver. And, if you have a wifi card with an exernal
>> antenna, you can do even better.
>
>
> First of all, a $100 item in the US is $200-$300 here (or more, depending
> upon the regulation required to get it in, the rarity, etc). For example,
> cheap MP3 players are around 25% more expensive, an iPod is double.

Ok.. so the Wi-Spy is going to be a bit on the pricey side for you.

>
> Second, I have never seen a real meaningfull number from a computer. Whether it
> is MacOS, Linux, or Windows XP, they all give some sort of relative number,
> for signal strength.

What software are you using to get the signal strength from the WiFi
card? AND, is your WiFi interface one that actually supports scanning
and measuring signal strengths (not all do.. it's less and less common)

However, if you have a card that supports it, you can probably get a
quantitative (but not necessarily calibrated) measurement.

>
> In some cases it has been useful, for example using Kismac, I found that the
> signal strength as measured by my WiFi card in my Mac, was in the mid 50's
> with a bluetooth dongle on the computer, and in the 60's without one.
>
> No matter what the number really is 50 is about where it gives up completely.
>
> However, it does not really help me. What I need is to be able to place a
> device at a specific distance from a 2.4 gHz antenna and read the EIRP.

>
> I can assume that a 100mW signal into the little whip on the back of a router,
> produces and EIRP of 100mW, which makes all gain antennas illegal.

That's not a valid assumption. You'd have to look at the FCC
registration data for the device (assuming the configuration is the same
in the US as you have) and see what their analysis is. Gain antennas
aren't necessarily a problem, even under Part 15.

> Or I can
> make an attempt at measuring it. It does not have to be 100%
accurate, 10% or even 25% off would be good enough.

Your problem is going to be finding a way to calibrate your measurement.
Do you have ANY calibrated signal source around? If so, you can build
a standard gain antenna, and generate a known field to measure with your
measurement device.

>
> For example, I found that placing my meter at about 1 inch from a WiFi router
> running "full tilt" produced a reading of .36mv/cm2 on the meter. However the
> only real information I can get from that is yes, the router is transmitting
> a signal, and yes, I can read it, but no, I have absolutely no clue as to
> what it means.

I assume you mean 0.36 mW/cm2... That's probably an average power (with
the averaging done by the meter movement).

>
> I may be asking the impossible, but what I would like to get is a number
> for example, if I hold the meter an inch from the antenna, 100mW EIRP is
> 1 mv/cm2. Then I can do something useful with it, as I already know how
> to compensate for distance. :-)

If you hold the meter an inch from the antenna, the meter is going to
alter the performance of the antenna.

You need something with some gain (or better sensitivity), so you can
put the probe farther away (e.g. more than a meter), and still make your
measurement. If your device under test is radiating 100 mW, the
surface area of a 1 meter radius sphere is about 130,000 cm^2, so 8E-4
mW/cm2. (call it -30dBm/cm^2) At 2.4 GHz, a wavelength is 12.5cm, so
a dipole will be half that, or 6cm. The effective aperture will be
around 10-20cm^2 (I can't remember off hand), so a receiver hooked to a
dipole probe needs to measure -20dBm sorts of power levels, which isn't
too bad. There's a bunch of inexpensive power detector ICs around that
have sensitivities spanning this (like the AD 8314.. goes -45dBm to
0dBm, 2.7GHz, $1 each in quantity)

You could probably get a sample or two for free. Build a tiny board that
combines the AD log detector and some sort of display or IR telemetry
and a small battery, with the dipole sticking out.

>
> Geoff.
>

648. Re: Detecting the HDTV for the Google Lunar X Prize, applications to the SETI search.

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-22 16:49:43 UTC
From: Jim Lux <james.p.lux@jpl.nasa.gov>
Message-ID: <h1ocn7lun1@news.jpl.nasa.gov>
Source record: 14410

Robert Clark wrote:
> On Jun 20, 10:45 am, Jim Lux <jim...@earthlink.net> wrote:

>
> The NASA Global Differential GPS System.
> "The NASA Global Differential GPS (GDGPS) System is a complete, highly
> accurate, and extremely robust real-time GPS monitoring and
> augmentation system.
> "Employing a large ground network of real-time reference receivers,
> innovative network architecture, and award-winning real-time data
> processing software, the GDGPS System provides decimeter (10 cm)
> positioning accuracy and sub-nanosecond time transfer accuracy
> anywhere in the world, on the ground, in the air, and in space,
> independent of local infrastructure."
> http://www.gdgps.net/
>
> This would be enough for the positional accuracy at this wavelength.
> This type of highly accurate receiver would probably have to be used
> only by the installers as they are likely to be expensive. Perhaps the
> positional accuracy could be maintained over time by referring to a
> satellite signal.

You got that right (about the expensive receiver). More to the point is that getting survey grade measurements requires having the antenna and receiver in place for a long time. You also need to have GPS antennas that are well characterized for the purpose (phase center vs look angle) and that deal well with multipath and such (i.e. you've probably seen guys with the choke ring antennas out doing GPS surveys). There's also a fair amount of technique. There's a reason the survey grade GPS costs >$10K and the guys and gals who use it get paid what they do. (you might want to look up the SCIGN Southern California Integrated Geodetic Network.. they're doing basically what you're talking about.

Yes, it is possible, with <$500 equipment, scrounging, and much amateur toil, to get this kind of performance, but not on a regular basis. If you have a good quality receiver with the right outputs (say you have an old Motorola OnCore or one of the newer ones) and some time and effort, you could probably measure the motion of your house as the plates move.

> The "time transfer" accuracy mentioned apparently does mean the many
> different sites can be put in time synchrony to within sub-nanosecond
> precision by reference to the atomic clocks on several GPS satellites
> at the same time:

Yes. This is pretty standard stuff. But not cheap or easy. Getting to
10-20ns is straightforward, getting to <1ns is not. There's a whole
raft of factors that conspire against you, and they're all in the few ns
range.

> However, JPL radio astronomer Dr. Dayton Jones responded to my
> question about the required timing accuracy at such long wavelengths,
> suggesting it might only have to be only at the ten's of nanoseconds
> to even microseconds range, depending on the bandwidth being detected:

Perhaps

>
> Newsgroups: rec.radio.amateur.space, rec.radio.amateur.antenna,
> sci.astro, sci.astro.seti, sci.space.policy
> From: rgcl...@my-deja.com (Robert Clark)
> Date: 18 Jun 2001 10:26:50 -0700
> Subject: Re: Will amateur radio astronomers be the first to directly
> detect extrasolar planets?
> http://groups.google.com/group/sci.astro.seti/msg/8a56d6bc52a09590
>
> Note that with the Radio JOVE system the bandwidth being detected is
> usually quite small at the tens to hundreds of khz range, as the
> emissions consist of short pulses. This would only require timing
> accuracy at the microsecond range.

If all you're doing is timing pulses AT ONE STATION, sure. If you're
trying to combine MULTIPLE signals coherently (which is what you're
doing), you need MUCH better performance.

> For the cost, note that for cable, DSL, satellite, internet and/or TV
> service typically the receivers, modems, routers, etc are only
> "rented" where you pay a nominal fee every month. If the cost for the
> dipole and receivers were in the range of $100 dollars per
> installation then this could be amortized over the life of that
> broadband internet system, at say $1 dollar a month or even 50 cents a
> month.

Someone has to pay the capital cost. The cable company is happy to rent
it to you, because they make money on the monthly fees, some of which
goes to pay for the borrowed money for the cable boxes.

I don't see cable companies investing any money in this (where's their
revenue stream?)

649. Re: 80m/160m trap dipole

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-22 17:21:40 UTC
From: KE5LDO <KE5LDO.485b765@radiobanter.com>
Message-ID: <KE5LDO.485b765@radiobanter.com>
Source record: 14413

There is an out of print book, "Easy up Antennas for Radio Listeners and Hams", by Ed Noll. It has plans in there for doing EXACTLY what you are looking for. Amazon has it for $13.50. Others may also have it. Good reference.
KE5LDO

maxpower;681187 Wrote:
> Hello All,
> I have an 80m dipole that I wish to use on 160m as well. I am
> considering using traps on the existing dipole. I have searched the
> web and have not found any 80m/160m trap dipoles. Has anyone added
> traps to their 80m dipole to make it usable on 160m? Or could anyone
> point me in the right direction towards homebrewing traps to suit. I
> have made traps in the past for 40m/80m dipoles but I am unsure what
> dimensions, length, turns etc I would need for homebrewing a trap to
> make my 80m dipole useable on 80m and 160m.
> Thank You.
> Cheers
> Max

--
KE5LDO

650. Re: Can you ID this antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-22 18:03:10 UTC
From: Gary KW4Z <gkendric@gmail.com>
Message-ID: <4a048ed1-47ad-4b69-bfb7-df523b6a5950@k38g2000yqh.googlegroups.com>
Source record: 14411

On Jun 22, 8:07 am, "Dale Parfitt" <pari...@verizon.net> wrote:
> "Gary KW4Z" <gkend...@gmail.com> wrote in message
>
> news:0826ec54-8e88-4b30-a12a-f849889eefd3@l8g2000vbp.googlegroups.com...
>
>
>
> > The other day, while passing the local Reserves building, I noticed a
> > new antenna mounted to their tower. It was in an inverted Vee form
> > but had approximately three white insulators that were around 6 to 8
> > inches in length running between the two wires of this antenna. The
> > antenna was fed, via coax, from the bottom by what appeared to be a
> > balun. The wire proceeded out from the balun past the bottom of the
> > three (per side) insulators and at each end appeared to either double
> > back, upon itself, or be attached to the top wire which was connected
> > to the bottom wire at each end then passed through the top of each of
> > the three (per side) insulators and ended up meeting the other sides,
> > top wire, at, what appeared to be, a plastic mounting plate that
> > served as a fastening point for each of the top wires and also as a
> > top support for the antenna's middle to be connected via rope, wire,
> > etc to either a tower or mast. The top (middle) of the antenna had no
> > contact with the bottom middle (of the antenna), where it was fed
> > from, but the top and bottom wires (isolated from each other as it ran
> > from the middle to end, by three white insulators approx 6-8 inches in
> > length) The only contact of the top wire to the bottom wire was at
> > the extreme ends of this inverted vee type antenna where the top and
> > bottom wires were attached to each other then each end mounted, via
> > insulator, to some connecting point to support the height of the ends
> > of this antenna.
>
> > I've just never seen this type antenna and would love to build one.
> > If you know the type, from the description I have given, please share
> > the name of it and where I might be able to obtain the forumulas for
> > calculating length. What bands does it work? Is it homebrew or
> > commercial?
>
> > Any input would be appreciated.
>
> Sounds very much like B&W's "folded dipole". I use quotes because in their
> version they have a resistor at the center of the unfed wire that absorbs
> power and smooths out the VSWR.http://www.bwantennas.com/ama/amaindex.htm
> Dale W4OP

Dale,

Though not exactly like the B&W antenna that you linked to it is similar enough that I feel it has to be based upon that antenna design. Jimmie, I'm sorry I totally lost you in the description. I'll see if I can get a photo however all of you are aware of the security precautions since Sept 11. My apology if the description was not concise enough to enable you to identify.

651. Sommer antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-22 19:10:19 UTC
From: moreradio <moreradio@alice.it>
Message-ID: <4a3fd71a$0$1113$4fafbaef@reader4.news.tin.it>
Source record: 14412

Anyone know if Sommer Antennas is still operating?
I tried to call them and E-mail them but got no response. Their website www.sommerantennas.com seems down.

Any knowledge?

Thanks

Claudio

652. Re: lightning protection Re: Coax + Ladder Line

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-23 01:08:34 UTC
From: Dave Oldridge <doldridg@leavethisoutshaw.ca>
Message-ID: <Xns9C32B88A071EEdoldridgsprintca@69.16.185.250>
Source record: 14414

"Rick" <ricknj10@hotmail.com> wrote in
news:KRM%l.598$NF6.167@nwrddc02.gnilink.net:

>>>> MUST ground the shields that's OK and you can use lightning
>>>> arrestors on both coaxes.
>
>This is probably not going to work in most cases. Remember an open
>wire feedline can have
>rather high voltages on it compared to a matched coax liine. This is
>because they are often
>mismatched at the antenna.
>If a voltage peak should happen to occur at the place where you have
>the arrestor, it can fire
>the gas tube because of the rf voltage.
>For example, a gas tube arrestor made for legal limit typically has a
>firing voltage of about 800 volts. In a matched
>50 ohm system, even with a full 1500 watts into 50 ohms the peak rf
>voltage is in the neighborhood of
>600 volts. But even a moderate power into a high impedance open line
>could be enough to fire
>the gas tubes. Neither the transmitter nor the gas tube would be happy
>with this situation.

That's true. You would probably need air-gap arrestors that can be
adjusted to not arc on normal transmitted voltages.

Still, the only really effective way of feeding a non-trap wire system on
several bands that I've encountered is to use open wire.

--
Dave Oldridge+
ICQ 454777283

653. Re: has anyone built the coat hanger ant for dtv yet?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-23 05:33:37 UTC
From: Jeff Liebermann <jeffl@cruzio.com>
Message-ID: <cup045h6iaipelclo7tgosu50eriiauiqo@4ax.com>
Source record: 14415

On 22 Jun 2009 03:45:53 +0200, Gordon <gonzo@alltomyself.com> wrote:

>Everyone seems to love that silly thing. And it seems to work
>in spite of itself.
>
>I tried a version of it, but it didn't work any better than
>two bowties on a stick. Here:
>http://mysite.verizon.net/g_reeder/Content/DTV_antenna.html
>
>Mine looks better.

<http://802.11junk.com/jeffl/antennas/DTV-jw/>
This one was built by a friend (without my involvement). I rather like the use of common hardware store parts and pieces. I'm trying to convince him to make some changes and to replace the electrical wire elements with sheet aluminum, but otherwise, methinks it's rather clever. I haven't made any measurements yet, so I don't know how well it's matched.

--
Jeff Liebermann jeffl@cruzio.com
150 Felker St #D http://www.LearnByDestroying.com
Santa Cruz CA 95060 http://802.11junk.com
Skype: JeffLiebermann AE6KS 831-336-2558

654. Re: 80m/160m trap dipole

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-23 09:01:42 UTC
From: Ian Jackson <ianREMOVETHISjackson@g3ohx.demon.co.uk>
Message-ID: <G7BxtCG2nJQKFwh5@g3ohx.demon.co.uk>
Source record: 14416

In message <PWq%l.276$9l4.96@nwrddc01.gnilink.net>, Dave
<noone@nowhere.com> writes
>
>"maxpower" <maxpowervk@yahoo.com.au> wrote in message
>news:556040d2-41cb-4358-baf5-7f2587b0bfd0@a5g2000pre.googlegroups.com...
>> Hello All,
>> I have an 80m dipole that I wish to use on 160m as well. I am
>> considering using traps on the existing dipole. I have searched the
>> web and have not found any 80m/160m trap dipoles. Has anyone added
>> traps to their 80m dipole to make it usable on 160m? Or could anyone
>> point me in the right direction towards homebrewing traps to suit. I
>> have made traps in the past for 40m/80m dipoles but I am unsure what
>> dimensions, length, turns etc I would need for homebrewing a trap to
>> make my 80m dipole useable on 80m and 160m.
>> Thank You.
>> Cheers
>> Max
>
>'traps' are normally meant to cut up a big antenna into smaller pieces
>for user on higher frequency bands. that is, if you had a 160m dipole
>you could put 80m traps in it to make the inner part resonant on 80m.
>to get an 80m dipole to resonate on 160m you need to add loading coils
>to make it look longer, that will of course make it not resonant on
>80m. with some more complex loading and trapping combined you could
>probably make something that would force it to resonate on 160m and
>80m... but its probably easier to just put a tuner at the radio end and
>got with that.

If you already have an 80m halfwave dipole, you will need to add your
80m traps at the ends. Anything added beyond the traps will 'not be
seen' on 80m.

You will then need to extend the dipole beyond the traps, adding
sufficient wire to make it resonant on 160m.

If there were no traps, the additional length of wire needed would be
around 67'. However, below their 80m parallel resonance, the 'effective
inductance' of 80m traps will act as loading coils, and the length of
wire needed will be less than 67'. [Note: The effective inductance will
be greater than the physical inductance of the coil itself.]

How long (or 'short') the additional wire will need to be will depend on
the L/C ratio of the traps. A large L/C will require less additional
wire). You might get away with (say) 30'. If you can't accommodate this
amount of wire, you could always cheat by winding some of it,

effectively as another loading coil.

Note that, because your 160m dipole has inductive loading (from the 80m traps alone, plus any additional loading you have to add), it will have less bandwidth than a full-size 160m dipole.

Of course, an easier alternative approach might be simply to use an open wire feeder, and a tuner in the shack. The existing 80m dipole will be reasonably efficient on 160m as it is, but it could be improved by extending the existing dipole (assuming you have the space available).
--
Ian

655. Re: 80m/160m trap dipole

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-23 11:44:17 UTC
From: maxpower <maxpowervk@yahoo.com.au>
Message-ID: <a0b13082-c9c5-4acc-a1d4-27c55eb27d75@x1g2000prh.googlegroups.com>
Source record: 14417

Thank You all for the replies.
Ian, what you haved written is what I am trying to do. I have an 80m dipole up at the moment that needs to be relocated.
I thought I might as well put it up where I could put some 80m traps inline and extend it for 160m. I haven't got enough room for a half wave 160m dipole, but I could possibly squeeze in an 80/160m trapped dipole, depending on how much extra length (with the 80m traps) I need to add to get it to resonate on 160m. I have since found a drawing for a 40/80/160m trapped dipole. I will make up the 80m traps from that plan, add it to my 80m dipole and see how I go.
Cheers
Max

656. Re: has anyone built the coat hanger ant for dtv yet?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-23 13:56:34 UTC
From: Allodoxaphobia <bit-bucket@config.com>
Message-ID: <slrnh41noi.25pi.bit-bucket@shell.config.com>
Source record: 14418

On Sat, 20 Jun 2009 08:49:11 -0500, John Bose wrote:
> i keep seeing the high tech version ant on you tube and pbs .

My soldering iron must be too hot -- because it keeps melting clear
through the plastic coat hangers.

657. Re: Can you ID this antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-23 15:48:26 UTC
From: Jon Teske <jdteske@verizon.net>
Message-ID: <pht145dbn9hqlfl6p76elfoimg52lkihp9@4ax.com>
Source record: 14419

The B&W, which comes in several configuations, is a pretty standard military antenna. We had several of them on various buildings at Ft. Meade, where I worked and I've seen them on military posts all over. Several other commands at Ft. Meade also had them. I've also seen then at some local reserve armories as I drive by them.

With an antenna tuner (usually automatic) they can cover the whole HF spectrum.

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I'm not an antenna engineer by any means but someone who was said that essentially is was a sort of hybrid between a Zepp and a folded dipole. The extra spacing contributed to its bandwidth. He said the center had some sort of insulator with a balun transformer. It was not the most effecient antenna, but could be erected quickly and was packaged with a mast kit for field operations.
The military version also had the option of stainless steel wire.
Most of the ones I saw were permanently installed.

I was always curious about them, but all my projects were receive-only for intercept so I never got to play with them at all.

Like to hear more about them.

Jon W3JT

658. Re: 80m/160m trap dipole

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-23 16:41:06 UTC
From: Ed <Huckleberry_REMOVE_@bigvalley.net>
Message-ID: <Xns9C336286A9AABHuckleberrybigvalley@198.186.192.196>
Source record: 14420

> Thank You all for the replies.
> Ian, what you haved written is what I am trying to do. I have an 80m
> dipole up at the moment that needs to be relocated.
> I thought I might as well put it up where I could put some 80m traps
> inline and extend it for 160m. I haven't got enough room for a half
> wave 160m dipole, but I could possibly squeeze in an 80/160m trapped
> dipole, depending on how much extra length (with the 80m traps) I need
> to add to get it to resonate on 160m. I have since found a drawing for
> a 40/80/160m trapped dipole. I will make up the 80m traps from that
> plan, add it to my 80m dipole and see how I go.
> Cheers
> Max
>

Good for you ! You're building your own. For planning purposes, I would comment that with my purchased Reyco 75M traps I had to add about 40 feet of wire beyond each trap for resonance around 1900KHz... but of course this will vary depending on the inductance of YOUR home made traps. If, during your design process your traps are built with more inductance vs capacitance, you might be able to shorten the 160M portions less than mine were. Good luck.

Ed K7AAT

659. Re: has anyone built the coat hanger ant for dtv yet?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-23 17:08:15 UTC
From: pirateham4400@webtv.net
Message-ID: <23157-4A410BFF-183@storefull-3171.bay.webtv.net>
Source record: 14421

that ant looks like a pro did it how well does it pick up

660. Re: Sommer antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-23 18:22:17 UTC
From: STEVE WEHRING <hogflyer@gmail.com>
Message-ID: <f08a34c0-6cb9-4d86-93c2-865e5abaa982@l12g2000yqo.googlegroups.com>
Source record: 14422

On Jun 22, 2:10 pm, "moreradio" <morera...@alice.it> wrote:
> Anyone know if Sommer Antennas is still operating?
> I tried to call them and E-mail them but got no response. Their
websitewww.sommerantennas.comseems down.
>
> Any knowledge?
>
> Thanks
>
> Claudio

Heard last night on 20 meters, w1 dx'er was saying, DJ2, Mr.
Sommer is now (sk)?

cannot confirm or deny. Could not hear the other party the qso was
directed to.

I was thinking about upgrading beams here also, butnow im not so
sure.

hope that helps.

73's Steve.

661. Re: has anyone built the coat hanger ant for dtv yet?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-23 18:40:10 UTC
From: Jeff Liebermann <jeffl@cruzio.com>
Message-ID: <qs7245djv3rmgogaha1v4a1d2ttrnbbl5f@4ax.com>
Source record: 14423

On Tue, 23 Jun 2009 12:08:15 -0500, pirateham4400@webtv.net (John
Bose) wrote:

>that ant looks like a pro did it how well does it pick up

Dunno. I haven't had time to play with it or bug the builder (name
withheld). He just sent me the photos and asked me for advice on some
details. I don't like the "phasing" lines between bowties. I would
say it's NOT ready for prime time, yet. He's now building a huge
version of the same antenna.

If you wanna build your own, look into construction articles on
Gray-Hoverman antennas such as:
<http://www.digitalhome.ca/ota/superantenna/>
<http://www.casano.com/projects/hoverman/index.html>
<http://www.engadgethd.com/2008/04/06/diy-gray-hoverman-antenna-promises-better-ota-recept
ion/>
etc...

Remember... the uglier the antenna, the better it works.

--
Jeff Liebermann jeffl@cruzio.com
150 Felker St #D http://www.LearnByDestroying.com
Santa Cruz CA 95060 http://802.11junk.com
Skype: JeffLiebermann AE6KS 831-336-2558

662. Re: lightning protection Re: Coax + Ladder Line

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-23 19:19:37 UTC
From: Bruce in alaska <fast@btpost.net>
Message-ID: <fast-0A58EF.11191923062009@unknown.usenetserver.com>
Source record: 14424

In article <Xns9C32B88A071EEdoldridgsprintca@69.16.185.250>,
Dave Oldridge <doldridg@leavethisoutshaw.ca> wrote:

> That's true. You would probably need air-gap arrestors that can be
> adjusted to not arc on normal transmitted voltages.
>
> Still, the only really effective way of feeding a non-trap wire system on
> several bands that I've encountered is to use open wire.
>
> --
> Dave Oldridge+
> ICQ 454777283

One of the best "air-gap arrestors" of the home-brew variety I have seen,
was made with a couple of Wide Gapped Spark-Plugs, threaded into a 1/4
Steel Plate that was bonded to a very deep Grounding System. The fellow
used GTO15000 to connect the spark-plugs to the Wire-Feeders. Worked
very well.......

--
Bruce in alaska
add <path> after <fast> to reply

663. Re: Can you ID this antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-23 20:19:42 UTC
From: Bob <rmiller47@satx.rr.com>
Message-ID: <6qd245pm854s0cosdueo9g9ei6v2229n4v@4ax.com>
Source record: 14425

It was probably one of these:

http://www.bwantennas.com/

Works on a wide range of HF frequencies, popular with the government,
but a tad expensive (upwards of $1,595.00 is a lot for a dipole) and
you lose a certain amount of power in the antenna.

bob
k5qwg

On Mon, 22 Jun 2009 05:11:09 -0700 (PDT), Gary KW4Z
<gkendric@gmail.com> wrote:

>The other day, while passing the local Reserves building, I noticed a
>new antenna mounted to their tower. It was in an inverted Vee form
>but had approximately three white insulators that were around 6 to 8
>inches in length running between the two wires of this antenna. The
>antenna was fed, via coax, from the bottom by what appeared to be a
>balun. The wire proceeded out from the balun past the bottom of the
>three (per side) insulators and at each end appeared to either double
>back, upon itself, or be attached to the top wire which was connected
>to the bottom wire at each end then passed through the top of each of
>the three (per side) insulators and ended up meeting the other sides,
>top wire, at, what appeared to be, a plastic mounting plate that
>served as a fastening point for each of the top wires and also as a
>top support for the antenna's middle to be connected via rope, wire,
>etc to either a tower or mast. The top (middle) of the antenna had no
>contact with the bottom middle (of the antenna), where it was fed
>from, but the top and bottom wires (isolated from each other as it ran
>from the middle to end, by three white insulators approx 6-8 inches in
>length) The only contact of the top wire to the bottom wire was at
>the extreme ends of this inverted vee type antenna where the top and
>bottom wires were attached to each other then each end mounted, via
>insulator, to some connecting point to support the height of the ends
>of this antenna.
>
>
>I've just never seen this type antenna and would love to build one.
>If you know the type, from the description I have given, please share
>the name of it and where I might be able to obtain the forumulas for
>calculating length. What bands does it work? Is it homebrew or
>commercial?
>
>Any input would be appreciated.

664. Re: has anyone built the coat hanger ant for dtv yet?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-23 20:23:10 UTC
From: Gordon <gonzo@alltomyself.com>
Message-ID: <Xns9C3388285A590greederxprtnet@194.177.98.144>
Source record: 14426

Jeff Liebermann <jeffl@cruzio.com> wrote in
news:cup045h6iaipelclo7tgosu50eriiauiqo@4ax.com:

> On 22 Jun 2009 03:45:53 +0200, Gordon <gonzo@alltomyself.com> wrote:
>
>>Everyone seems to love that silly thing. And it seems to work
>>in spite of itself.
>>
>>I tried a version of it, but it didn't work any better than
>>two bowties on a stick. Here:
>>http://mysite.verizon.net/g_reeder/Content/DTV_antenna.html
>>
>>Mine looks better.
>
> <http://802.11junk.com/jeffl/antennas/DTV-jw/>
> This one was built by a friend (without my involvement). I rather
> like the use of common hardware store parts and pieces. I'm trying to
> convince him to make some changes and to replace the electrical wire
> elements with sheet aluminum, but otherwise, methinks it's rather
> clever. I haven't made any measurements yet, so I don't know how well
> it's matched.
>

Shouldn't the lines between the elements be crossed?
Or the feed point be taken from between the elements?

665. Re: AT&T Usenet Netnews Service Shutting Down

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-24 04:54:03 UTC
From: "J. Severyn" <severynj.cutout@comcast.net>
Message-ID: <h1sblk$p8q$1@news.eternal-september.org>
Source record: 14427

"'Doc" <ltdoc@yahoo.com> wrote in message
news:89ad7dbf-004a-401d-829c-57badaf78cd5@h23g2000vbc.googlegroups.com...
> Cecil,
> Just something to think about. I signed up with TeraNews last
> night. I'm sure part of the problem was me just not understanding
> 'their' way of doing things, but there were problems. Couldn't get a
> satisfactory answer to too many questions, and finally had to cancel
> the subscription.
> Did some checking to see if anyone else had these sort of problems,
> and it seems to be fairly common. I honestly can't say TeraNews is a
> bad choice, but it was certainly the wrong one for me.
> As for why AT&T decided to quit newsgroups? So they can make a
> buck on it, of course! AT&T and 'Ma Bell' do not have a good odor
> around here, even with their employees.
> - 'Doc
>

I had comcast news for several years until they dropped newgroups a year
ago. So I switched to motzeralla.org which recently changed all its news
servers to "eternal-september.org"
http://www.eternal-september.org/
They are free but your download total is limited in several ways, but I've
never bumped into the limits. They do not support the binaries at all.
Otherwise it works just fine for me.

Also, you will need a e-mail account that is not AT&T or Bellsouth, as for
some reason, AT&T/Bellsouth has blacklisted eternal-september.org. A
hotmail or yahoo account works just fine. (used for account verification).

J. Severyn
AF6QO

666. HR 2160 - restrictive covenants webinar Thursday

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-24 12:36:08 UTC
From: ARRL MW Division <memberlist@www.arrl.org>
Message-ID: <20090624122405.22AC2301B8@www.arrl.org>
Source record: 14428
Cross-posted to: rec.radio.amateur.moderated,rec.radio.amateur.antenna,rec.radio.info

Midwest Division members,

Hams have been happy to have the tools available in PRB-1 to combat restrictive municipal government ordinances against antennas and towers. We have wished for these protections to be extended to private covenants, which PRB-1 did not speak to. In many urban areas it's virtually impossible to find a home not subject to private restrictive covenants.

Now HR 2160 has been introduced into the US House of Representatives. In a two-step process this bill might well give us PRB-1 type ammunition to use when trying to erect amateur antennas in covenant communities.

Thanks to the division members who have already written their congressional representative in support of this bill. For more background check out
http://www.arrl.org/news/stories/2009/05/12/10818

Atlantic Division Director Bill Edgar has sent the following invitation. If you have interest in facilitating protection from restrictive covenants this webinar will be of interest. Please consider attending. And have a rewarding Field Day. -:- k0bj -:-

The Atlantic Division is sponsoring a webinar about HR 2160 for our members on Thursday, June 25th at 8:00pm EDT. We have space for 1,000 people to listen and view this presentation.

Dave Sumner was gracious enough to offer his help in doing this presentation.

You are welcome to invite your division members to join in with us. There is no cost for attendees to listen/view this presentation. You are also invited to register as well to attend.

Participants must register in order to listen/view the presentation and all they need to do to register is to click on the URL:
https://www1.gotomeeting.com/register/596535705

- Bill N3LLR

ARRL Midwest Division
Director: Bruce Frahm, K0BJ
k0bj@arrl.org
---

667. Re: Can you ID this antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-24 14:46:16 UTC
From: Roger D Johnson <n1rj~@roadrunner.com>
Message-ID: <Z_q0m.1676$_Z2.2@newsfe01.iad>
Source record: 14429

Jon Teske wrote:
> The B&W, which comes in several configuations, is a pretty standard
> military antenna. We had several of them on various buildings at Ft.
> Meade, where I worked and I've seen them on military posts all over.
> Several other commands at Ft. Meade also had them. I've also seen then
> at some local reserve armories as I drive by them.
>
> With an antenna tuner (usually automatic) they can cover the whole HF
> spectrum.
>
> As it is a government issue, it likely can be made by several vendors
> to government specs and then bid upon, unless there is something so
> unique about it that it is a sole source contract. Some of them I
> inventoried when doing site inventories (I was a US Dept. of Defense
> program manager) were, in fact sold to the gov't by B&W which I
> believe is short for Barker & Williamson who made ham transmitters in
> the 1950's when I was both a kid and first licensed.
>
> I'm not an antenna engineer by any means but someone who was said that
> essentially is was a sort of hybrid between a Zepp and a folded
> dipole. The extra spacing contributed to its bandwidth. He said the
> center had some sort of insulator with a balun transformer. It was
> not the most effecient antenna, but could be erected quickly and was
> packaged with a mast kit for field operations.
> The military version also had the option of stainless steel wire.
> Most of the ones I saw were permanently installed.
>
> I was always curious about them, but all my projects were receive-only
> for intercept so I never got to play with them at all.
>
> Like to hear more about them.
>
> Jon W3JT

--
Remove tilde (~) to reply

Remember the USS Liberty (AGTR-5)
http://ussliberty.org/

668. Re: has anyone built the coat hanger ant for dtv yet?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-24 16:50:12 UTC
From: Jeff Liebermann <jeffl@cruzio.com>
Message-ID: <t7m44515nsdp6ukpra69fo6uduah5e86vj@4ax.com>
Source record: 14430

On 23 Jun 2009 22:23:10 +0200, Gordon <gonzo@alltomyself.com> wrote:

>Jeff Liebermann <jeffl@cruzio.com> wrote in
>news:cup045h6iaipelclo7tgosu50eriiauiqo@4ax.com:
>
>> On 22 Jun 2009 03:45:53 +0200, Gordon <gonzo@alltomyself.com> wrote:
>>
>>>Everyone seems to love that silly thing. And it seems to work
>>>in spite of itself.
>>>
>>>I tried a version of it, but it didn't work any better than
>>>two bowties on a stick. Here:
>>>http://mysite.verizon.net/g_reeder/Content/DTV_antenna.html
>>>
>>>Mine looks better.
>>
>> <http://802.11junk.com/jeffl/antennas/DTV-jw/>
>> This one was built by a friend (without my involvement). I rather
>> like the use of common hardware store parts and pieces. I'm trying to
>> convince him to make some changes and to replace the electrical wire
>> elements with sheet aluminum, but otherwise, methinks it's rather
>> clever. I haven't made any measurements yet, so I don't know how well
>> it's matched.

>Shouldn't the lines between the elements be crossed?
>Or the feed point be taken from between the elements?

Ooops. You're right. They should be crossed. I didn't notice.
Thanks. Like I said, I haven't had time to do much more than stare at
it. (Not my design or construction).

--
Jeff Liebermann jeffl@cruzio.com
150 Felker St #D http://www.LearnByDestroying.com
Santa Cruz CA 95060 http://802.11junk.com
Skype: JeffLiebermann AE6KS 831-336-2558

669. Re: Can you ID this antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-24 23:36:27 UTC
From: Lime Light <hot-ham-and-cheese@hotmail.com>
Message-ID: <701dbd38-d086-42ad-b4c7-7bec0ac02813@j19g2000vbp.googlegroups.com>
Source record: 14431

On Jun 23, 11:48 am, Jon Teske <jdte...@verizon.net> wrote:
> The B&W, which comes in several configuations, is a pretty standard
> military antenna. We had several of them on various buildings at Ft.
> Meade, where I worked and I've seen them on military posts all over.
> Several other commands at Ft. Meade also had them. I've also seen then
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> inventoried when doing site inventories (I was a US Dept. of Defense
> program manager) were, in fact sold to the gov't by B&W which I
> believe is short for Barker & Williamson who made ham transmitters in
> the 1950's when I was both a kid and first licensed.
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> essentially is was a sort of hybrid between a Zepp and a folded
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> center had some sort of insulator with a balun transformer. It was
> not the most effecient antenna, but could be erected quickly and was
> packaged with a mast kit for field operations.
> The military version also had the option of stainless steel wire.
> Most of the ones I saw were permanently installed.
>
> I was always curious about them, but all my projects were receive-only
> for intercept so I never got to play with them at all.
>
> Like to hear more about them.
>
> Jon W3JT

They're found on the roof tops os US Embassy's as well. If the design
incorporates a resistor there will be additional loss, but that is the
trade off when you need a multiband antenna that plays well with ALE.

We were issued dipoles which had to be retuned with each frequency
change through out the day. Sometimes efficiency isn't everything.

670. Re: Can you ID this antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-25 01:37:37 UTC
From: Ed Cregger <ecregger@bellsouff.net>
Message-ID: <h1ukd5$m53$1@news.eternal-september.org>
Source record: 14432

"Lime Light" <hot-ham-and-cheese@hotmail.com> wrote in message
news:701dbd38-d086-42ad-b4c7-7bec0ac02813@j19g2000vbp.googlegroups.com...
On Jun 23, 11:48 am, Jon Teske <jdte...@verizon.net> wrote:
> The B&W, which comes in several configuations, is a pretty standard
> military antenna. We had several of them on various buildings at Ft.
> Meade, where I worked and I've seen them on military posts all over.
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>
> Jon W3JT

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incorporates a resistor there will be additional loss, but that is the
trade off when you need a multiband antenna that plays well with ALE.

We were issued dipoles which had to be retuned with each frequency
change through out the day. Sometimes efficiency isn't everything.

How much power did the military use with that type of antenna? I used to
mess around at the Delaware armory communication setup (MARS?) back about

twenty years ago, but I don't remember the power levels they were running.
Hi, Tom!!!

Ed Cregger, NM2K
(I got my old callsign back after having AJ4PJ - I couldn't take being away from it)

671. Re: Can you ID this antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-25 08:03:20 UTC
From: Ian Jackson <ianREMOVETHISjackson@g3ohx.demon.co.uk>
Message-ID: <5i+ubVMI9yQKFwWs@g3ohx.demon.co.uk>
Source record: 14433

In message
<701dbd38-d086-42ad-b4c7-7bec0ac02813@j19g2000vbp.googlegroups.com>,
Lime Light <hot-ham-and-cheese@hotmail.com> writes
>On Jun 23, 11:48ï¿½am, Jon Teske <jdte...@verizon.net> wrote:
>> The B&W, which comes in several configuations, is a pretty standard
>> military antenna. We had several of them on various buildings at Ft.
>> Meade, where I worked and I've seen them on military posts all over.
>> Several other commands at Ft. Meade also had them. I've also seen then
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>> As it is a government issue, it likely can be made by several vendors
>> to government specs and then bid upon, unless there is something so
>> unique about it that it is a sole source contract. ï¿½Some of them I
>> inventoried when doing site inventories (I was a US Dept. of Defense
>> program manager) were, in fact sold to the gov't by B&W which I
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>trade off when you need a multiband antenna that plays well with ALE.
>
>We were issued dipoles which had to be retuned with each frequency
>change through out the day. Sometimes efficiency isn't everything.

Do a Google on "T2FD", and you will find lots of information on this antenna. I believe the Cebik did an analysis of it, but his articles are not as accessible as they used to be.
--
Ian

672. Re: Odd lightning effect

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-25 10:56:32 UTC
From: ml <m@di.net>
Message-ID: <m-7D4B4F.06563225062009@news.optonline.net>
Source record: 14434
Body handling: HTML body converted to readable text

In article
<8286c3ad-fde8-469f-8662-ca3835665698@f30g2000vbf.googlegroups.com>,
JIMMIE wrote:

> On Jun 20, 1:45 pm, Bert Hyman wrote:
> > Innews:4a3d1ea9$0$22522$607ed4bc@cv.net"Bill Ogden"
> >
> > wrote:
> > > The OT question is what kind of antenna effect (in the gift bag) would
> > > activate it?
> >
> > Maybe not an antenna effect at all, but the pressure wave that produced
> > the KA-BOOM pushed the switch.
> >
> > --
> > Bert Hyman St. Paul, MN b...@iphouse.com
>
> Lightning can do some pretty strange things. I was given a RS color
> computer years ago after it had been on the receiving end of a
> lightning strike.
> Already having one of these computers I proceded to check it out by
> replacing the chips in my computer one at a time with the ones in the
> fried computer(I know, not very smart). Well at the the end of all
> the chip swapping my computer still worked. Power supply on the
> damaged computer checked OK. A closer inspection of the circuit board
> showd that some traces underneath the processor chip had ben
> vaporized. Repairing these traces yielded a working computer. How the
> lightning burned out these traces without frying the rest of the
> computer was beyound my understanding.
>
>
> Jimmie

guessing a large and fast ammount of lightning induced current
traveld along the ckt trace it got hot and fried creating the
open voltage no longer could pass and so never reached the
other parts ie chips etc

so prob by luck you had enough current to damage the trace dosn't
take much, but not enough to arc over and contine damage

673. OCF Dipole and Window Line Choke

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-25 15:34:00 UTC
From: dykesc <cupstidd@bellsouth.net>
Message-ID: <c0bab953-135b-455c-9a3f-ccd17c787484@e20g2000vbc.googlegroups.com>
Source record: 14435

I'm going to 450 ohm window line to my OCF Dipole. Obviously, as confirmed by EZNEC, without some kind of choking action at the feedpoint, my feedline will be radiating. What kind of 1:1 choke could I use on the 450 ohm line at the antenna feedpoint? I could build a 1:1 choke with the right toroid but not sure if I can maintain the 450 ohm line Z0 through the choke.

674. Re: OCF Dipole and Window Line Choke

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-25 15:48:56 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <H%M0m.7190$Ai6.5662@newsfe09.iad>
Source record: 14436

dykesc wrote:
> I'm going to 450 ohm window line to my OCF Dipole. Obviously, as
> confirmed by EZNEC, without some kind of choking action at the
> feedpoint, my feedline will be radiating. What kind of 1:1 choke could
> I use on the 450 ohm line at the antenna feedpoint? I could build a
> 1:1 choke with the right toroid but not sure if I can maintain the 450
> ohm line Z0 through the choke.

It is very difficult to choke 450 ohm window line.
I would suggest a husky 1:1 current-choke-balun at
your window-line/coax junction. The Carolina Windom
advertises feedline radiation as a benefit/feature.

With an OCF, fighting feedline radiation is usually a
losing battle.
--
73, Cecil, IEEE, OOTC, http://www.w5dxp.com

675. Re: OCF Dipole and Window Line Choke

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-25 16:14:14 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <s97745pong9n4evo0q5tiqapsro3e60k90@4ax.com>
Source record: 14437

On Thu, 25 Jun 2009 08:34:00 -0700 (PDT), dykesc
<cupstidd@bellsouth.net> wrote:

>I'm going to 450 ohm window line to my OCF Dipole. Obviously, as
>confirmed by EZNEC, without some kind of choking action at the
>feedpoint, my feedline will be radiating. What kind of 1:1 choke could
>I use on the 450 ohm line at the antenna feedpoint? I could build a
>1:1 choke with the right toroid but not sure if I can maintain the 450
>ohm line Z0 through the choke.

No, you cannot, but is that important? Select a product that works
and connect the line to it, and the antenna to the other side. Of
course "works" means: offers sufficient Z in relation to the load and
the line. "Sufficient" means: 10 times Z.

Going further, what is the point of 450 Ohm (sic) Window line in this
application anyway? An OCF would only demand a 200 - 300 Ohm line
depending on where the off-center is off center.

Given there are an infinite off centers to every center, that makes
for a lot variation in drive point Z. Have you selected the optimum,
or just going for an ad hoc design? Given your 450 Ohm desire for an
antenna reputed to be 200 Ohms, it would seem you are guessing.

As you report you have EZNEC, the solution is at hand. Put up the
longest wire you can run. Place the source at the center of 101
segments. Set the alternative SWR source Z to 100 Ohms. Run a full
sweep from 3 to 30 MHz at 10 kHz increments. On a separate chart of
about 10 columns, make notes of each dip in SWR (about 4) in columns
that are spaced equal to the dip's relation to the full 3-30 sweep.
Now move the source 5% and repeat the steps. Keep moving the source
towards the end by 5% steps, again repeating the steps.

I've done this and know where the "best" offset is, but telling would
cheat you of your investment in EZNEC.

73's
Richard Clark, KB7QHC

676. Re: OCF Dipole and Window Line Choke

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-25 17:29:52 UTC
From: Michael Coslo <mjc5@psu.edu>
Message-ID: <h20c6h$bk6i$1@tr22n12.aset.psu.edu>
Source record: 14438

dykesc wrote:
> I'm going to 450 ohm window line to my OCF Dipole. Obviously, as
> confirmed by EZNEC, without some kind of choking action at the
> feedpoint, my feedline will be radiating. What kind of 1:1 choke could
> I use on the 450 ohm line at the antenna feedpoint? I could build a
> 1:1 choke with the right toroid but not sure if I can maintain the 450
> ohm line Z0 through the choke.

I'd let the feedline radiate. It's a part of the package.

Also, is there a reason that you wouldn't use coax instead of window line? Your impedance on amateur frequencies should be such that a 4:1 or 6:1 balun at the (off) center point then a run of coax should work well.

- 73 de Mike N3LI -

677. Re: OCF Dipole and Window Line Choke

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-25 18:17:06 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <-dCdnblbKoS5It7XnZ2dnUVZ_vqdnZ2d@giganews.com>
Source record: 14439

There can be substantial radiation from an OCF dipole feedline even with an effective choke in place. The asymmetrical positioning of the feedline relative to the antenna results in a net induced common mode current, while a choke only stops the current at one point. Effective reduction of induced current can require two chokes placed about a quarter wavelength apart, which isn't practical for a multi-band antenna. In practice, you might have to fiddle with the feedline length (since some lengths will result in more current than others on particular bands) in addition to using two or more chokes in order to drop the feedline radiation to a tolerable level. I think that with an OCF dipole you've just about got to expect some feedline radiation.

Roy Lewallen, W7EL

678. Re: OCF Dipole and Window Line Choke

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-25 18:47:37 UTC
From: dykesc <cupstidd@bellsouth.net>
Message-ID: <f0c491d7-1830-439d-8fbd-307904b8b9af@j19g2000vbp.googlegroups.com>
Source record: 14440

On Jun 25, 12:29 pm, Michael Coslo <m...@psu.edu> wrote:
> dykesc wrote:
> > I'm going to 450 ohm window line to my OCF Dipole. Obviously, as
> > confirmed by EZNEC, without some kind of choking action at the
> > feedpoint, my feedline will be radiating. What kind of 1:1 choke could
> > I use on the 450 ohm line at the antenna feedpoint? I could build a
> > 1:1 choke with the right toroid but not sure if I can maintain the 450
> > ohm line Z0 through the choke.
>
> I'd let the feedline radiate. It's a part of the package.
>
> Also, is there a reason that you wouldn't use coax instead of window
> line? Your impedance on amateur frequencies should be such that a 4:1 or
> 6:1 balun at the (off) center point then a run of coax should work well.
>
>   - 73 de Mike N3LI

Hi Mike

I modeled a 4:1 at the feedpoint in EZNEC. I would need 100 feet of 50 ohm line. Loss on RG-58 at 3.7 Mhz is 3.25 db. At 28.3 Mhz loss is 4.7db. Those are "best swr" frequencies for those bands. Operation on either side of them results in even greater loss. Similar results on other bands. RG-8 cuts the losses in half but the variation in SWR I mentioned makes that a still unacceptable option for me. No amplifier here so conservation of power delivered to the antenna is important to me.

73
Dykes (AD5VS)

679. Re: OCF Dipole and Window Line Choke

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-25 19:41:21 UTC
From: dykesc <cupstidd@bellsouth.net>
Message-ID: <ba02bcc3-4602-42c3-b24c-a183d30e0ce7@g6g2000vbr.googlegroups.com>
Source record: 14441

On Jun 25, 1:17 pm, Roy Lewallen <w...@eznec.com> wrote:
> There can be substantial radiation from an OCF dipole feedline even with
> an effective choke in place. The asymmetrical positioning of the
> feedline relative to the antenna results in a net induced common mode
> current, while a choke only stops the current at one point. Effective
> reduction of induced current can require two chokes placed about a
> quarter wavelength apart, which isn't practical for a multi-band
> antenna. In practice, you might have to fiddle with the feedline length
> (since some lengths will result in more current than others on
> particular bands) in addition to using two or more chokes in order to
> drop the feedline radiation to a tolerable level. I think that with an
> OCF dipole you've just about got to expect some feedline radiation.
>
> Roy Lewallen, W7EL

Thanks Roy. You've pretty much confirmed what everyone else is saying regarding feedline radiation. Hadn't thought about the induced contributor from the asymmetrical configuration. So a 90 degree feedline takeoff in this situation would still result in induced current it would appear. I added a wire simulating the radiating feedline conductor in my EZNEC model. It appears from the FF patterns it may be helping in some directions.

While I've got you, is there any way in EZNEC to add an RF ground counterpoise at the source end of my model? I have a long wire at my common equipment ground point to better enable RF grounding on my equipment and would like to see if EZNEC can tell me anything about its effectiveness. I can't figure out how to tie the wire in to only the ground side of a source. I read up on split sources but still can't be sure I'm doing this correctly.

73
Dykes (AD5VS)

680. i need some ideas on a homemade hazer ?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-25 19:43:20 UTC
From: pirateham4400@webtv.net
Message-ID: <19691-4A43D358-1246@storefull-3173.bay.webtv.net>
Source record: 14443

has anybody have any brainstorm ideas my tower is like the old style flat bar type about 30 ft high.to me hazer cost to much plus i think you can make some smiler much less in cost beware of the patten police

681. Re: OCF Dipole and Window Line Choke

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-25 19:50:39 UTC
From: dykesc <cupstidd@bellsouth.net>
Message-ID: <1131a550-398c-478a-95c9-0fce98a3cf27@m18g2000vbi.googlegroups.com>
Source record: 14442

On Jun 25, 11:14 am, Richard Clark <kb7...@comcast.net> wrote:
Ohm (sic) Window line in this

> As you report you have EZNEC, the solution is at hand. Put up the
> longest wire you can run. Place the source at the center of 101
> segments. Set the alternative SWR source Z to 100 Ohms.   Run a full
> sweep from 3 to 30 MHz at 10 kHz increments. On a separate chart of
> about 10 columns, make notes of each dip in SWR (about 4) in columns
> that are spaced equal to the dip's relation to the full 3-30 sweep.
> Now move the source 5% and repeat the steps. Keep moving the source
> towards the end by 5% steps, again repeating the steps.
>
> I've done this and know where the "best" offset is, but telling would
> cheat you of your investment in EZNEC.
>
> 73's
> Richard Clark, KB7QHC

You're right Richard. I am working with an "ad-hoc" design. I'll try
your method, but since I've only got 450 ohm line to work with, other
than lossy coax, I'll use 450 as the alternate Z0.

73
Dykes (AD5VS)

682. Re: OCF Dipole and Window Line Choke

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-25 20:13:01 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <1MydnZKrzprNR97XnZ2dnUVZ_oOdnZ2d@giganews.com>
Source record: 14444

dykesc wrote:
>
> Thanks Roy. You've pretty much confirmed what everyone else is saying
> regarding feedline radiation. Hadn't thought about the induced
> contributor from the asymmetrical configuration. So a 90 degree
> feedline takeoff in this situation would still result in induced
> current it would appear.

Yes, that's correct. And sometimes a single common mode choke (current balun) can actually make it worse by forcing near-zero current at a point favorable to the current distribution.

> I added a wire simulating the radiating
> feedline conductor in my EZNEC model. It appears from the FF patterns
> it may be helping in some directions.

It may well be. But in order to really know what the common mode current will be, you'll need to accurately model the entire path to the Earth, because that path (length and orientation) determines the common mode current distribution.

> While I've got you, is there any way in EZNEC to add an RF ground
> counterpoise at the source end of my model? I have a long wire at my
> common equipment ground point to better enable RF grounding on my
> equipment and would like to see if EZNEC can tell me anything about
> its effectiveness. I can't figure out how to tie the wire in to only
> the ground side of a source. I read up on split sources but still
> can't be sure I'm doing this correctly.

The way to do it is to put your (conventional, non-split) source on the end segment of the counterpoise wire, and connect the transmission line end to the same segment, rather than using a virtual segment for the interconnection.

Roy Lewallen, W7EL

683. Re: OCF Dipole and Window Line Choke

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-25 20:44:48 UTC
From: dykesc <cupstidd@bellsouth.net>
Message-ID: <5f2a9c6e-75ab-41fd-9236-5b9ca7bcc927@l34g2000vbi.googlegroups.com>
Source record: 14445

On Jun 25, 3:13 pm, Roy Lewallen <w...@eznec.com> wrote:
> dykesc wrote:

> > While I've got you, is there any way in EZNEC to add an RF ground
> > counterpoise at the source end of my model? I have a long wire at my
> > common equipment ground point to better enable RF grounding on my
> > equipment and would like to see if EZNEC can tell me anything about
> > its effectiveness. I can't figure out how to tie the wire in to only
> > the ground side of a source. I read up on split sources but still
> > can't be sure I'm doing this correctly.
>
> The way to do it is to put your (conventional, non-split) source on the
> end segment of the counterpoise wire, and connect the transmission line
> end to the same segment, rather than using a virtual segment for the
> interconnection.
>
> Roy Lewallen, W7EL

Ok Roy I added the RF ground counterpoise as you stated above, but it
would appear to me all I did was add another antenna wire at the
source end of my model. I did ground one end of the RF ground
counterpoise, but I'm having a tough time seeing how the source is not
just seeing this as another antenna wire. Maybe that's the way it
should be, but in the physical world the counterpoise is only
connected to transmitter ground and my transmitter is not trying to
drive it through the center conductor.

73
Dykes (AD5VS)

684. Re: OCF Dipole and Window Line Choke

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-25 21:25:13 UTC
From: Owen Duffy <none@no.where>
Message-ID: <Xns9C364B7C27117nonenowhere@61.9.191.5>
Source record: 14446

dykesc <cupstidd@bellsouth.net> wrote in news:c0bab953-135b-455c-9a3f-ccd17c787484@e20g2000vbc.googlegroups.com:

> I'm going to 450 ohm window line to my OCF Dipole. Obviously, as
> confirmed by EZNEC, without some kind of choking action at the
> feedpoint, my feedline will be radiating. What kind of 1:1 choke could
> I use on the 450 ohm line at the antenna feedpoint? I could build a
> 1:1 choke with the right toroid but not sure if I can maintain the 450
> ohm line Z0 through the choke.

I differ with some of the other advice that you have.

I suggest that the "appropriate" common mode impedance is independent of differential Zo. I refer to this as Rule 500, as it usually requires the magnitude of common mode impedance to be 500 ohms or greater for use on a 50 ohm line.

Rule 500 is born out of a lumped circuit analysis, and is less relevant to the antenna scenario with its coupled conductors. Like most Rules of Thumb, it is spruiked without stating or often knowing the underlying assumptions and is then RoT.

You could create a model of your antenna, including the common mode current path and insert the common mode impedance as a load in the relevant conductor in the model, and explore the effect with different choke impedances and frequencies etc.

My article at http://www.vk1od.net/balun/W2DU/index.htm shows that done, in that case with a W2DU balun. Several other articles on the site model the common mode impedance of ferrite cored baluns, so they might give you some ball park figures to try (eg http://www.vk1od.net/balun/Guanella/G.1-1.htm).

The model also allows you to explore the importance of a shunt path to ground outside the shack as an element of mitigating common mode current.

You may also come to the conclusion that Rule 500 is not applicable to the scenario.

Owen

685. test

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-25 22:59:47 UTC
From: JimFoster
Message-ID: <DjT0m.3554$kA.1291@nlpi068.nbdc.sbc.com>
Source record: 14447

test

686. Re: OCF Dipole and Window Line Choke

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-26 00:15:08 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <8sKdnYUM3qCTjtnXnZ2dnUVZ_s-dnZ2d@giganews.com>
Source record: 14448

dykesc wrote:
>
> Ok Roy I added the RF ground counterpoise as you stated above, but it
> would appear to me all I did was add another antenna wire at the
> source end of my model. I did ground one end of the RF ground
> counterpoise, but I'm having a tough time seeing how the source is not
> just seeing this as another antenna wire. Maybe that's the way it
> should be, but in the physical world the counterpoise is only
> connected to transmitter ground and my transmitter is not trying to
> drive it through the center conductor.
>
> 73
> Dykes (AD5VS)
>

Sorry, I don't understand. EZNEC has no idea of what you consider to be an "antenna", "counterpoise", or "ground" (except when connected to a perfect or MININEC-type ground plane). A conductor is a conductor, just as in the real world. It sounds to me like the model matches your setup -- the terminal of the source connected to the long wire is the transmitter "ground", and the other source terminal is the transmitter "hot". But if the suggestion I made doesn't match the physical configuration of your setup, then it needs to be modified so it does. Unless other readers are interested, contact me by email and try again at describing the physical setup if you still need help with it.

Roy Lewallen, W7EL

687. Re: i need some ideas on a homemade hazer ?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-26 02:42:10 UTC
From: "Bruce W. Ellis" <ellis@means.net>
Message-ID: <18d8455kieldl2gqa58cvcskl0172ve7k8@4ax.com>
Source record: 14449

On Thu, 25 Jun 2009 14:43:20 -0500, pirateham4400@webtv.net (John
Bose) wrote:

>has anybody have any brainstorm ideas my tower is like the old style
>flat bar type about 30 ft high.to me hazer cost to much plus i think you
>can make some smiler much less in cost beware of the patten police

And in which language is this message written ?

688. Re: i need some ideas on a homemade hazer ?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-26 02:54:50 UTC
From: MTV <volztexas@comcast.net>
Message-ID: <9MW0m.283739$Tp1.241768@en-nntp-01.dc1.easynews.com>
Source record: 14450

John Bose wrote:
> has anybody have any brainstorm ideas my tower is like the old style
> flat bar type about 30 ft high.to me hazer cost to much plus i think you
> can make some smiler much less in cost beware of the patten police
>

The Glen Martin kits for Rohn's are $3-400, not bad methinks.

Marv
W5MTV

689. Re: i need some ideas on a homemade hazer ?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-26 03:32:49 UTC
From: kb9rqz@yahoooo.com
Message-ID: <u9g845dptccd02tm0jtfjhefv7ib6m97td@4ax.com>
Source record: 14501

On Thu, 25 Jun 2009 21:42:10 -0500, Bruce W. Ellis <ellis@means.net>
wrote:

>On Thu, 25 Jun 2009 14:43:20 -0500, pirateham4400@webtv.net (John
>Bose) wrote:
>
>>has anybody have any brainstorm ideas my tower is like the old style
>>flat bar type about 30 ft high.to me hazer cost to much plus i think you
>>can make some smiler much less in cost beware of the patten police
>
>And in which language is this message written ?

gee gues that narrowband OOKRF has fried your brain

"one useless man is disgrace 2 become a law firm 3 or more become a congress"
adams

woger you are a Congress all in your own head
"http://www.3ix.org/sys/aff.php?aff=7439" target="_blank"

altopia is never used by KB9RQZ
http://kb9rqz.cc.cc
http://kd8ctl.com
nor is Konstans@hotmail.com ever
btw i can be found at
17366 N River Rd
Chassel Mi

but the cowards asking lack the gut to act

690. Re: i need some ideas on a homemade hazer ?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-26 06:25:29 UTC
From: 'Doc <ltdoc@yahoo.com>
Message-ID: <4f42d86c-11ed-4073-a988-9fdf9866042f@r36g2000vbn.googlegroups.com>
Source record: 14502

It can certainly be done. The hardest part for me was figuring a way
to lock the thing in at the top. Wound up using a spring loaded bar
that slid into a corresponding 'loop' on the hazer. The rest is just
simple and not so simple mechanics, sort of. You might think about
putting 'rub' buffers on the hazer, some kind of plastic or whatever.
Good luck.
- 'Doc

691. Re: i need some ideas on a homemade hazer ?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-26 14:12:50 UTC
From: pirateham4400@webtv.net
Message-ID: <19693-4A44D762-300@storefull-3173.bay.webtv.net>
Source record: 14503

thanks doc

692. Re: OCF Dipole and Window Line Choke

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-26 15:31:42 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <AR51m.115306$9Z.113667@newsfe08.iad>
Source record: 14504

dykesc wrote:
> ... but it
> would appear to me all I did was add another antenna wire at the
> source end of my model.

Welcome to the world of RF. On a long "ground" wire,
the only place that is at "ground" is where it is
grounded and at 1/2WL intervals. With standing waves
on that wire, there are points at which the impedance
(and voltage) is sky high - yes, on the "ground" wire.
--
73, Cecil, IEEE, OOTC, http://www.w5dxp.com

693. Re: i need some ideas on a homemade hazer ?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-26 16:04:05 UTC
From: Jim Lux <james.p.lux@jpl.nasa.gov>
Message-ID: <h22rhi$kp0$1@news.jpl.nasa.gov>
Source record: 14505

'Doc wrote:
> It can certainly be done. The hardest part for me was figuring a way
> to lock the thing in at the top. Wound up using a spring loaded bar
> that slid into a corresponding 'loop' on the hazer. The rest is just
> simple and not so simple mechanics, sort of. You might think about
> putting 'rub' buffers on the hazer, some kind of plastic or whatever.
> Good luck.
> - 'Doc
>
skateboard wheels
or
inexpensive casters

Pick ones with the right materials and loose tolerances (so it doesn't
rust and the inevitable crud doesn't jam it)

OR... high density polyethylene (poor man's Teflon).. cutting boards are
a good source.. quite durable, easy to cut to make rub pads or rings or
forks.

694. Re: OCF Dipole and Window Line Choke

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-27 05:07:13 UTC
From: dykesc <cupstidd@bellsouth.net>
Message-ID: <f68349b1-b9ee-44c2-80c2-4506a5db5750@l28g2000vba.googlegroups.com>
Source record: 14506

On Jun 26, 10:31 am, Cecil Moore <nos...@w5dxp.com> wrote:

> Welcome to the world of RF. On a long "ground" wire,
> the only place that is at "ground" is where it is
> grounded and at 1/2WL intervals. With standing waves
> on that wire, there are points at which the impedance
> (and voltage) is sky high - yes, on the "ground" wire.
> --
> 73, Cecil, IEEE, OOTC, http://www.w5dxp.com

Thanks for the reply Cecil. I am aware of the physics of RF on
longwires. What I am having trouble with is how to include a longwire
RF energy sink at the source end of my antenna model. These are
normally 1/4 wavelength at the operating frequency (or band midpoint
for a best fit) and are open circuit on the far end resulting in a low
impedance path for stray rf energy as part of the station ground
configuration. Look back at Roy's reply on how to implement this in a
model. The way he suggested would appear to have the source driving
the 1/4 wave ground wire as an end fed element. Just doesn't look
right to me. The source should only see this wire on the ground side
of the model.

73
Dykes (AD5VS)

695. Re: OCF Dipole and Window Line Choke

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-27 06:17:33 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <30eb45h5rojai4ao5l2dmvl34qkj1flijo@4ax.com>
Source record: 14507

On Fri, 26 Jun 2009 22:07:13 -0700 (PDT), dykesc
<cupstidd@bellsouth.net> wrote:

> What I am having trouble with is how to include a longwire
>RF energy sink at the source end of my antenna model.

There are any number of alternatives, each matching the situation of
"someone." They vary by rather simple to rather elaborate estimations
of "ground." At least one can be found in the generous help manual.

The trick is how well you know your "ground's" characteristic to
sufficient accuracy. Chances are you (given you have an ad hoc
design) you barely know. This, of course, translates into a model of
equal imprecision.

Myself, I lay out several dozen radials over an average earth and
connect to it. If it is a simple dipole, I lay out a ground mat below
the antenna (it does make a difference).

73's
Richard Clark, KB7QHC

696. Re: OCF Dipole and Window Line Choke

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-27 14:07:22 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <slp1m.3375$6A3.3247@newsfe20.iad>
Source record: 14508

dykesc wrote:
> Look back at Roy's reply on how to implement this in a
> model. The way he suggested would appear to have the source driving
> the 1/4 wave ground wire as an end fed element.

Is it possible for you to publish a graphic of your
antenna system or share your EZNEC file? I'm not sure
that anyone really understands your text description.
--
73, Cecil, IEEE, OOTC, http://www.w5dxp.com

697. Re: OCF Dipole and Window Line Choke

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-27 19:31:11 UTC
From: dykesc <cupstidd@bellsouth.net>
Message-ID: <89b2a7ad-0978-4d8e-a8fa-8b7d6f080f29@b14g2000yqd.googlegroups.com>
Source record: 14509

On Jun 27, 9:07 am, Cecil Moore <nos...@w5dxp.com> wrote:

> Is it possible for you to publish a graphic of your
> antenna system or share your EZNEC file? I'm not sure
> that anyone really understands your text description.
> --
> 73, Cecil, IEEE, OOTC, http://www.w5dxp.com

Cecil,

I sent you am e-mail with the EZNEC file attached. Don't know how to
make it public here.

Thanks for looking at the file for me.

73
Dykes (AD5VS)

698. Re: i need some ideas on a homemade hazer ?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-27 20:11:30 UTC
From: JIMMIE <JIMMIEDEE123@YAHOO.COM>
Message-ID: <51a39c5e-ae86-4f09-83a5-e1b40e53b44c@x17g2000yqd.googlegroups.com>
Source record: 14510

On Jun 25, 3:43 pm, pirateham4...@webtv.net (John Bose) wrote:
> has anybody have any brainstorm ideas my tower is like the old style
> flat bar type about 30 ft high.to me hazer cost to much plus i think you
> can make some smiler much less in cost beware of the patten police

Ive only seen one DIY hazer. It was a larger tower section slipped over the regular tower and the guy had added some rollers and guides. This might be a real pain to install if the tower is already populated with antennas. This was a show and tell at a club meeting and lets see its been 15 years since I went to a club meeting.

Anyway his biggest point was that it was pretty easy to make once you knew how to make the guides, just take a section of tower that will slide over yours and bolt on the guides. Of course there's the matter of the winch and pulley system. I didnt catch that part.

Jimmie

699. Re: Possible new problem TVI

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-27 21:48:54 UTC
From: Dick <aa5vu@arrl.net>
Message-ID: <aa5vu-DCFAD4.16485427062009@news.eternal-september.org>
Source record: 14511

In article <HKidnbyWQ4uhOavXnZ2dnUVZ_hydnZ2d@earthlink.com>,
"David Thompson" <thompson@mindspring.com> wrote:

> Does this mean we go back to having TVI problems
> as we did before cable?
>
> Dave K4JRB

Dave K4JRB,

I ran into a weird problem with our new HDTV. Anytime I would transmit with over 100 watts the RF was QRMing the remote control receiver inside the Sony and causing the Menu to flash on and off. No issues at all with audio or video. The fix was the addition of common mode filters.

Check out the article on page 40 of the July issue of QST for pictures and more details.

Dick AA5VU

700. Re: OCF Dipole and Window Line Choke

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-27 22:17:12 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <GTw1m.2400$0T2.847@newsfe24.iad>
Source record: 14512

dykesc wrote:
> I sent you am e-mail with the EZNEC file attached. Don't know how to
> make it public here.

Do you mind if I upload it to my web page so
everyone can take a look?
--
73, Cecil, IEEE, OOTC, http://www.w5dxp.com

701. Re: i need some ideas on a homemade hazer ?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-27 22:27:40 UTC
From: pirateham4400@webtv.net
Message-ID: <14924-4A469CDC-2961@storefull-3172.bay.webtv.net>
Source record: 14513

hey jimmie that is a great idea i wll be looking around for a bigger
section of tower thank you sir for the info

702. Re: OCF Dipole and Window Line Choke

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-28 01:43:25 UTC
From: dykesc <cupstidd@bellsouth.net>
Message-ID: <f9f2433b-a13a-42c8-9313-cce9851450b5@37g2000yqp.googlegroups.com>
Source record: 14514

On Jun 27, 5:17 pm, Cecil Moore <nos...@w5dxp.com> wrote:
> dykesc wrote:
> > I sent you am e-mail with the EZNEC file attached. Don't know how to
> > make it public here.
>
> Do you mind if I upload it to my web page so
> everyone can take a look?
> --
> 73, Cecil, IEEE, OOTC, http://www.w5dxp.com

Please do Cecil. Thanks.

Dykes (AD5VS)

703. Re: i need some ideas on a homemade hazer ?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-28 03:14:30 UTC
From: JIMMIE <JIMMIEDEE123@YAHOO.COM>
Message-ID: <960c69d6-f5f5-41e4-8ea4-37d9fcdfd228@y9g2000yqg.googlegroups.com>
Source record: 14515

On Jun 27, 6:27 pm, pirateham4...@webtv.net (John Bose) wrote:
> hey jimmie that is a great idea i wll be looking around for a bigger
> section of tower thank you sir for the info

John, Whatever type tower you decide to use look at one of there
catalogs, they will probably have some interesting bits and pieces you
could use. Using at least somre of their stuff may save you some
engineering.

Jimmie

704. High data rate space transmissions through visible light communication.

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-28 06:54:14 UTC
From: Robert Clark <rgregoryclark@yahoo.com>
Message-ID: <d93b5c96-717b-43b1-8178-eec713504a89@h18g2000yqj.googlegroups.com>
Source record: 14516
Cross-posted to: sci.astro,rec.radio.amateur.space,rec.radio.amateur.antenna,sci.astro.seti,sci.physics

I had been thinking about methods of high data rate transmission in regards to getting *video* transmissions from Mars orbiter missions. I was irritated by the spotty coverage of the Mars surface at the best resolutions so I wanted to send real-time *continuous* imaging back to Earth receiving stations at the highest imaging resolutions. This would require very high transmission rates, much higher than what is currently used.

The idea would be to use light transmissions but only of the on-off variety. You would use a large surface, many meters across, capable of being alternatively lit up and darkened. There are computer chips of course capable of operating at Ghz rates. This would determine if the large surface was lit up or not electrically, possibly by using a material whose reflective properties can be changed electrically.

I was worried though about the twinkling seen in point sources, which this would appear to be, such as with stars due to atmospheric effects. So this might require the telescope(s) to be in Earth orbit. The question I had though was whether the atmospheric distortion would cause an "on" signal to appear "off" and vice versa? My understanding of atmospheric distortion is that it causes the point source to be constantly apparently undergoing small shifts in position. But this wouldn't be a problem if what you want to determine is whether it is on or off. If that is the case then ground based telescopes would work.

In the large reflecting surface, I actually wanted to use separate, say, squares on the reflecting surface that could be put separately in the on-off position to increase the information transmission rate. But that would require being able to distinguish the squares from Earth millions of kilometers away. This is why I wanted to use light rather than radio for this since the larger wavelengths in radio would make the reflecting surface impractically large for diffraction limited resolution.

Even with light you couldn't do this with a single telescope. They would have to be widely separated. Combining the signals from widely separated scopes is common in radio astronomy but is not nearly as successful in optical astronomy. That is because the light wavelengths are so much smaller and you would have to have nanoscale accuracy in positioning the widely separate mirrors in relationship to each other. However, in the case of just detecting an on-off signal this shouldn't be as big of a problem as you're not trying to form a usable image, but only trying to see if a particular location is on or off. You would need though highly accurate timing synchrony between the separate scopes, within nanoseconds, to be sure they are detecting the same on-off square. Note also here that the shifting in the image due

to atmospheric distortion very definitely would be bad for using
ground based scopes.

It occurred to me this might be a means of acquiring advertising
support for a Google Lunar X Prize entrant. I had also been trying to
come up with a method of having an illuminated image either on the
Moon or in lunar orbit that would be visible to the naked eye on
Earth. Such an idea was discussed here:

moon advertising.
put a billboard on the moon.
http://www.halfbakery.com/idea/moon_20advertising

I wouldn't be in favor of doing this in a way that would actually
advertise a product. But I was thinking about it as a way of sending a
message in favor of, for example, world peace. In this case you could
still have advertisers who could say in TV commercials for example
they supplied funding to support the mission and the message.
BTW, I would be in favor of advertisers who could pay to have
advertising signs set up at the rover landing site so that if anyone
who wanted to log on to the the rover transmissions or who watched a
TV program on the rover transmissions would see the ads. This to me is
something different than an ad that someone would be forced to see
just by looking up at the Moon.
In any case you would need something large enough so that with naked
eye resolution at the lunar distance it would still be
distinguishable. This page gives the naked eye resolution at the lunar
distance:

Purpose of Building Telescopes.
http://www.astronomy.org/astronomy-survival/telepur.htm

According to this page the resolution of the human eye at the lunar
distance would be about 22 miles. One single object clearly couldn't
do this. However, if you had separate illuminated landers or orbiters
at this large distance apart they could be used to send a message
visible to the naked eye on Earth.
It could work with orbiters by the example set of satellite formation
flying by the Cluster mission:

Cluster mission.
http://en.wikipedia.org/wiki/Cluster_mission

I also needed to find how large a brightly illuminated surface needed
to be at the lunar surface to be visible by the naked eye on Earth. I
thought of the example of the "Iridium flares":

Satellite flare.
http://en.wikipedia.org/wiki/Satellite_flare

The Iridium satellites have 3 antennas that happen to be also
reflective in visible light, totaling 4.8 m^2 in area. According to
the Wikipedia page, the flares can be up to -8 in apparent magnitude,

though typically at +6 magnitude, and are produced by an individual antenna, so by one of area 1.6 m^2.
I'll assume the brightest flares are produced just by the orientation the antennas happen to be in so we could make our reflective surfaces be oriented with respect to the Sun to get the greatest brightness.
For the same size surface, the brightness would be lessened by the greater distance to the Moon. The Iridium satellites are at about 780 km altitude so the Moon is about 500 times further. This would lower the brightness by a factor of 500^2 = 250,000.
This page gives the apparent brightness commonly visible by the naked eye in urban areas as +3:

Apparent magnitude.
http://en.wikipedia.org/wiki/Apparent_magnitude

The 250,000 times lesser brightness at the lunar distance for an Iridium sized reflective surface would give it a +13.5 higher apparent magnitude so up to +5.5 in apparent magnitude. To make our reflective surface be at +3 apparent magnitude we could make the area be 10 times larger, so at 16 m^2 area, or a square 4 meters across.
We would need a method for a flat reflecting surface of unfolding it to this size. It might be easier instead to have the reflecting surface be a balloon inflated by stored gas. Since this would be in a vacuum, you wouldn't need much gas pressure or mass to accomplish this.
Another consideration is that because of the brightness of the Moon it could swamp out our illuminated surface. For the orbiter, this could probably be alleviated by having the orbiter have a highly elliptical orbit, (this also would be beneficial in minimizing the required delta-v and fuel load) then it would be visible at the higher distances from the Moon in its orbit. For the landers it might work for them to land in the dark lunar maria.

To communicate the message though we would need a method to turn on and off the reflecting surface. One possibility would be to have the reflecting surface consist of very many small squares that could be rotated to reflect toward the Earth or away. Another possibility might be to have it covered with LCD's. Whichever method it would have to be both lightweight and low power.
For our first attempts we probably would not want to send so many orbiter or landers at once to form a naked-eye visible image. We would first send just a single one to test it out. Note that this method with a single vehicle could still be used to send high definition video by having our single reflective surface be turned on and off at the required rate, about 256,000 times per sec with compression.

Bob Clark

On Jun 16, 6:57 pm, Robert Clark <rgregorycl...@yahoo.com> wrote:
> On another forum there was debate about whether the requirement of
> "near real time" high definition video transmissions was achievable
> for a such a low-cost mission.

> It would certainly be doable if the receiving antennas on Earth were
> the large radio antennas used for space communications with
> interplanetary probes or those radio antennas used for radio
> astronomy. This is evidenced by the fact that the Kaguya(Selene) lunar
> orbiter mission was able to send high definition video to a large
> receiving dish radio antenna. And also by the fact that DirecTV sends
> high definition video to only 2 foot size antennas from geosynchronous
> orbit; so 10 times larger antennas would be able to receive such
> signals from a 10 times larger distance at the Moon.
> However, I was wondering if it would be possible to detect this using
> amateur sized equipment at such a large distance. Usually for
> receiving high data rates you used transmissions at very high
> frequencies, as higher frequencies can carry more data. For instance
> both Kaguya and DirecTV transmit the high def video at gigahertz
> frequencies.
> However, for the system I'm imaging I'm thinking of using much lower
> frequencies, and necessarily longer wavelengths. What I wanted to do
> is transmit at decametric wavelengths. High data transmissions rates
> would be achieved by making it be pulsed in an on-off fashion at high
> intensity but at a rapid rate.
> On that other forum the data rate required for high def TV was given
> as 256,000 bits per second. So I wanted to make these transmissions be
> pulsed at this rapid rate at wavelengths of a few tens's of meters.
> My decametric wavelength requirement was because of the fact that
> high schools and universities have programs for detecting radio
> emissions from Jupiter at these wavelengths:
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> NASA's Radio JOVE Project.http://radiojove.gsfc.nasa.gov/
>
> The Discovery of Jupiter's Radio Emissions.
> How a chance discovery opened up the field of Jovian radio studies.
> by Dr. Leonard N. Garciahttp://radiojove.gsfc.nasa.gov/library/sci_briefs/discovery.html
>
> These school and university receiving antennas on Earth consist of
> dozens to hundreds of vertical dipoles of lengths at the meters scale
> to correspond to the radio wavelengths. Some questions I had: how
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> the Moon above background noise for a detector on Earth of say a few
> dozen dipoles? Could this be done for the transmitter of power of say
> a few hundred watts for a low cost, low weight lander mission? Could
> the transmitter antenna on the moon be only a few meters size for the
> low weight requirement?
> A secondary purpose I had in mind was a pet project of mine involving
> linking these many school receivers to form a global telescope at
> decametric wavelengths:
>
> From: rgcl...@my-deja.com (Robert Clark)
> Date: 23 May 2001 11:15:06 -0700
> Subject: Will amateur radio astronomers be the first to directly
> detect extrasolar planets?

> Newsgroups: rec.radio.amateur.space, rec.radio.amateur.antenna,
> sci.astro, sci.astro.seti,
sci.space.policyhttp://groups.google.com/group/sci.astro.seti/browse_frm/thread/c0018...
>
> The long wavelengths should make the requirements for accurate
> distance information and timing synchrony between the separate
> detectors easy to manage even for amateur systems. Using this method
> might make the detection achievable even if the power or transmitting
> antenna size requirements are not practical for a low cost, low weight
> lander on the Moon for an individual detector on Earth.
> The recent achievement of real-time very long baseline interferometry
> should make it possible to integrate these separate detector signals
> in real-time as well:
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> Astronomers Demonstrate a Global Internet Telescope.
> Date Released: Friday, October 08, 2004
> Source: Jodrell Bank Observatoryhttp://www.spaceref.com/news/viewpr.html?pid=15251
>
>   Bob Clark

705. Re: High data rate space transmissions through visible light communication.

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-28 07:14:14 UTC
From: Peter Webb <webbfamily@DIESPAMDIEoptusnet.com.au>
Message-ID: <4a471855$0$22552$afc38c87@news.optusnet.com.au>
Source record: 14517
Cross-posted to: sci.astro,rec.radio.amateur.space,rec.radio.amateur.antenna,sci.astro.seti,sci.physics

Nice idea, but ...

Illuminating an area of Mars or the moon and relying on this secondary reflection will actually produce less photons returning to earth than aiming the light source directly at the earth.

Furthermore, the radiation from a reflected area is isotropic - goes in all directions - and hence very little is directed towards the earth.

If you were using the light source directly, rather than having it illuminate an area of the ground, you could also use lenses or mirrors to focus it back on the earth, giving thousands or millions of times the signal strength on earth, the same technique as is used for radio comms.

"Robert Clark" <rgregoryclark@yahoo.com> wrote in message news:d93b5c96-717b-43b1-8178-eec713504a89@h18g2000yqj.googlegroups.com...
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than radio for this since the larger wavelengths in radio would make the reflecting surface impractically large for diffraction limited resolution.
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> How a chance discovery opened up the field of Jovian radio studies.
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> sci.astro, sci.astro.seti,
> sci.space.policyhttp://groups.google.com/group/sci.astro.seti/browse_frm/thread/c0018...
>
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> distance information and timing synchrony between the separate
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> Source: Jodrell Bank
> Observatoryhttp://www.spaceref.com/news/viewpr.html?pid=15251
>
> Bob Clark

706. Re: i need some ideas on a homemade hazer ?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-28 14:12:43 UTC
From: John Ferrell <jferrell13@triad.rr.com>
Message-ID: <dpse45pfpvgpombd6jvlv345h4kfip24e2@4ax.com>
Source record: 14518

On Thu, 25 Jun 2009 14:43:20 -0500, pirateham4400@webtv.net (John Bose) wrote:

>has anybody have any brainstorm ideas my tower is like the old style
>flat bar type about 30 ft high.to me hazer cost to much plus i think you
>can make some smiler much less in cost beware of the patten police

I have been thinking along these lines in a slightly different way. I choose to call the traveling part a "tram". I have a forty foot utility pole ready to plant but there is no way I will ever climb it. It is a little more complicated because it is about 12 inches in diameter at the bottom and about 6 inches in diameter at the top.

I envision something like an inverted crank up tower mechanism. I am planning a long sleeve (3 feet?) pulled up by one or two steel cables. As the tram approaches the top, vee notches in the upper end of the sleeve will engage a big pin through the pole to align & stabilize the horizontal position. The vertical positioning will be accomplished by wedges length wise on the pole that do not engage the inner surface of the tram until the last few feet of travel.

There is no new technology here so no patent issues. The choice of materials for the tram is important, it must be strong but light as possible!

If anyone is inclined to turn my idea into a commercial product I would be flattered!

John Ferrell W8CCW

707. Re: OCF Dipole and Window Line Choke

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-28 14:26:40 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <y4L1m.938$yh.929@newsfe16.iad>
Source record: 14519

dykesc wrote:
> On Jun 27, 5:17 pm, Cecil Moore <nos...@w5dxp.com> wrote:
>> Do you mind if I upload it to my web page so
>> everyone can take a look?
>
> Please do Cecil. Thanks. Dykes (AD5VS)

OK, Dykes, anyone interested in downloading your
EZNEC file can do so from:

http://www.w5dxp.com/ocfv.EZ

Roy, w7el, offered to help. Did you send your .EZ
file to him by email?
--
73, Cecil, IEEE, OOTC, http://www.w5dxp.com

708. ��� ������ ����� ���� ������ ��
����, ...

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-28 14:40:05 UTC
From: acticeFooca <acticeFooca.48d4c1f@radiobanter.com>
Message-ID: <acticeFooca.48d4c1f@radiobanter.com>
Source record: 14521

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acticeFooca

709. Re: OCF Dipole and Window Line Choke

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-28 15:01:58 UTC
From: dykesc <cupstidd@bellsouth.net>
Message-ID: <447c037c-c3e4-4999-9eb1-ce06ff82f127@3g2000yqk.googlegroups.com>
Source record: 14520

On Jun 28, 9:26 am, Cecil Moore <nos...@w5dxp.com> wrote:
> dykesc wrote:
> > On Jun 27, 5:17 pm, Cecil Moore <nos...@w5dxp.com> wrote:
> >> Do you mind if I upload it to my web page so
> >> everyone can take a look?
>
> > Please do Cecil. Thanks. Dykes (AD5VS)
>
> OK, Dykes, anyone interested in downloading your
> EZNEC file can do so from:
>
> http://www.w5dxp.com/ocfv.EZ
>
> Roy, w7el, offered to help. Did you send your .EZ
> file to him by email?
> --
> 73, Cecil, IEEE, OOTC, http://www.w5dxp.com

Thanks for making the file public Cecil. I'll send a copy to Roy. He said he would be tied up with field day activities through the weekend.

73
Dykes (AD5VS)

710. Re: High data rate space transmissions through visible light communication.

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-28 17:41:34 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <tiaf45p58ncdq3ssmgbtmef6jv7k3n7ve0@4ax.com>
Source record: 14522
Cross-posted to: sci.astro,rec.radio.amateur.space,rec.radio.amateur.antenna,sci.astro.seti,sci.physics

On Sun, 28 Jun 2009 17:14:14 +1000, "Peter Webb"
<webbfamily@DIESPAMDIEoptusnet.com.au> wrote:

>Furthermore, the radiation from a reflected area is isotropic - goes in all
>directions - and hence very little is directed towards the earth.

Actually, it is lambertian in its distribution, and it would have a
major lobe that was directed in rather typical fashion (at the same,
but negative angle to the norm to the surface). However, as is the
intent of your response, very much less will find its way to the
intended target.

73's
Richard Clark, KB7QHC

711. Re: High data rate space transmissions through visible light communication.

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-28 18:37:01 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <72ef451urb76hj7jpsrqqu2rltv042lefk@4ax.com>
Source record: 14523
Cross-posted to: sci.astro,rec.radio.amateur.space,rec.radio.amateur.antenna,sci.astro.seti,sci.physics

On Sat, 27 Jun 2009 23:54:14 -0700 (PDT), Robert Clark
<rgregoryclark@yahoo.com> wrote:

> I had been thinking about methods of high data rate transmission in
>regards to getting *video* transmissions from Mars orbiter missions. I
>was irritated by the spotty coverage of the Mars surface at the best
>resolutions so I wanted to send real-time *continuous* imaging back to
>Earth receiving stations at the highest imaging resolutions.

A curious distinction in this "continuous." Direct Current
transmission from Mars? I think not. Anything else is rather
conventional.

>This
>would require very high transmission rates, much higher than what is
>currently used.

"Continuous" is not distinctive to rate except at DC. Grab both sides
of conventional 120VAC from any wall socket, and it will seem
distinctly continuous - boosting it 1 THz wouldn't bring any different
sensation.

>The idea would be to use light transmissions but only of the on-off
>variety.

Rates, and on-off have departed the realm of "continuous."

>You would use a large surface, many meters across, capable of
>being alternatively lit up and darkened.

This is entirely unrelated to "continuous" rates or modes of
transmission. In and of itself, in regards to establishing remote
communications at light wavelengths, it is guilding the lily and
painting the rose.

>There are computer chips of
>course capable of operating at Ghz rates.
How that relates to:
>This would determine if the
>large surface was lit up or not electrically, possibly by using a
>material whose reflective properties can be changed electrically.
is bordering on stream-of-consciousness rambling.

>I actually wanted to use separate,
>say, squares on the reflecting surface that could be put separately in
>the on-off position to increase the information transmission rate.

There is no causal correlation between many surfaces and rate. This
is merely the substitution of complexity for the appearance of deep
consideration (which it is not).

>This is why I wanted to use light rather
>than radio for this since the larger wavelengths in radio would make
>the reflecting surface impractically large for diffraction limited
>resolution.

You are simply limited in your perception of what RF and Light means.
If one suffers for wavelength, then they both do.

>Even with light you couldn't do this with a single telescope.

Sounds like an artificial objection. Have you tried thinking in terms
of a power budget?

>They would have to be widely separated.
Does not come naturally as a solution from the rather diaphonous
problem put forward to this point, and the following is not a reason:
>Combining the signals from widely
>separated scopes is common in radio astronomy but is not nearly as
>successful in optical astronomy. That is because the light wavelengths
>are so much smaller and you would have to have nanoscale accuracy in
>positioning the widely separate mirrors in relationship to each other.
This is problem of degree, one which you painted yourself into a
corner with. Further, it doesn't necessarily follow one from the
other.

>However, in the case of just detecting an on-off signal this shouldn't
>be as big of a problem as you're not trying to form a usable image,
>but only trying to see if a particular location is on or off. You
>would need though highly accurate timing synchrony between the
>separate scopes, within nanoseconds, to be sure they are detecting the
>same on-off square. Note also here that the shifting in the image due
>to atmospheric distortion very definitely would be bad for using
>ground based scopes.

This is, based on your own objections, rather whipsawed by the
application of the term "nano." Nanoseconds and nanometers are not on
the balance to the solution of your problem. If you had nanometer
issues optically, they are not solved within nanoseconds simply
because they are not forming an image (which is a poor metaphor
because if fails with its own application).

>moon advertising.
>put a billboard on the moon.
>http://www.halfbakery.com/idea/moon_20advertising

Half backed? It is undercooked by half that again.

Let's consider: To obtain a sufficient contrast ratio, the light
would have to exceed the brilliance of the sun.

Did I mention a power budget?

The rest of this hardly borders on novely so much as fantasy. Keep
that to the appropriate groups.

73's
Richard Clark, KB7QHC

712. Re: High data rate space transmissions through visible light communication.

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-28 20:48:25 UTC
From: BradGuth <bradguth@gmail.com>
Message-ID: <a7ca4412-2049-4f84-a646-25bec33956a1@e21g2000yqb.googlegroups.com>
Source record: 14524
Cross-posted to: sci.astro,rec.radio.amateur.space,rec.radio.amateur.antenna,sci.astro.seti,sci.physics

Yes, you are perfectly dead on the spot for using the visual spectrum
on behalf of interplanetary and interstellar communications, as by far
the most extremely narrow of monochromatic or those of FM photons
accomplishing their one-way or ideally two-way energy and technology
efficient alternative. I kid you not.

The problem is that it’s perhaps too darn good and perhaps even too
energy efficient. Signal pointing and tracking errors from a
satellite platform are seriously narrow, though receiving isn’t all
that insurmountable.

~ BG

On Jun 28, 12:14 am, "Peter Webb"
<webbfam...@DIESPAMDIEoptusnet.com.au> wrote:
> Nice idea, but ...
>
> Illuminating an area of Mars or the moon and relying on this secondary
> reflection will actually produce less photons returning to earth than aiming
> the light source directly at the earth.
>
> Furthermore, the radiation from a reflected area is isotropic - goes in all
> directions - and hence very little is directed towards the earth.
>
> If you were using the light source directly, rather than having it
> illuminate an area of the ground, you could also use lenses or mirrors to
> focus it back on the earth, giving thousands or millions of times the signal
> strength on earth, the same technique as is used for radio comms.
>
> "Robert Clark" <rgregorycl...@yahoo.com> wrote in message
>
> news:d93b5c96-717b-43b1-8178-eec713504a89@h18g2000yqj.googlegroups.com...
> I had been thinking about methods of high data rate transmission in
> regards to getting *video* transmissions from Mars orbiter missions. I
> was irritated by the spotty coverage of the Mars surface at the best
> resolutions so I wanted to send real-time *continuous* imaging back to
> Earth receiving stations at the highest imaging resolutions. This
> would require very high transmission rates, much higher than what is
> currently used.
> The idea would be to use light transmissions but only of the on-off
> variety. You would use a large surface, many meters across, capable of
> being alternatively lit up and darkened. There are computer chips of
> course capable of operating at Ghz rates. This would determine if the
> large surface was lit up or not electrically, possibly by using a

> material whose reflective properties can be changed electrically.
> I was worried though about the twinkling seen in point sources, which
> this would appear to be, such as with stars due to atmospheric
> effects. So this might require the telescope(s) to be in Earth orbit.
> The question I had though was whether the atmospheric distortion would
> cause an "on" signal to appear "off" and vice versa? My understanding
> of atmospheric distortion is that it causes the point source to be
> constantly apparently undergoing small shifts in position. But this
> wouldn't be a problem if what you want to determine is whether it is
> on or off. If that is the case then ground based telescopes would
> work.
> In the large reflecting surface, I actually wanted to use separate,
> say, squares on the reflecting surface that could be put separately in
> the on-off position to increase the information transmission rate. But
> that would require being able to distinguish the squares from Earth
> millions of kilometers away. This is why I wanted to use light rather
> than radio for this since the larger wavelengths in radio would make
> the reflecting surface impractically large for diffraction limited
> resolution.
> Even with light you couldn't do this with a single telescope. They
> would have to be widely separated. Combining the signals from widely
> separated scopes is common in radio astronomy but is not nearly as
> successful in optical astronomy. That is because the light wavelengths
> are so much smaller and you would have to have nanoscale accuracy in
> positioning the widely separate mirrors in relationship to each other.
> However, in the case of just detecting an on-off signal this shouldn't
> be as big of a problem as you're not trying to form a usable image,
> but only trying to see if a particular location is on or off. You
> would need though highly accurate timing synchrony between the
> separate scopes, within nanoseconds, to be sure they are detecting the
> same on-off square. Note also here that the shifting in the image due
> to atmospheric distortion very definitely would be bad for using
> ground based scopes.
>
> It occurred to me this might be a means of acquiring advertising
> support for a Google Lunar X Prize entrant. I had also been trying to
> come up with a method of having an illuminated image either on the
> Moon or in lunar orbit that would be visible to the naked eye on
> Earth. Such an idea was discussed here:
>
> moon advertising.
> put a billboard on the moon.http://www.halfbakery.com/idea/moon_20advertising
>
> I wouldn't be in favor of doing this in a way that would actually
> advertise a product. But I was thinking about it as a way of sending a
> message in favor of, for example, world peace. In this case you could
> still have advertisers who could say in TV commercials for example
> they supplied funding to support the mission and the message.
> BTW, I would be in favor of advertisers who could pay to have
> advertising signs set up at the rover landing site so that if anyone

> who wanted to log on to the the rover transmissions or who watched a
> TV program on the rover transmissions would see the ads. This to me is
> something different than an ad that someone would be forced to see
> just by looking up at the Moon.
> In any case you would need something large enough so that with naked
> eye resolution at the lunar distance it would still be
> distinguishable. This page gives the naked eye resolution at the lunar
> distance:
>
> Purpose of Building Telescopes.http://www.astronomy.org/astronomy-survival/telepur.htm
>
> According to this page the resolution of the human eye at the lunar
> distance would be about 22 miles. One single object clearly couldn't
> do this. However, if you had separate illuminated landers or orbiters
> at this large distance apart they could be used to send a message
> visible to the naked eye on Earth.
> It could work with orbiters by the example set of satellite formation
> flying by the Cluster mission:
>
> Cluster mission.http://en.wikipedia.org/wiki/Cluster_mission
>
> I also needed to find how large a brightly illuminated surface needed
> to be at the lunar surface to be visible by the naked eye on Earth. I
> thought of the example of the "Iridium flares":
>
> Satellite flare.http://en.wikipedia.org/wiki/Satellite_flare
>
> The Iridium satellites have 3 antennas that happen to be also
> reflective in visible light, totaling 4.8 m^2 in area. According to
> the Wikipedia page, the flares can be up to -8 in apparent magnitude,
> though typically at +6 magnitude, and are produced by an individual
> antenna, so by one of area 1.6 m^2.
> I'll assume the brightest flares are produced just by the orientation
> the antennas happen to be in so we could make our reflective surfaces
> be oriented with respect to the Sun to get the greatest brightness.
> For the same size surface, the brightness would be lessened by the
> greater distance to the Moon. The Iridium satellites are at about 780
> km altitude so the Moon is about 500 times further. This would lower
> the brightness by a factor of 500^2 = 250,000.
> This page gives the apparent brightness commonly visible by the naked
> eye in urban areas as +3:
>
> Apparent magnitude.http://en.wikipedia.org/wiki/Apparent_magnitude
>
> The 250,000 times lesser brightness at the lunar distance for an
> Iridium sized reflective surface would give it a +13.5 higher apparent
> magnitude so up to +5.5 in apparent magnitude. To make our reflective
> surface be at +3 apparent magnitude we could make the area be 10 times
> larger, so at 16 m^2 area, or a square 4 meters across.
> We would need a method for a flat reflecting surface of unfolding it

> to this size. It might be easier instead to have the reflecting
> surface be a balloon inflated by stored gas. Since this would be in a
> vacuum, you wouldn't need much gas pressure or mass to accomplish
> this.
> Another consideration is that because of the brightness of the Moon
> it could swamp out our illuminated surface. For the orbiter, this
> could probably be alleviated by having the orbiter have a highly
> elliptical orbit, (this also would be beneficial in minimizing the
> required delta-v and fuel load) then it would be visible at the higher
> distances from the Moon in its orbit. For the landers it might work
> for them to land in the dark lunar maria.
>
> To communicate the message though we would need a method to turn on
> and off the reflecting surface. One possibility would be to have the
> reflecting surface consist of very many small squares that could be
> rotated to reflect toward the Earth or away. Another possibility might
> be to have it covered with LCD's. Whichever method it would have to be
> both lightweight and low power.
> For our first attempts we probably would not want to send so many
> orbiter or landers at once to form a naked-eye visible image. We would
> first send just a single one to test it out. Note that this method
> with a single vehicle could still be used to send high definition
> video by having our single reflective surface be turned on and off at
> the required rate, about 256,000 times per sec with compression.
>
>   Bob Clark
>
> On Jun 16, 6:57 pm, Robert Clark <rgregorycl...@yahoo.com> wrote:> On another forum there
was debate about whether the requirement of
> > "near real time" high definition video transmissions was achievable
> > for a such a low-cost mission.
> > It would certainly be doable if the receiving antennas on Earth were
> > the large radio antennas used for space communications with
> > interplanetary probes or those radio antennas used for radio
> > astronomy. This is evidenced by the fact that the Kaguya(Selene) lunar
> > orbiter mission was able to send high definition video to a large
> > receiving dish radio antenna. And also by the fact that DirecTV sends
> > high definition video to only 2 foot size antennas from geosynchronous
> > orbit; so 10 times larger antennas would be able to receive such
> > signals from a 10 times larger distance at the Moon.
> > However, I was wondering if it would be possible to detect this using
> > amateur sized equipment at such a large distance. Usually for
> > receiving high data rates you used transmissions at very high
> > frequencies, as higher frequencies can carry more data. For instance
> > both Kaguya and DirecTV transmit the high def video at gigahertz
> > frequencies.
> > However, for the system I'm imaging I'm thinking of using much lower
> > frequencies, and necessarily longer wavelengths. What I wanted to do
> > is transmit at decametric wavelengths. High data transmissions rates
> > would be achieved by making it be pulsed in an on-off fashion at high

> > intensity but at a rapid rate.
> > On that other forum the data rate required for high def TV was given
> > as 256,000 bits per second. So I wanted to make these transmissions be
> > pulsed at this rapid rate at wavelengths of a few tens's of meters.
> > My decametric wavelength requirement was because of the fact that
> > high schools and universities have programs for detecting radio
> > emissions from Jupiter at these wavelengths:
>
> > NASA's Radio JOVE Project.http://radiojove.gsfc.nasa.gov/
>
> > The Discovery of Jupiter's Radio Emissions.
> > How a chance discovery opened up the field of Jovian radio studies.
> > by Dr. Leonard N.
> > Garciahttp://radiojove.gsfc.nasa.gov/library/sci_briefs/discovery.html
>
> > These school and university receiving antennas on Earth consist of
> > dozens to hundreds of vertical dipoles of lengths at the meters scale
> > to correspond to the radio wavelengths. Some questions I had: how
> > intense would the pulse have to be on the Moon to be detectable from
> > the Moon above background noise for a detector on Earth of say a few
> > dozen dipoles? Could this be done for the transmitter of power of say
> > a few hundred watts for a low cost, low weight lander mission? Could
> > the transmitter antenna on the moon be only a few meters size for the
> > low weight requirement?
> > A secondary purpose I had in mind was a pet project of mine involving
> > linking these many school receivers to form a global telescope at
> > decametric wavelengths:
>
> > From: rgcl...@my-deja.com (Robert Clark)
> > Date: 23 May 2001 11:15:06 -0700
> > Subject: Will amateur radio astronomers be the first to directly
> > detect extrasolar planets?
> > Newsgroups: rec.radio.amateur.space, rec.radio.amateur.antenna,
> > sci.astro, sci.astro.seti,
> >
sci.space.policyhttp://groups.google.com/group/sci.astro.seti/browse_frm/thread/c0018...
>
> > The long wavelengths should make the requirements for accurate
> > distance information and timing synchrony between the separate
> > detectors easy to manage even for amateur systems. Using this method
> > might make the detection achievable even if the power or transmitting
> > antenna size requirements are not practical for a low cost, low weight
> > lander on the Moon for an individual detector on Earth.
> > The recent achievement of real-time very long baseline interferometry
> > should make it possible to integrate these separate detector signals
> > in real-time as well:
>
> > Astronomers Demonstrate a Global Internet Telescope.
> > Date Released: Friday, October 08, 2004
> > Source: Jodrell Bank

> > Observatoryhttp://www.spaceref.com/news/viewpr.html?pid=15251
>
> > Bob Clark

713. Re: High data rate space transmissions through visible light communication.

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-28 20:59:07 UTC
From: Uncle Al <UncleAl0@hate.spam.net>
Message-ID: <4A47D99B.AF208356@hate.spam.net>
Source record: 14525
Cross-posted to: sci.astro,rec.radio.amateur.space,rec.radio.amateur.antenna,sci.astro.seti

Robert Clark wrote:
>
> I had been thinking about methods of high data rate transmission in
> regards to getting *video* transmissions from Mars orbiter missions.

Would modulating a 1 GW continuous laser at Mars be sufficient? The
laser is already in place - and running,
[snip crap]

http://www.mazepath.com/uncleal/race.htm

Hey stooopid - what happened to the Mars surface space face? You
dumped a gigabyte of crap extolling it. Where's the compost?

> Even with light you couldn't do this with a single telescope.
[snip more crap]

What, a gigagatt continuous is not enough? Give an idiot the answer
and obtain NASA ratiocinating on how to get to the moon (and
presumably, back).

> I had also been trying to
> come up with a method of having an illuminated image either on the
> Moon or in lunar orbit that would be visible to the naked eye on
> Earth. Such an idea was discussed here:
[snip rest of crap]

http://www.geocities.com/SouthBeach/1380/crmoon.html

idiot

--
Uncle Al
http://www.mazepath.com/uncleal/
(Toxic URL! Unsafe for children and most mammals)
http://www.mazepath.com/uncleal/lajos.htm#a2

714. Re: OCF Dipole and Window Line Choke

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-28 21:51:59 UTC
From: Owen Duffy <none@no.where>
Message-ID: <Xns9C395005BE661nonenowhere@61.9.191.5>
Source record: 14526

dykesc <cupstidd@bellsouth.net> wrote in news:447c037c-c3e4-4999-9eb1-ce06ff82f127@3g2000yqk.googlegroups.com:

> http://www.w5dxp.com/ocfv.EZ

I had a look at your model and couldn't make head and tail of it.

Here is a simple model of a Carolina Windom, well to the extent that it can be guessed from the smoke and mirrors used to describe and promote it... http://www.vk1od.net/files/CW01.EZ .

The model attempts to represent a voltage balun at the dipole feed point, a vertical coax feedline to a common mode choke (2000+j2000) and then the coax outer is grounded via a moderately good station ground (directly under the feedpoint). The power lost in the ground connection and the choke can be found from the reports. The model does not attempt to represent the differential mode transmission line, though it could be done. The CW's voltage balun at the feedpoint is modelled as a pair of equal voltage sources, with the common mode path connected between them. I have treated the voltage balun as having zero common mode impedance, it is probably a few ohms, but insignificant in this model.

As Roy I think already advised you, you have to model the entire common mode path to ground and my example above is a simple one, but it demonstrates a technique.

You will see the currents flowing in the three conductors (each side of the dipole and the coax outer), and their contribution to / effect on the pattern.

Others may disagree with my representation of the Carolina Windom.

Owen

715. Re: High data rate space transmissions through visible light communication.

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-29 00:31:58 UTC
From: Robert Clark <rgregoryclark@yahoo.com>
Message-ID: <c4dfce48-4867-40b6-9d8f-7f515a21c1a5@y9g2000yqg.googlegroups.com>
Source record: 14527
Cross-posted to: sci.astro,rec.radio.amateur.space,rec.radio.amateur.antenna,sci.astro.seti,sci.physics

On Jun 28, 1:41 pm, Richard Clark <kb7...@comcast.net> wrote:
> On Sun, 28 Jun 2009 17:14:14 +1000, "Peter Webb"
>
> <webbfam...@DIESPAMDIEoptusnet.com.au> wrote:
> >Furthermore, the radiation from a reflected area is isotropic - goes in all
> >directions - and hence very little is directed towards the earth.
>
> Actually, it is lambertian in its distribution, and it would have a
> major lobe that was directed in rather typical fashion (at the same,
> but negative angle to the norm to the surface). However, as is the
> intent of your response, very much less will find its way to the
> intended target.
>
> 73's
> Richard Clark, KB7QHC

This describes the reflection from the Iridium antennas as specular
where most of the reflected light is concentrated in a single
direction:

SeeSat-L Apr-98: Method for predicting flare.
http://satobs.org/seesat/Apr-1998/0175.html

About specular reflection:

Specular reflection.
http://en.wikipedia.org/wiki/Specular_reflection

We could get even higher concentration of the image by using
parabolic mirror reflectors.

Bob Clark

716. Re: OCF Dipole and Window Line Choke

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-29 01:27:18 UTC
From: dykesc <cupstidd@bellsouth.net>
Message-ID: <6c2bff9b-583d-4eb5-90fb-f76df2448e7c@x3g2000yqa.googlegroups.com>
Source record: 14528

On Jun 28, 4:51 pm, Owen Duffy <n...@no.where> wrote:

> I had a look at your model and couldn't make head and tail of it.

Owen, maybe the following description will help with understanding my model.

The antenna is an OCF Dipole in a Vee configuration. Wires 1 and 3 are the short and long sides respectively. Wire 4 is just a short connector at the apex. The antenna is fed with 100 feet of 450 ohm line which transitions through a 4:1 transformer to 5 feet of 50 ohm coax and then to the source. Wire 6 is an attempt to simulate the unbalance radiation from the 450 ohm line. Wire 7 is an approximate 80m 1/4 wave RF "sink" on the ground side of the source end of the model and is not meant to be a main element radiator so its position relative to the other elements is immaterial.

Also, as you can see, I have wire 6 grounded which isn't actually the case in the physical world. It is meant to simulate radiation from the 450 ohm line which actually ties into the 200 ohm (ungrounded high Z side) of the transformer. I guess I figured grounding it was the right thing to do since the EZNEC Help file implies the need for that to simulate coax radiation. I do have wire 6 positioned correctly relative to the other antenna elements, so its effect on the antenna pattern should be accurate.

Don't let short wire 5 which looks out of position throw you. It just serves as a termination junction between the 50 ohm side of the transformer and the short run of coax. There are a couple of other short "junction only" wires in the model.

A look at the wires, transmission lines, transformers, and sources tables should aid in understanding the model.

I by no means mean to imply I've modeled everything correctly. I just wanted you to know what I was attempting when I built the model.

Thanks for the Carolina Windom model. Good reference for comparing to what I have done.

Also, thanks for looking at this. Any advice much appreciated.

73

Dykes (AD5VS)

717. Re: High data rate space transmissions through visible light communication.

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-29 03:14:58 UTC
From: Sam Wormley <swormley1@mchsi.com>
Message-ID: <SkW1m.165323$DP1.155290@attbi_s22>
Source record: 14529
Cross-posted to: sci.astro,rec.radio.amateur.space,rec.radio.amateur.antenna,sci.astro.seti,sci.physics

Plenty of bandwidth in the radio and microwave spectrum.

A Mathematical Theory of Communication by Claude E. Shannon
http://cm.bell-labs.com/cm/ms/what/shannonday/paper.html
http://cm.bell-labs.com/cm/ms/what/shannonday/shannon1948.pdf

Claude E. Shannon
http://scienceworld.wolfram.com/biography/Shannon.html

718. Re: High data rate space transmissions through visible light communication.

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-29 04:03:28 UTC
From: Craig Markwardt <craig.markwardt@gmail.com>
Message-ID: <ea4f31c6-ff4d-4c6b-b872-eb003d8b6659@l32g2000vbp.googlegroups.com>
Source record: 14530
Cross-posted to: sci.astro,rec.radio.amateur.space,rec.radio.amateur.antenna,sci.astro.seti,sci.physics

On Jun 28, 8:31 pm, Robert Clark <rgregorycl...@yahoo.com> wrote:
> On Jun 28, 1:41 pm, Richard Clark <kb7...@comcast.net> wrote:
>
> > On Sun, 28 Jun 2009 17:14:14 +1000, "Peter Webb"
>
> > <webbfam...@DIESPAMDIEoptusnet.com.au> wrote:
> > >Furthermore, the radiation from a reflected area is isotropic - goes in all
> > >directions - and hence very little is directed towards the earth.
>
> > Actually, it is lambertian in its distribution, and it would have a
> > major lobe that was directed in rather typical fashion (at the same,
> > but negative angle to the norm to the surface). However, as is the
> > intent of your response, very much less will find its way to the
> > intended target.
>
> > 73's
> > Richard Clark, KB7QHC
>
> This describes the reflection from the Iridium antennas as specular
> where most of the reflected light is concentrated in a single
> direction:
>
> SeeSat-L Apr-98: Method for predicting flare.http://satobs.org/seesat/Apr-1998/0175.html
>
> About specular reflection:
>
> Specular reflection.http://en.wikipedia.org/wiki/Specular_reflection
>
> We could get even higher concentration of the image by using
> parabolic mirror reflectors.

So basically you discovered the parabolic antenna. Congratulations.

CM

719. Re: High data rate space transmissions through visible light communication.

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-29 05:03:42 UTC
From: BradGuth <bradguth@gmail.com>
Message-ID: <41bfcaf2-d9d9-4f81-8a10-3dc7faf4f08a@z14g2000yqa.googlegroups.com>
Source record: 14531
Cross-posted to: sci.astro,rec.radio.amateur.space,rec.radio.amateur.antenna,sci.astro.seti,sci.physics

On Jun 28, 5:31 pm, Robert Clark <rgregorycl...@yahoo.com> wrote:
> On Jun 28, 1:41 pm, Richard Clark <kb7...@comcast.net> wrote:
>
> > On Sun, 28 Jun 2009 17:14:14 +1000, "Peter Webb"
>
> > <webbfam...@DIESPAMDIEoptusnet.com.au> wrote:
> > >Furthermore, the radiation from a reflected area is isotropic - goes in all
> > >directions - and hence very little is directed towards the earth.
>
> > Actually, it is lambertian in its distribution, and it would have a
> > major lobe that was directed in rather typical fashion (at the same,
> > but negative angle to the norm to the surface). However, as is the
> > intent of your response, very much less will find its way to the
> > intended target.
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> > 73's
> > Richard Clark, KB7QHC
>
> This describes the reflection from the Iridium antennas as specular
> where most of the reflected light is concentrated in a single
> direction:
>
> SeeSat-L Apr-98: Method for predicting flare.http://satobs.org/seesat/Apr-1998/0175.html
>
> About specular reflection:
>
> Specular reflection.http://en.wikipedia.org/wiki/Specular_reflection
>
> We could get even higher concentration of the image by using
> parabolic mirror reflectors.
>
> Bob Clark

Yes, and it was all doable as of more than a decade ago. However, at
the rate we're going, perhaps another century is required.

~ BG

720. Re: OCF Dipole and Window Line Choke

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-29 06:37:33 UTC
From: Owen Duffy <none@no.where>
Message-ID: <Xns9C39A920BE60Dnonenowhere@61.9.191.5>
Source record: 14532

dykesc <cupstidd@bellsouth.net> wrote in news:6c2bff9b-583d-4eb5-90fb-f76df2448e7c@x3g2000yqa.googlegroups.com:

You have two parts to your model, and they are disconnected (apart from conductor coupling effects). You have complicated your model with your counterpoise concept and it doesn't work.

Try a simple model with not more elements than necessary, then when you have it working, current look rational etc, extend the model.

Hint: the TL element models the differential mode of the transmission line, and NOT the common mode. To answer your original question, you do not need to model differential mode TL, just put the source(s) up in the centre of the dipole.

You do need to know the common mode impedance of your 4:1 transformer to include it in the model. If it is a voltage balun, you can probably treat it as zero ohms without introducing great error, but if it is a current balun (as your mention of choke implies), you need to know its impedance at the model frequency.

Owen

721. Re: High data rate space transmissions through visible light communication.

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-29 15:42:02 UTC
From: Jim Lux <james.p.lux@jpl.nasa.gov>
Message-ID: <h2anca$iq2$1@news.jpl.nasa.gov>
Source record: 14533

Robert Clark wrote:
> I had been thinking about methods of high data rate transmission in
> regards to getting *video* transmissions from Mars orbiter missions. I
> was irritated by the spotty coverage of the Mars surface at the best
> resolutions so I wanted to send real-time *continuous* imaging back to
> Earth receiving stations at the highest imaging resolutions. This
> would require very high transmission rates, much higher than what is
> currently used.
> The idea would be to use light transmissions but only of the on-off
> variety. You would use a large surface, many meters across, capable of

Bob,
You might not want to cross-post to 5 groups.

1) what spotty coverage? I doubt any gaps are due to the lack of data bandwidth from Mars to Earth, except when MRO goes behind Mars, or similar line of sight interruptions. There's a non-zero cost to running DSN antennas, too. In any case, getting sufficient bandwidth in a pipe to earth isn't a matter of technology, it's a matter of money.
2) Optical comm with very high bandwidths is a subject of research and development at NASA (at JPL) and the USAF (at Lincoln Labs). Lots of interesting ideas for receivers on the Earth, etc. Doesn't take a huge telescope or high powers at either end. They use, IIRC, a form of pulse position modulation.

There was a special issue of IEEE Proceedings October 2007 (Special issue on Technical Advances in Deep-Space Communications and Tracking) that discusses a lot of this stuff. (including optical) Read it and learn, rather than just looking at press releases and formulating ideas from that.

722. Newbie Question

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-29 21:09:44 UTC
From: pixel_a_ted <pixel_a_ted@yahoo.com>
Message-ID: <7f9cddd4-821e-4e6c-b30a-630352e448f1@k20g2000vbp.googlegroups.com>
Source record: 14534

I'm not an amateur radio guy or anything like that. I recently bought a Kaito KA1103 Worldband Radio, mainly to get better reception of AM stations. I sometimes like to listen to discussion shows at night and the local selection is limited. The reviews seemed to indicate that the radio has good AM discrimination, etc. Well, so far it doesn't seem to be any better than my little 20 year old Sony Walkman radio. I've also scanned through the short wave frequencies and found nothing, but that was not my main reason for getting the radio.

The radio came with an "antenna" that seems to be one big loop of wire with a plug at one end that goes into the radio and a plastic clip at the other end. I'm not sure what to do with it and have read somewhat contradictory advice on the internet. Nothing that I have tried has resulted in any better reception. I also see somewhat inexpensive loop antennas advertised.

Any suggestions for improving AM reception would be greatly appreciated.

Thanks.

723. Re: Newbie Question

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-29 21:42:13 UTC
From: tom <news4792@taring.org>
Message-ID: <4a4934fd$0$18864$8046368a@newsreader.iphouse.net>
Source record: 14535

pixel_a_ted wrote:
> I'm not an amateur radio guy or anything like that. I recently bought
> a Kaito KA1103 Worldband Radio, mainly to get better reception of AM
> stations. I sometimes like to listen to discussion shows at night and
> the local selection is limited. The reviews seemed to indicate that
> the radio has good AM discrimination, etc. Well, so far it doesn't
> seem to be any better than my little 20 year old Sony Walkman radio.
> I've also scanned through the short wave frequencies and found
> nothing, but that was not my main reason for getting the radio.
>
> The radio came with an "antenna" that seems to be one big loop of wire
> with a plug at one end that goes into the radio and a plastic clip at
> the other end. I'm not sure what to do with it and have read somewhat
> contradictory advice on the internet. Nothing that I have tried has
> resulted in any better reception. I also see somewhat inexpensive loop
> antennas advertised.
>
> Any suggestions for improving AM reception would be greatly
> appreciated.
>
> Thanks.

First, the external antenna is intended for shortwave, so that's not
going to help.

The reviews I read stated that AM was quite good, better than some
radios that I know are good, but that the AC adapter is quite noisy. If
you are using that, try running just on batteries.

If that doesn't work out for you, locate a GE Superradio or go C Crane
site and get a CC Radio. The CC Radio is the best I've ever used that
has straight AM detection and costs less than $300. Their site is
www.ccrane.com.

good luck
tom
K0TAR

724. Re: Newbie Question

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-29 21:49:18 UTC
From: tom <news4792@taring.org>
Message-ID: <4a4936a6$0$18863$8046368a@newsreader.iphouse.net>
Source record: 14536

pixel_a_ted wrote:
> I'm not an amateur radio guy or anything like that. I recently bought
> a Kaito KA1103 Worldband Radio, mainly to get better reception of AM
> stations. I sometimes like to listen to discussion shows at night and
> the local selection is limited. The reviews seemed to indicate that
> the radio has good AM discrimination, etc. Well, so far it doesn't
> seem to be any better than my little 20 year old Sony Walkman radio.
> I've also scanned through the short wave frequencies and found
> nothing, but that was not my main reason for getting the radio.
>
> The radio came with an "antenna" that seems to be one big loop of wire
> with a plug at one end that goes into the radio and a plastic clip at
> the other end. I'm not sure what to do with it and have read somewhat
> contradictory advice on the internet. Nothing that I have tried has
> resulted in any better reception. I also see somewhat inexpensive loop
> antennas advertised.
>
> Any suggestions for improving AM reception would be greatly
> appreciated.
>
> Thanks.

It looks like the original model CCRadio that I own has been replaced by
the CCRadio-2.

tom
K0TAR

725. Re: Newbie Question

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-29 22:28:54 UTC
From: Jerry <jerrymartes@verizon.net>
Message-ID: <Geb2m.1969$NF6.296@nwrddc02.gnilink.net>
Source record: 14537

"pixel_a_ted" <pixel_a_ted@yahoo.com> wrote in message
news:7f9cddd4-821e-4e6c-b30a-630352e448f1@k20g2000vbp.googlegroups.com...
> I'm not an amateur radio guy or anything like that. I recently bought
> a Kaito KA1103 Worldband Radio, mainly to get better reception of AM
> stations. I sometimes like to listen to discussion shows at night and
> the local selection is limited. The reviews seemed to indicate that
> the radio has good AM discrimination, etc. Well, so far it doesn't
> seem to be any better than my little 20 year old Sony Walkman radio.
> I've also scanned through the short wave frequencies and found
> nothing, but that was not my main reason for getting the radio.
>
> The radio came with an "antenna" that seems to be one big loop of wire
> with a plug at one end that goes into the radio and a plastic clip at
> the other end. I'm not sure what to do with it and have read somewhat
> contradictory advice on the internet. Nothing that I have tried has
> resulted in any better reception. I also see somewhat inexpensive loop
> antennas advertised.
>
> Any suggestions for improving AM reception would be greatly
> appreciated.
>
> Thanks.

Hi "Ted"

If you wanted AM stations in the 0.5 to 2 MHz band, you might be happy
with a tuned loop. I went "overboard and made a big multiturn loop that can
be located outside but tuned and rotated from inside, It gets too
complicated to both rotate and tune a big, outside AM Loop antenna. But,
that really works well for reception of AM radio from long distances. You
might find something in this site http://www.mindspring.com/~loop_antenna/

Jerry KD6JDJ

726. Re: High data rate space transmissions through visible light communication.

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-29 23:26:44 UTC
From: Robert Clark <rgregoryclark@yahoo.com>
Message-ID: <97cd9d59-0698-4a2b-8385-429b67d46834@r33g2000yqn.googlegroups.com>
Source record: 14538

On Jun 29, 11:42 am, Jim Lux <james.p....@jpl.nasa.gov> wrote:
>...
>
> There was a special issue of IEEE Proceedings October 2007 (Special
> issue on Technical Advances in Deep-Space Communications and Tracking)
> that discusses a lot of this stuff. (including optical) Read it and
> learn, rather than just looking at press releases and formulating ideas
> from that.

And also picking the brains of people on these forums.

Bob Clark ;-)

727. Re: Newbie Question

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-30 03:27:52 UTC
From: KE5LDO <KE5LDO.48f465d@radiobanter.com>
Message-ID: <KE5LDO.48f465d@radiobanter.com>
Source record: 14539

Here what you ight consider doing;
The additional wire should, hopefully, increase the signal you capture.
If you have window close to where you listen to your radio, stretch the
wire around the room , at the highest level you can INDOORS. I use cup
hooks to supend the wire. This will improve the shortwave signals. To
improve the MW signals in the AM band, do some researach at some of the
Yahoo groups on MW natennas and it has much more infor mation than I
can list here. The 1103 is good portable, but DO NOT hook it up to an
outside atenna. It will overload and you will get false signals
everywhere. A good loop antenna or a Select-Tenna will improve the MW
section. Hope this helps. Email me if you have questions. KE5LDO.

tom;681846 Wrote:
> pixel_a_ted wrote:-
> I'm not an amateur radio guy or anything like that. I recently bought
> a Kaito KA1103 Worldband Radio, mainly to get better reception of AM
> stations. I sometimes like to listen to discussion shows at night and
> the local selection is limited. The reviews seemed to indicate that
> the radio has good AM discrimination, etc. Well, so far it doesn't
> seem to be any better than my little 20 year old Sony Walkman radio.
> I've also scanned through the short wave frequencies and found
> nothing, but that was not my main reason for getting the radio.
>
> The radio came with an "antenna" that seems to be one big loop of
> wire
> with a plug at one end that goes into the radio and a plastic clip at
> the other end. I'm not sure what to do with it and have read somewhat
> contradictory advice on the internet. Nothing that I have tried has
> resulted in any better reception. I also see somewhat inexpensive
> loop
> antennas advertised.
>
> Any suggestions for improving AM reception would be greatly
> appreciated.
>
> Thanks.-
>
> First, the external antenna is intended for shortwave, so that's not
> going to help.
>
> The reviews I read stated that AM was quite good, better than some
> radios that I know are good, but that the AC adapter is quite noisy.
> If
> you are using that, try running just on batteries.

>
> If that doesn't work out for you, locate a GE Superradio or go C Crane
>
> site and get a CC Radio. The CC Radio is the best I've ever used that
>
> has straight AM detection and costs less than $300. Their site is
> www.ccrane.com.
>
> good luck
> tom
> K0TAR

--
KE5LDO

728. Re: Newbie Question

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-30 11:49:22 UTC
From: Richard Fry <rfry@adams.net>
Message-ID: <fd10bbc9-7865-4894-95e7-4a87b38f8d3e@a7g2000yqk.googlegroups.com>
Source record: 14540

On Jun 29, 4:09 pm, pixel_a_ted <pixel_a_...@yahoo.com>
> Any suggestions for improving AM reception would be greatly
> appreciated.

Medium-wave AM reception can be difficult in an indoor environment due to shielding provided by nearby wires and especially from the steel frame of a building. Radio noise from light dimmers, touch lamps etc nearby (yours and/or your neighbors) can limit AM reception, also.

This Kaito radio has a built-in ferrite antenna that is used for AM broadcast reception. It is directional with best reception when the longest dimension of the radio is perpendicular to the direction to the station it is receiving. The telescopic whip is used for short wave and FM broadcast reception, only.

According to the Operation Manual at
http://www.ccrane.com/instruction-manuals/kaito-ka1103-radio.pdf
, this radio needs a field strength as high as 1 mV/m on the AM broadcast band. That is rather high, but some of the 50,000 watt AM stations like WJR (760), WLW (700), KMOX (1120) etc can produce nighttime fields that high or higher over wide areas of the US.

The "Local/DX" switch probably should be in the DX position when listening to distant stations, unless you are located close to an AM station with a very strong signal at your location (experiment).

You might take your radio outside to see if reception improves. If it does you may need to use an external MW antenna such a "long wire" or the C. Crane unit at
http://www.ccrane.com/antennas/am-antennas/twin-coil-ferrite-am-antenna.aspx
. Unfortunately, the Crane antenna costs more than you paid for your Kaito radio, probably.

RF

729. Re: Newbie Question

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-30 12:54:34 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <bWn2m.11418$3O.559@newsfe25.iad>
Source record: 14541

tom wrote:
> The CC (Crane) Radio is the best I've ever used that
> has straight AM detection and costs less than $300.

I read rave reviews so I bought one and the display
failed. I only use the memory channels now. It's
also not any better than my Yacht Boy 400.
--
73, Cecil, IEEE, OOTC, http://www.w5dxp.com

730. Re: Detecting the HDTV for the Google Lunar X Prize, applications to the SETI search.

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-30 18:37:29 UTC
From: Robert Clark <rgregoryclark@yahoo.com>
Message-ID: <c3131f3f-b685-4510-bf2d-a9b74e6d3212@q14g2000vbn.googlegroups.com>
Source record: 14542
Cross-posted to: sci.astro,rec.radio.amateur.space,rec.radio.amateur.antenna,sci.astro.seti,sci.physics

On Jun 16, 9:43 pm, Jim Lux <james.p....@jpl.nasa.gov> wrote:
> ...
>
> Look up LOFAR or the SKA (Square Kilometer Array) for a fairly well
> funded scheme.

LOFAR.
http://en.wikipedia.org/wiki/LOFAR

LOFAR like my proposal is to use many separate dipoles to detect long wavelength radio waves. However, it is to have only 10,000 dipoles whereas mine at the end will have ca. 1 billion dipoles.

The progenitors of the LOFAR project have argued in papers that it could be used for the SETI search. However, this article by well known SETI search scientist Seth Shostak argues LOFAR will be too weak to detect Earth type radio transmissions at a distance of say 55 light-years by a factor of 1 million:

Listening for ET’s Television.
November 9, 2006
by Seth Shostak, Senior Astronomer
http://www.seti.org/Page.aspx?pid=917

Then since my proposal will be about 100,000 times more sensitive than LOFAR, it could detect Earth-like radio transmissions to about 1/3 the distance of 55 lightyears, or to about 18 lightyears way. There are several star systems in that range. The Shostak article notes you could get several hundred times better sensitivity by listening to certain stars over months or years. Then my proposal could detect such transmissions out to even 55 lightyears and further.

Bob Clark

731. Re: Detecting the HDTV for the Google Lunar X Prize, applications to the SETI search.

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-30 21:10:08 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <mnvk4516r26idmgfhd89caquonurv9e0re@4ax.com>
Source record: 14543
Cross-posted to: sci.astro,rec.radio.amateur.space,rec.radio.amateur.antenna,sci.astro.seti,sci.physics

On Tue, 30 Jun 2009 11:37:29 -0700 (PDT), Robert Clark
<rgregoryclark@yahoo.com> wrote:

>The Shostak article
>notes you could get several hundred times better sensitivity by
>listening to certain stars over months or years.

And if you lost your keys at night, you might find them faster looking
under street lights.

Yet another troll.

73's
Richard Clark, KB7QHC

732. Re: Newbie Question

Newsgroup: rec.radio.amateur.antenna
Date: 2009-06-30 23:25:36 UTC
From: tom <news4792@taring.org>
Message-ID: <4a4a9eb2$0$18869$8046368a@newsreader.iphouse.net>
Source record: 14544

Cecil Moore wrote:
> tom wrote:
>> The CC (Crane) Radio is the best I've ever used that has straight AM
>> detection and costs less than $300.
>
> I read rave reviews so I bought one and the display
> failed. I only use the memory channels now. It's
> also not any better than my Yacht Boy 400.

Sorry to hear that. Mine is running strong at about 10 years old.

Never played with a Yacht Boy. My experience with Grundigs is with the smaller/cheaper models which aren't impressive and the giant ones that are way too expensive for the performance they give. The big ones aren't bad, but not close to the performance of what I could buy a used amateur rig for the same price, so I've stayed away.

tom
K0TAR

733. Re: Newbie Question

Newsgroup: rec.radio.amateur.antenna
Date: 2009-07-01 01:53:26 UTC
From: Bob <rmiller47@satx.rr.com>
Message-ID: <86gl455qdr1mr6gj04r2iv4sdrs54pe7om@4ax.com>
Source record: 14545

On Tue, 30 Jun 2009 07:54:34 -0500, Cecil Moore <nospam@w5dxp.com>
wrote:

>tom wrote:
>> The CC (Crane) Radio is the best I've ever used that
>> has straight AM detection and costs less than $300.
>
>I read rave reviews so I bought one and the display
>failed. I only use the memory channels now. It's
>also not any better than my Yacht Boy 400.

The display in my original CCRadio failed, too -- I sent it back to
the Crane folks and they put in a new display for $25, one that has
much better longevity, they say. Still going strong after several
years.

Bob
k5qwg

734. Re: Newbie Question

Newsgroup: rec.radio.amateur.antenna
Date: 2009-07-01 02:03:25 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <Jtz2m.1405$9E7.50@newsfe20.iad>
Source record: 14546

Bob wrote:
> The display in my original CCRadio failed, too -- I sent it back to
> the Crane folks and they put in a new display for $25, one that has
> much better longevity, they say. Still going strong after several
> years.

Thanks Bob, maybe I should do that.
--
73, Cecil, IEEE, OOTC, http://www.w5dxp.com

735. Re: Newbie Question

Newsgroup: rec.radio.amateur.antenna
Date: 2009-07-01 05:00:31 UTC
From: "Sal M. Onella" <salmonella@food.poisoning.org>
Message-ID: <Q3C2m.4810$ml7.4523@newsfe18.iad>
Source record: 14547

On Jun 29, 4:09 pm, pixel_a_ted <pixel_a_...@yahoo.com>
> Any suggestions for improving AM reception would be greatly
> appreciated.

I have employed a certain technique with success. It takes a longwire antenna, preferably strung high and clear. Bring the free end of the wire into the house and wrap it around the radio about a dozen times and then ground the end. You have wound a crude RF transformer. If you have hum or buzzing, you may be able to cure it by repositioning the longwire.

You might not know how the rod antenna is mounted inside the case; experiment to get the optimum improvement. In a radio with a big case, you can locate the antenna rod with any remote control. Simply hold the remote control at different places around the radio and press a button. Where the remote makes the most noise, that's where the rod is. You can test a remote for dead/alive this way, too.

I have also opened up a radio, wound a small coil (again, just a few turns) around the antenna rod and brought the two ends out of the radio, grounding one and connecting the other to the longwire antenna in para 1.

Properly employed, this absolutely works.

When I was in the Navy on a ship in Pearl Harbor, my longwire antenna was the telephone wiring for the ship. I got a few clicks and pops from dialing pulses, but I also got to listen to AM radio in my bunk. A small cap isolated the phone's DC. On another ship, I had a single piece of hookup wire that ran out on deck through a convenient door near my berthing compartment and I wrapped it around some piping on deck. I was questioned about it a few times, but I got to keep it. (It's good to be the Chief.)

Best ever was my office desk on the aircraft carrier Oriskany. I snaked a coax cable up near the top of the island structure to the antenna patch panel of the meteorologists. I shared their 35' whip through an SRA-12 band-splitting filter. (They never used the BCB outputs, anyway.) I bummed my very own patch cord from the radiomen, coded it with yellow tape and asked the meteorologists if they minded that I added a patch cord to their patch panel. They didn't. (It's good to be the Chief.)

With the weather-guessers' whip, I got KNX-1070, Los Angeles between Hawaii and Guam, about 3700 miles. (Wish I'd sent them a reception report but I didn't; I called the bridge and got our LAT/LONG.)

Sal

736. Crossposting Permitted to rec.radio.amateur.moderated

Newsgroup: rec.radio.amateur.antenna
Date: 2009-07-01 06:00:02 UTC
From: rram@panix.com
Message-ID: <radio/ham-radio/moderated/crossposting-1-1246428001@panix.com>
Source record: 14548
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.dx,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.policy,rec.radio.amateur.space,rec.radio.info

```
Posted-By: auto-faq 3.3.2 beta (PGPMoose V2.0, Perl 5.005)
Archive-name: radio/ham-radio/moderated/crossposting
Revision: 1.1 2009/04/12 19:42:04
Posting-Frequency: posted monthly
URL: http://www.panix.com/~rram/usenet/rram/index.html

Changes followed by "|".

After a 30-day public discussion and feedback period to gauge reader
opinions in March of 2009:

http://groups.google.com/group/rec.radio.amateur.moderated/browse_thread/thread/d7d337db35
f23326

the rec.radio.amateur.moderated Moderation Team has decided to consider
amending its charter, and permit limited simultaneous crossposting to
rec.radio.amateur.moderated and one other unmoderated
amateur-radio-related discussion newsgroup. We are currently trying
this on a temporary basis (90 days, through early July 2009), and adopt
it permanently if successful.

Approved rec.radio.amateur.* newsgroups are those that are currently
listed in the latest version of the "List of Big Eight Newsgroups" which
is crossposted monthly to news.announce.newgroups, news.groups, and
news.lists.misc.

Approved alt.radio.amateur.* and alt.ham-radio.* newsgroups are those
that have been created consistent with the suggestions in "So You Want
to Create an Alt Newsgroup" at:

http://www.faqs.org/faqs/alt-creation-guide/

Approved regional hierarchy newsgroups are those that contain either
"radio.amateur" or "ham-radio" in their names, including
uk.radio.amateur and aus.radio.amateur.misc.

We will make every reasonable effort to keep our list of approved
newsgroups up-to-date. In case we have overlooked any, and a submission
is rejected in error as a result, the rejected submitter can E-mail us
at our administrative contact address (in the signature at the bottom of
this article, and the default Reply-To for the rejection message)
requesting that it be added, and that the article be approved. We may
still choose to reject articles crossposted to any alt.* newsgroup with
an inappropriate name, including obscene language, embedded
name-calling, or encouragement of unlawful conduct.
```

Please direct any comments, questions, or criticisms to
rec-radio-amateur-moderated-request@panix.com.

737. HS-900 Manual

Newsgroup: rec.radio.amateur.antenna
Date: 2009-07-01 12:30:57 UTC
From: Topaz305rk <navajomt@nemont.net>
Message-ID: <adqdnbN6YsWMytbXnZ2dnUVZ_uOdnZ2d@vnet-inc.com>
Source record: 14549

Looking for the manual for a High Sierra HS-900 screwdriver antenna.
It is discontinued, and High Sierra had a computer crash a number of years ago and no longer have any copies.
Anyone have a copy they could copy and email to me?
Anyone want to sell a copy of what they have?
Anyone know anyplace on the internet that has a copy I can download? Have searched with no luck.

Thanks to anyone in advance.

Sam Moore - K7SAM

738. Re: Newbie Question

Newsgroup: rec.radio.amateur.antenna
Date: 2009-07-01 19:37:17 UTC
From: pixel_a_ted <pixel_a_ted@yahoo.com>
Message-ID: <8c50dabb-be34-4dfa-97ef-534097b274a0@d4g2000yqa.googlegroups.com>
Source record: 14550

Thanks all for the comments and suggestions. I appreciate you taking
the time to answer.

739. Re: Newbie Question

Newsgroup: rec.radio.amateur.antenna
Date: 2009-07-02 02:45:21 UTC
From: Dave Heil <k8mn@frontiernet.net>
Message-ID: <4bV2m.2316$IU6.1387@newsfe05.iad>
Source record: 14351

Sal M. Onella wrote:
> On Jun 29, 4:09 pm, pixel_a_ted <pixel_a_...@yahoo.com>
>> Any suggestions for improving AM reception would be greatly
>> appreciated.
> __________
>
> I have employed a certain technique with success. It takes a longwire
> antenna, preferably strung high and clear. Bring the free end of the wire
> into the house and wrap it around the radio about a dozen times and then
> ground the end. You have wound a crude RF transformer. If you have hum or
> buzzing, you may be able to cure it by repositioning the longwire.
>
> You might not know how the rod antenna is mounted inside the case;
> experiment to get the optimum improvement. In a radio with a big case, you
> can locate the antenna rod with any remote control. Simply hold the remote
> control at different places around the radio and press a button. Where the
> remote makes the most noise, that's where the rod is. You can test a remote
> for dead/alive this way, too.
>
> I have also opened up a radio, wound a small coil (again, just a few turns)
> around the antenna rod and brought the two ends out of the radio, grounding
> one and connecting the other to the longwire antenna in para 1.

Even easier is using a flat piece of plastic sheet (from an old bleach bottle or something similar) perhaps 1" x 3 or 4". Wind it full of hookup wire held in place by duct tape. One end of the winding to ground and the other to an end fed wire antenna which is highly unlikely to be a longwire. Tune in a distant Medium Wave signal with the built-in antenna then begin moving the new winding about on the back of the radio's case until the signal peaks up. Either tape it in place or use a couple of pieces of Velcro to attach it to the back of the receiver.

Dave K8MN

740. Noise Immune type of Antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2009-07-02 11:25:37 UTC
From: bpetria@verizon.net
Message-ID: <4a4af60f.7038338@news.verizon.net>
Source record: 14352

Hi,

I like to listen to ham radio HF bands and short wave broadcasts, but
I often have intermittent power line noise. I found a source (power pole,
possibly bad insulator), but when the person from the power company came out
to investigate my complaint, the noise wasn't there (intermittent).

Running a wire antenna perpendicular (not parallel) to power lines is one
way to lower power line noise, but unfortunately, the power lines run North to
South where I live. My wire antenna also runs North to South so it "favors"
East and West, which is what I want.

Can anyone recommend a noise immune type of antenna that is less
sensitive to power line noise?

Thanks in advance, Brad

Before you type your password, credit card number, etc.,
be sure there is no active keystroke logger (spyware) in your PC.

741. Re: Noise Immune type of Antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2009-07-02 12:31:41 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <KM13m.1704$DA1.220@newsfe25.iad>
Source record: 14353

Brad wrote:
> Running a wire antenna perpendicular (not parallel) to power lines is one
> way to lower power line noise ...

Not necessarily. At my previous QTH, the power line
noise was mostly vertically polarized coming from
a 30 foot ground wire running down from a capacitor.
--
73, Cecil, IEEE, OOTC, http://www.w5dxp.com

742. Re: Noise Immune type of Antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2009-07-02 13:33:37 UTC
From: Rich Griffiths <richgrif@one.net>
Message-ID: <o9SdnWsLEuesKtHXnZ2dnUVZ_uCdnZ2d@posted.nuvoxcommunications>
Source record: 14354

On Thu, 02 Jul 2009 11:25:37 +0000, Brad wrote:

> Hi,
>
> I like to listen to ham radio HF bands and short wave broadcasts,
> but
> I often have intermittent power line noise. I found a source (power
> pole, possibly bad insulator), but when the person from the power
> company came out to investigate my complaint, the noise wasn't there
> (intermittent).
>
> Running a wire antenna perpendicular (not parallel) to power lines
> is one
> way to lower power line noise, but unfortunately, the power lines run
> North to South where I live. My wire antenna also runs North to South
> so it "favors" East and West, which is what I want.
>
> Can anyone recommend a noise immune type of antenna that is less
> sensitive to power line noise?
>
> Thanks in advance, Brad
>
> Before you type your password, credit card number, etc.,
> be sure there is no active keystroke logger (spyware) in your PC.

You might get some relief by grounding the antenna for DC. Since you are not using the wire for transmitting (am I reading the above correctly?), you can easily ground the wire using an RF choke or a so-called magnetic balun. Perhaps a 1 mH or so choke from the end of the wire to ground. The balun is basically just a toroid transformer that allows you to isolate the wire from the radio and ground the wire directly.

No guarantee of effectiveness, but either is easy and cheap to do and won't harm the radio.

--
Rich W2RG

743. Re: Noise Immune type of Antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2009-07-02 15:27:03 UTC
From: Ed <Huckleberry_REMOVE_@bigvalley.net>
Message-ID: <Xns9C3C55F82332CHuckleberrybigvalley@198.186.192.196>
Source record: 14355

Since your noise seems to be primarily coming from this single noisy source, you might consider buying one of those noise cancellers such as the MFJ-1026 and learn how to use it. They do work well under such circumstances as you describe.

Better, though, to persist with the power company until they can take care of the problem.

Ed K7AAT

.

744. Re: Noise Immune type of Antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2009-07-02 18:21:43 UTC
From: KD7HB <co_farmer@yahoo.com>
Message-ID: <317bc4dc-244c-4dba-9415-5e2fa93c2e9d@d9g2000prh.googlegroups.com>
Source record: 14356

On Jul 2, 4:25 am, bpet...@verizon.net (Brad) wrote:
> Hi,
>
>   I like to listen to ham radio HF bands and short wave broadcasts, but
> I often have intermittent power line noise. I found a source (power pole,
> possibly bad insulator), but when the person from the power company came out
> to investigate my complaint, the noise wasn't there (intermittent).
>
>   Running a wire antenna perpendicular (not parallel) to power lines is one
> way to lower power line noise, but unfortunately, the power lines run North to
> South where I live.   My wire antenna also runs North to South so it "favors"
> East and West, which is what I want.
>
>   Can anyone recommend a noise immune type of antenna that is less
> sensitive to power line noise?
>
>   Thanks in advance, Brad
>
>   Before you type your password, credit card number, etc.,
> be sure there is no active keystroke logger (spyware) in your PC.

Hi, Brad.
My previous home was adjacent to a primary power distribution line
with three high voltage three phase lines, plus a residential
distribution line. Sometimes noise was fierce. I made a folded dipole
antenna out of 300 ohm TV twin lead, cut for the 75 meter ham band.
When first hooked to a receiver, I thought the receiver had died, but
eventually found a signal and it was working fine. Just no more noise
from the power lines.

If you can find a length of twin lead, try a folded dipole. I
currently use a horizontal loop antenna and it, too, is very low noise
pickup.

Paul, KD7HB

745. Re: Noise Immune type of Antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2009-07-02 18:24:32 UTC
From: No Spam <nospam@nospam.com>
Message-ID: <h2iu10$os9$2@news.albasani.net>
Source record: 14357

On Thu, 02 Jul 2009 11:25:37 +0000, Brad wrote:

> Hi,
>
> I like to listen to ham radio HF bands and short wave broadcasts,
> but
> I often have intermittent power line noise. I found a source (power
> pole, possibly bad insulator), but when the person from the power
> company came out to investigate my complaint, the noise wasn't there
> (intermittent).
>
> Running a wire antenna perpendicular (not parallel) to power lines
> is one
> way to lower power line noise, but unfortunately, the power lines run
> North to South where I live. My wire antenna also runs North to South
> so it "favors" East and West, which is what I want.
>
> Can anyone recommend a noise immune type of antenna that is less
> sensitive to power line noise?
>
> Thanks in advance, Brad

Before I discovered the T2FD, the noise was soo bad that I never pursued my ticket. The T2FD's balanced nature reduced local QRM from S9 to S1.

Some people here will tell you all the problems with this type of antenna but I've had great fun over the last 4 years. I constructed mine from plans off the web but you can purchase these already to fly.

746. Re: Noise Immune type of Antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2009-07-02 21:15:00 UTC
From: Gregor Martin <gregor.martin@kpnplanet.nl>
Message-ID: <4a4d2356$0$20843$703f8584@news.kpn.nl>
Source record: 14358

The T2FD antenna is an option. Google it! Greetz

"Brad" <bpetria@verizon.net> schreef in bericht
news:4a4af60f.7038338@news.verizon.net...
> Hi,
>
> I like to listen to ham radio HF bands and short wave broadcasts, but
> I often have intermittent power line noise. I found a source (power pole,
> possibly bad insulator), but when the person from the power company came
> out
> to investigate my complaint, the noise wasn't there (intermittent).
>
> Running a wire antenna perpendicular (not parallel) to power lines is
> one
> way to lower power line noise, but unfortunately, the power lines run
> North to
> South where I live. My wire antenna also runs North to South so it
> "favors"
> East and West, which is what I want.
>
> Can anyone recommend a noise immune type of antenna that is less
> sensitive to power line noise?
>
> Thanks in advance, Brad
>
> Before you type your password, credit card number, etc.,
> be sure there is no active keystroke logger (spyware) in your PC.
>

747. Re: Newbie Question

Newsgroup: rec.radio.amateur.antenna
Date: 2009-07-03 21:27:35 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <eJu3m.3553$8P7.390@newsfe21.iad>
Source record: 14359

Bob wrote:
> The display in my original CCRadio failed, too -- I sent it back to
> the Crane folks and they put in a new display for $25, one that has
> much better longevity, they say. Still going strong after several
> years.

Out of the blue, I just received this email from C.Crane Co.

"I read online that you have a display problem with your CCRadio. Upon looking into your account I can see it is a CCRadio Plus which is far easier to put our newer display technology into than an original CCRadio. In fact we can do this at no charge. We would only need you to send the radio to us. We take care of shipping the radio back to you. John Wilder, Customer/Product Support, C. Crane Company, Inc."
--
73, Cecil, IEEE, OOTC, http://www.w5dxp.com

748. Re: Newbie Question

Newsgroup: rec.radio.amateur.antenna
Date: 2009-07-04 02:11:21 UTC
From: tom <news4792@taring.org>
Message-ID: <4a4eba47$0$18864$8046368a@newsreader.iphouse.net>
Source record: 14360

Cecil Moore wrote:
> Bob wrote:
>> The display in my original CCRadio failed, too -- I sent it back to
>> the Crane folks and they put in a new display for $25, one that has
>> much better longevity, they say. Still going strong after several
>> years.
>
> Out of the blue, I just received this email from C.Crane Co.
>
> "I read online that you have a display problem with your CCRadio. Upon
> looking into your account I can see it is a CCRadio Plus which is far
> easier to put our newer display technology into than an original
> CCRadio. In fact we can do this at no charge. We would only need you
> to send the radio to us. We take care of shipping the radio back to
> you. John Wilder, Customer/Product Support, C. Crane Company, Inc."

WOW!

Now that's customer support.

I am officially impressed.

tom
K0TAR

749. nike clothing,nike shoes,online store,http://www.maidi2008.net air Jordan Shoes,Nike Air Jordans, Air Force Ones,Retro Air Jordan, Bape Hoodies,Bape shoes-Tencent Traveler|Jordan Shoes,Nike Air Jordans, Air Force Ones,Retro Air Jordan, Bape Hood

Newsgroup: rec.radio.amateur.antenna
Date: 2009-07-04 03:14:41 UTC
From: shenjingbin wuhuem <xiwirmqi@gmail.com>
Message-ID: <4b403a9b-d524-432d-a9d9-fa3b0d911314@v23g2000pro.googlegroups.com>
Source record: 14361

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AIR Jordan Size 15 shoes
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Dunk high cut

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Jordan 5 shoes Nike Air Jordan 6 VI Force 1 Jordan Fusion AJF 6 AJF6
AJ6F Jordan 6 Rings Jordan 6 fusion (paypal payment)(http://
www.maidi2008.net)

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AIR Jordan Large Size Jordan
AIR Jordan Size 14 Jordan
AIR Jordan Size 15 shoes
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Nike air force one, air force 1, air force one low cut, air force one high cut, air force one release date
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750. Re: Noise Immune type of Antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2009-07-04 11:40:58 UTC
From: bpetria@verizon.net
Message-ID: <4a4e121a.9637515@news.verizon.net>
Source record: 14362

Hi Paul,

Thank you for that information.

Also, thanks to everyone.

I found information on the T2FD antenna that was also recommended.

Brad

On Thu, 2 Jul 2009 11:21:43 -0700 (PDT), in rec.radio.amateur.antenna you wrote:

>On Jul 2, 4:25 am, bpet...@verizon.net (Brad) wrote:
>> Hi,
>>
>> I like to listen to ham radio HF bands and short wave broadcasts, but
>> I often have intermittent power line noise. I found a source (power pole,
>> possibly bad insulator), but when the person from the power company came out
>> to investigate my complaint, the noise wasn't there (intermittent).
>>
>> Running a wire antenna perpendicular (not parallel) to power lines is one
>> way to lower power line noise, but unfortunately, the power lines run North to
>> South where I live. My wire antenna also runs North to South so it "favors"
>> East and West, which is what I want.
>>
>> Can anyone recommend a noise immune type of antenna that is less
>> sensitive to power line noise?
>>
>> Thanks in advance, Brad
>>
>> Before you type your password, credit card number, etc.,
>> be sure there is no active keystroke logger (spyware) in your PC.
>
>Hi, Brad.
>My previous home was adjacent to a primary power distribution line
>with three high voltage three phase lines, plus a residential
>distribution line. Sometimes noise was fierce. I made a folded dipole
>antenna out of 300 ohm TV twin lead, cut for the 75 meter ham band.
>When first hooked to a receiver, I thought the receiver had died, but
>eventually found a signal and it was working fine. Just no more noise
>from the power lines.
>
>If you can find a length of twin lead, try a folded dipole. I
>currently use a horizontal loop antenna and it, too, is very low noise

>pickup.
>
>Paul, KD7HB

751. fiberglass Sat boom?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-07-05 01:58:31 UTC
From: ml <m@di.net>
Message-ID: <m-FE13DA.21583104072009@news.optonline.net>
Source record: 14363

hi

Wanted to see what people thing regarding the design of a modest satelite set up hopfully soon to be installed.

I was going to get the Yaesu as/el rotator and a circular pol beam by M2 both for 2m and 430. at a future point i might put a small 1296 ant on it as well.

the 2m/430 beam antennas are around 10ft and mount in the middle.

I have sorta two options for the EL boom.

a) i can use a fiberglass mast

question, how strong are these I was also looking at the M2 one in particular

anyone know of anything better ?

b) how much of a difference signal wise would it make going from the fiberglass to say a regular metal boom (EL)??

C) any special advantage that might be afforded due to the less weight?

thanks and happy 4th

752. nike clothing,nike shoes,online store,http://www.maidi2008.net air Jordan Shoes,Nike Air Jordans, Air Force Ones,Retro Air Jordan, Bape Hoodies,Bape shoes-Tencent Traveler|Jordan Shoes,Nike Air Jordans, Air Force Ones,Retro Air Jordan, Bape Hood

Newsgroup: rec.radio.amateur.antenna
Date: 2009-07-05 12:07:48 UTC
From: eiegneeimqeinq insieineiem <sixneimemrnq@gmail.com>
Message-ID: <943d8d00-bb02-433f-9aeb-9986417a4e58@y4g2000prf.googlegroups.com>
Source record: 14364

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Dunk shoes for woman (paypal payment)(http://www.maidi2008.net)
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Dunk high cut

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www.maidi2008.net)

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(paypal payment)(http://www.maidi2008.net)

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Air force one, air foce one 25TH, af 1, af 1 25TH, Nike air force one new releases, limited version
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Air Jordan 17 XVII Force 1 Jordan Fusions AJF 17 AJF17 AJ17F Jordan
our website : http://www.maidi2008.net

753. Obtaining electromagnetic radiation from accelerating electrons

Newsgroup: rec.radio.amateur.antenna
Date: 2009-07-05 12:24:20 UTC
From: Richard <nearlynews_email@ntlworld.com>
Message-ID: <7bbkckF22jlreU1@mid.individual.net>
Source record: 14365

Is it not true that if I were able to accelerate my cup of coffee at light speeds at a frequency of 14Mhz my cup of coffee would radiate a 14Mhz carrier?

754. Re: Obtaining electromagnetic radiation from accelerating electrons

Newsgroup: rec.radio.amateur.antenna
Date: 2009-07-05 13:46:48 UTC
From: Rich Griffiths <richgrif@one.net>
Message-ID: <K_OdnfXJ4eZVM83XnZ2dnUVZ_uadnZ2d@posted.nuvoxcommunications>
Source record: 14366

On Sun, 05 Jul 2009 13:24:20 +0100, Richard wrote:

> Is it not true that if I were able to accelerate my cup of coffee at
> light speeds

non sequitur. acceleration = rate of change of speed.

> at a frequency of 14Mhz

non sequitur. frequency is not a measure of speed or acceleration.

> my cup of coffee would radiate a 14Mhz carrier?

No.

--
Rich

755. Re: Obtaining electromagnetic radiation from accelerating electrons

Newsgroup: rec.radio.amateur.antenna
Date: 2009-07-05 16:36:38 UTC
From: Jim Lux <jimlux@earthlink.net>
Message-ID: <dc5699a7-d6dd-44be-91c1-58937aefd82e@m3g2000pri.googlegroups.com>
Source record: 14367

On Jul 5, 5:24 am, "Richard" <nearlynews_em...@ntlworld.com> wrote:
> Is it not true that if I were able to accelerate my cup of coffee at light
> speeds at a frequency of 14Mhz my cup of coffee would radiate a 14Mhz
> carrier?

No.
You don't have to go the speed of light . Bigger the acceleration,
bigger the amplitude of the radiated signal.

And, it's the vibrating your cup of coffee back and forth at 14MHz
that would do it.

Another problem.. there's no net charge on your coffee.. so no
radiated field when you move it back and forth.

Consider a balloon which you've charged up by rubbing it on your hair
(or that fuzzy sweater...) If you move it back and forth, and have an
electric field meter some small distance away, you'll see the field
changing. Move the meter farther away, and the field is still
changing, but the amplitude is smaller.

Now look at the time delay between your moving the balloon and when
you see the field change. That delay is the time it takes for the
changed field to "propagate" to the meter.. aka the speed of light.

756. Re: Obtaining electromagnetic radiation from accelerating electrons

Newsgroup: rec.radio.amateur.antenna
Date: 2009-07-05 18:36:44 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <3p64m.39240$IU6.18617@newsfe05.iad>
Source record: 14368

Jim Lux wrote:
> Another problem.. there's no net charge on your coffee.. so no
> radiated field when you move it back and forth.

How many free electrons in coffee? How about salt water?
--
73, Cecil, IEEE, OOTC, http://www.w5dxp.com

757. FS Drake MN-2700 Antenna Tuner

Newsgroup: rec.radio.amateur.antenna
Date: 2009-07-05 22:18:26 UTC
From: Charlie Hugg <k5mbx@sbcglobal.net>
Message-ID: <SE94m.3467$bq1.577@nlpi066.nbdc.sbc.com>
Source record: 14369

FS: Drake MN-2700 Antenna Tuner capable of handling 2000 watts PEP. It covers all ham bands from 160 to 10 meters, including the WARC bands. It has a very accurate built-in SWR and Power Meter. It works great. This is an early production unit and has the gummy paint on the cabinet. The cabinet is in good condition, but would look better if stripped and repainted. The front panel is excellent. I am the second owner of this antenna tuner. This unit comes with the original Drake Instruction Manual and the original letter from Drake to the customer and the Quality Control Record Tag with the Serial Number of the unit and the date Oct 29, 1979. Price is $285 plus shipping. Thanks, Charlie Hugg, K5MBX

758. Re: i am going to put a tv ant on my 100ft tower

Newsgroup: rec.radio.amateur.antenna
Date: 2009-07-06 00:29:52 UTC
From: Bill <bbaka@comcast.net>
Message-ID: <5Ab4m.11177$aX1.2744@nlpi067.nbdc.sbc.com>
Source record: 14370

Sal M. Onella wrote:
> "John Bose" <pirateham4400@webtv.net> wrote in message
> news:12658-4A3CEB63-1266@storefull-3172.bay.webtv.net...
>> i going to expermint with this just to see how many dtv i can dx and fm
>> also not shure what kind of ant i should try i was thinking to yagi ant
>> side by side or the big uhf bay looking type also a channel
>> master amp
>>
>
> If you have the money, a yagi antenna for VHF channels 7 - 13 would be my
> recommendation for TV. There are also FM yagis. I don't beleive any
> so-called "All Channel" antenna will peform as well as an antenna intended
> for a limited band.
>
> UHF TV is tricky and unreliable. About the only thing to recommend it is the
> high gain antennas tou can build on a smaller boom. In my opinion, VHF 7 -
> 13 is a better hunting ground.
>
>
I lived in Chicago in 1962-63 and DX'ed channel 2 in Miami at 5:30 A.M.
in the winter. Sometimes it pays off and sometimes not. That was back in
the days of test signals, many with the Indian, and I took snapshots of
the screen with my camera. No VCR's back then either.
Bill Baka

759. Re: Obtaining electromagnetic radiation from accelerating electrons

Newsgroup: rec.radio.amateur.antenna
Date: 2009-07-06 03:19:54 UTC
From: 'Doc <ltdoc@yahoo.com>
Message-ID: <7535e199-2d46-4405-a62a-9ee1f3f719dc@g31g2000yqc.googlegroups.com>
Source record: 14371

I don't care if it works or not, YOU are the one that's gonna have
to clean up that @#$ coffee mess!
- 'Doc

760. Re: i am going to put a tv ant on my 100ft tower

Newsgroup: rec.radio.amateur.antenna
Date: 2009-07-06 06:45:01 UTC
From: "Sal M. Onella" <salmonella@food.poisoning.org>
Message-ID: <P3h4m.4547$3o6.1645@newsfe24.iad>
Source record: 14372

"Bill" <bbaka@comcast.net> wrote in message
news:5Ab4m.11177$aX1.2744@nlpi067.nbdc.sbc.com...

< snip >

> I lived in Chicago in 1962-63 and DX'ed channel 2 in Miami at 5:30 A.M.
> in the winter. Sometimes it pays off and sometimes not. That was back in
> the days of test signals, many with the Indian, and I took snapshots of
> the screen with my camera. No VCR's back then either.

I never did that well. Late night Buffalo NY received in Norfolk VA was my best (1969). The picture was good enough a bunch of us sat around and watched the movie!

Norfolk was an interesting location -- just a few local stations in those days, so it was good for DX. I was at sea level, but I had a 50-foot mast and no surrounding obstacles.

Channel 5 was funny. With the antenna aimed approx northeast, we got Channel 5 from Washington DC. Then, without changing the channel, we rotated CCW and got Channel 5 in Washington again, but it was Washington, NC, a completely different station.

Sal

761. Re: Obtaining electromagnetic radiation from accelerating electrons

Newsgroup: rec.radio.amateur.antenna
Date: 2009-07-06 08:46:45 UTC
From: Richard <nearlynews_email@ntlworld.com>
Message-ID: <7bdrvnF22ordaU1@mid.individual.net>
Source record: 14373

"Rich Griffiths" <richgrif@one.net> wrote in message
news:K_OdnfXJ4eZVM83XnZ2dnUVZ_uadnZ2d@posted.nuvoxcommunications...
> On Sun, 05 Jul 2009 13:24:20 +0100, Richard wrote:
>
>> Is it not true that if I were able to accelerate my cup of coffee at
>> light speeds
>
> non sequitur. acceleration = rate of change of speed.
>
>> at a frequency of 14Mhz
>
> non sequitur. frequency is not a measure of speed or acceleration.
>
>> my cup of coffee would radiate a 14Mhz carrier?
>
> No.
>
> --
> Rich

If the cup was to move 5 meters left, then 10 meters right, then ten meter
left again that would be one cylcle. There are 14 million cycles in one
second. So, net speed of cup is speed of light.

762. Re: Obtaining electromagnetic radiation from accelerating electrons

Newsgroup: rec.radio.amateur.antenna
Date: 2009-07-06 08:51:12 UTC
From: Richard <nearlynews_email@ntlworld.com>
Message-ID: <7bds88F23ftooU1@mid.individual.net>
Source record: 14374

"Richard" <nearlynews_email@ntlworld.com> wrote in message
news:7bdrvnF22ordaU1@mid.individual.net...
>
> "Rich Griffiths" <richgrif@one.net> wrote in message
> news:K_OdnfXJ4eZVM83XnZ2dnUVZ_uadnZ2d@posted.nuvoxcommunications...
>> On Sun, 05 Jul 2009 13:24:20 +0100, Richard wrote:
>>
>>> Is it not true that if I were able to accelerate my cup of coffee at
>>> light speeds
>>
>> non sequitur. acceleration = rate of change of speed.
>>
>>> at a frequency of 14Mhz
>>
>> non sequitur. frequency is not a measure of speed or acceleration.
>>
>>> my cup of coffee would radiate a 14Mhz carrier?
>>
>> No.
>>
>> --
>> Rich
>
> If the cup was to move 5 meters left, then 10 meters right, then ten meter
> left again that would be one cylcle. There are 14 million cycles in one
> second. So, net speed of cup is speed of light.

Actually the frequency ought to be 15 Mhz.

763. nike clothing,nike shoes,online store,http://www.maidi2008.net air Jordan Shoes,Nike Air Jordans, Air Force Ones,Retro Air Jordan, Bape Hoodies,Bape shoes-Tencent Traveler|Jordan Shoes,Nike Air Jordans, Air Force Ones,Retro Air Jordan, Bape Hood

Newsgroup: rec.radio.amateur.antenna
Date: 2009-07-06 10:56:41 UTC
From: eiemgjqimiqm inxeimeiqmximw <inxiemhrmqmq@gmail.com>
Message-ID: <77c64eb7-4250-4451-b19e-b3cd711086a5@i8g2000pro.googlegroups.com>
Source record: 14375

nike clothing,nike shoes,online store,http://www.maidi2008.net air Jordan Shoes,Nike Air Jordans, Air Force Ones,Retro Air Jordan, Bape Hoodies,Bape shoes-Tencent Traveler|Jordan Shoes,Nike Air Jordans, Air Force Ones,Retro Air Jordan, Bape Hoodies,Bape shoes-Tencent Traveler|Jordan Shoes,Nike Air Jordans, Air Force Ones,Retro Air Jordan, Bape Hoodies,Bape shoes-Tencent Traveler

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woman

Nike sb dunk Nike Dunk High SB nike dunk low premuim sb Nike SB Dunk
High Shimizu
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Dunk shoes for woman (paypal payment)(http://www.maidi2008.net)
Dunk low cut
Dunk high cut

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Jordan 5 shoes Nike Air Jordan 6 VI Force 1 Jordan Fusion AJF 6 AJF6
AJ6F Jordan 6 Rings Jordan 6 fusion (paypal payment)(http://
www.maidi2008.net)

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(paypal payment)(http://www.maidi2008.net)

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Fusion 10 Jordan 11 shoes Nike Air Jordan 12 XII Force 1 Jordan
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(paypal payment)(http://www.maidi2008.net)

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AIR Jordan Size 14 Jordan
AIR Jordan Size 15 shoes
AIR Jordan DMP
Nike air force one, air force 1, air force one low cut, air force one high cut, air force one release date
Air force one, air foce one 25TH, af 1, af 1 25TH, Nike air force one new releases, limited version
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Nike SB Dunk Pro Nike SB Dunk Dunk SB
Nike Dunk shoes
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(paypal payment)(http://www.maidi2008.net)

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(paypal payment)(http://www.maidi2008.net)

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our website : http://www.maidi2008.net

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AIR Jordan Size 15 shoes

AIR Jordan DMP
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Air force one, air foce one 25TH, af 1, af 1 25TH, Nike air force one new releases, limited version
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Nike SB Dunk Pro Nike SB Dunk Dunk SB
Nike Dunk shoes
Dunk shoes for woman (paypal payment)(http://www.maidi2008.net)
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Jordan 5 shoes Nike Air Jordan 6 VI Force 1 Jordan Fusion AJF 6 AJF6 AJ6F Jordan 6 Rings Jordan 6 fusion (paypal payment)(http://www.maidi2008.net)

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AIR Jordan Large Size Jordan
AIR Jordan Size 14 Jordan
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Nike air force one, air force 1, air force one low cut, air force one high cut, air force one release date
Air force one, air foce one 25TH, af 1, af 1 25TH, Nike air force one new releases, limited version
Air Force One (paypal payment)(http://www.maidi2008.net)
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Dunk sb nike sb dunk nike dunk sb dunk sb high dunk sb low dunk sb woman
Nike sb dunk Nike Dunk High SB nike dunk low premuim sb Nike SB Dunk High Shimizu
Nike SB Dunk Pro Nike SB Dunk Dunk SB
Nike Dunk shoes
Dunk shoes for woman (paypal payment)(http://www.maidi2008.net)
Dunk low cut

Dunk high cut

AIR Jordans Fusion 1 Jordan 2 Fusion AIR Jordan 3 Nike Jordan Fusion 4
Jordan 5 shoes Nike Air Jordan 6 VI Force 1 Jordan Fusion AJF 6 AJF6 AJ6F Jordan 6 Rings Jordan 6 fusion (paypal payment)(http://www.maidi2008.net)

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AIR Jordan Fusions 7 NIKE Jordan Fusion 8 AIR Jordans 9 Nikes Jordan Fusion 10 Jordan 11 shoes Nike Air Jordan 12 XII Force 1 Jordan Fusion AJF 12 AJF12 AJ12F Jordans 12 fusions
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NIKE AIR JORDAN FORCE FUSION SHOES AJF 5 V JORDANs 5 FUSION NIKE JORDAN 5 FUSION SHOES AJF5 Nike Air Jordan XXIII 23 Force 1 Jordan Fusion AJF 23 AJF23 AJ23F
(paypal payment)(http://www.maidi2008.net)

Nike Jordans Fusion 23 AIR Jordan 22 Jordan Fusions 21 AIR Jordans Fusion 20 Jordan 19 shoes Air Jordan Force Fusion VIII (8), AJF 8 Nike (paypal payment)(http://www.maidi2008.net)
Air Jordan 17 XVII Force 1 Jordan Fusions AJF 17 AJF17 AJ17F Jordan
our website : http://www.maidi2008.net

764. Re: fiberglass Sat boom?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-07-06 11:21:15 UTC
From: ml <m@di.net>
Message-ID: <m-031448.07211506072009@news.optonline.net>
Source record: 14376

In article <m-FE13DA.21583104072009@news.optonline.net>, ml <m@di.net>
wrote:

> hi
>
> Wanted to see what people thing regarding the design of a modest
> satelite set up hopfully soon to be installed.
>
> I was going to get the Yaesu as/el rotator and a circular pol
> beam by M2 both for 2m and 430. at a future point i might put a
> small 1296 ant on it as well.
>
> the 2m/430 beam antennas are around 10ft and mount in the middle.
>
>
> I have sorta two options for the EL boom.
>
> a) i can use a fiberglass mast
>
> question, how strong are these I was also looking at the M2 one in
> particular
>
> anyone know of anything better ?
>
> b) how much of a difference signal wise would it make going from the
> fiberglass to say a regular metal boom (EL)?? since they are circular pol
i assume a large difference but wonder for sure
>
> C) any special advantage that might be afforded due to the less
> weight?
>
>
>
>
>
>
> thanks and happy 4th

some thoughts would be appreciated

765. rotator side brackets?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-07-06 11:25:06 UTC
From: ml <m@di.net>
Message-ID: <m-CC55F4.07250606072009@news.optonline.net>
Source record: 14377

hi

wondering if anyone knows a place i can get a set of brackets that
will allow a rotator to be mounted to an existing tubular mast.

I won't have a tower, just a mast, remember seeing someplace that
sold a set of brackets that allowed the rotator to site off on the
side on a bracket/shelf and another that held a thrust bearing

so from afar it looked like a mast then another mast to its side

anyone know any company(s) that make these??

thanks

766. Re: Obtaining electromagnetic radiation from accelerating electrons

Newsgroup: rec.radio.amateur.antenna
Date: 2009-07-06 12:46:10 UTC
From: Rich Griffiths <richgrif@one.net>
Message-ID: <1s-dna_rCfqPb8zXnZ2dnUVZ_vZi4p2d@posted.nuvoxcommunications>
Source record: 14378

```
On Mon, 06 Jul 2009 09:51:12 +0100, Richard wrote:

> "Richard" <nearlynews_email@ntlworld.com> wrote in message
> news:7bdrvnF22ordaU1@mid.individual.net...
>>
>> "Rich Griffiths" <richgrif@one.net> wrote in message
>> news:K_OdnfXJ4eZVM83XnZ2dnUVZ_uadnZ2d@posted.nuvoxcommunications...
>>> On Sun, 05 Jul 2009 13:24:20 +0100, Richard wrote:
>>>
>>>> Is it not true that if I were able to accelerate my cup of coffee at
>>>> light speeds
>>>
>>> non sequitur. acceleration = rate of change of speed.
>>>
>>>> at a frequency of 14Mhz
>>>
>>> non sequitur. frequency is not a measure of speed or acceleration.
>>>
>>>> my cup of coffee would radiate a 14Mhz carrier?
>>>
>>> No.
>>>
>>> --
>>> Rich
>>
>> If the cup was to move 5 meters left, then 10 meters right, then ten
>> meter left again that would be one cylcle. There are 14 million cycles
>> in one second. So, net speed of cup is speed of light.
>
> Actually the frequency ought to be 15 Mhz.

Nonetheless, you still have acceleration, speed, and frequency seriously
confused. If you want to do a "thought experiment" (or any experiment,
for that matter), you must formulate it properly if you want to draw
sound conclusions from it.

And the "clarification" about frequency also makes no sense.

Either the cup has infinite acceleration at each end of its motion, or it
accelerates steadily from zero speed to a maximum at the middle and then
decelerates to zero again. The first implies an infinite change in
momentum and kinetic energy. The second implies a speed higher than the
speed of light at the middle of the motion.

You can't postulate conditions that defy the laws of physics and then ask
what physics implies anyway.
```

This is all WAY off topic, so we should end it.

--
73
Rich

767. Re: fiberglass Sat boom?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-07-06 14:20:38 UTC
From: Ralph Mowery <rmowery28146@earthlink.net>
Message-ID: <fI-dnUCmaqNXZMzXnZ2dnUVZ_tudnZ2d@earthlink.com>
Source record: 14379

"ml" <m@di.net> wrote in message
news:m-FE13DA.21583104072009@news.optonline.net...
> hi
>
> Wanted to see what people thing regarding the design of a modest
> satelite set up hopfully soon to be installed.
>
> I was going to get the Yaesu as/el rotator and a circular pol
> beam by M2 both for 2m and 430. at a future point i might put a
> small 1296 ant on it as well.
>
> the 2m/430 beam antennas are around 10ft and mount in the middle.
>
>
> I have sorta two options for the EL boom.
>
> a) i can use a fiberglass mast
>
> question, how strong are these I was also looking at the M2 one in
> particular
>
> anyone know of anything better ?
>
> b) how much of a difference signal wise would it make going from the
> fiberglass to say a regular metal boom (EL)??
>
> C) any special advantage that might be afforded due to the less
> weight?

I used a piece of PVC pipe with a wooden closet pole inside it. It is holding up a KLM 22C and the 435 KLM antennas. The 435 antenna is mounted at the back so the coax comes out the back side and does not get in the antenna patern. I did not go out the back of the 22C 2 meter antenna, but ran it up the boom and out the side. I did turn the antenna so the elements are at a 45 deg angle to the boom so the coax is halfway between the elements. I do not know if that makes any differance or not. I did work Oscar 10 and 13 while they were at the maximum distance running 100 watts on 435 into about 75 feet of the 9913 type coax on both antennas.

If you do not go out the back of the antennas with the coax, I doubt it would make much differance what kind of cross boom is used, especially on two meters if the coax is taped to the cross boom.

I have not used the antennas in a while , but think all the sats are now in a low earth orbit and it should not take too much to work them anyway.

768. 2 baluns on doublet feedline to overcome impedance changes?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-07-06 14:28:33 UTC
From: "bugzilla.97@googlemail.com" <bugzilla.97@googlemail.com>
Message-ID: <e40fe68c-7d4d-4afe-a215-f784dd0d621b@g1g2000yqh.googlegroups.com>
Source record: 14380

hi, everybody;

i am interested in constructing a choke balun for balancing a doublet
75 metres long, centre-fed with 30 metres of ladder line, an l-match
between the rig and the feeder;

i have read around a bit, including roy lewallen's splendid article
below; it seems that a balun maintains balance best when its inductive
reactance outweighs the line impedance by a factor of at least 4;

at about 2 mhz, the impedance at the bottom of my feeder will be high,
resulting in considerable imbalance on the line (more so that the
frequency is low, where the balun's inductive reactance is lower); i
have two questions;

1) would a balun at the antenna end of the line (where the impedance
is much lower) maintain balance in both antenna and line?
2) and then how about another balun at the l-match end of the line,
for frequencies where the antenna-end impedance is high?

your assistance would be appreciated; best wishes

--
http://eznec.com/Amateur/Articles/Baluns.pdf

769. Re: 2 baluns on doublet feedline to overcome impedance changes?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-07-06 14:41:19 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <m2o4m.22671$c82.10906@newsfe08.iad>
Source record: 14381

bugzilla.97@googlemail.com wrote:
> 1) would a balun at the antenna end of the line (where the impedance
> is much lower) maintain balance in both antenna and line?

The antenna is balanced. The feedline is balanced. What you
would need is a BALBAL, not a Balun. I haven't seen any
BALBALs advertised lately.

> 2) and then how about another balun at the l-match end of the line,
> for frequencies where the antenna-end impedance is high?

When I ran into the same problem, I decided to adjust my
ladder-line length per band so the balun would always be
looking into an impedance between 35 ohms and 85 ohms.

http://www.w5dxp.com/notuner.htm

No tuner equals no tuner losses.
--
73, Cecil, IEEE, OOTC, http://www.w5dxp.com

770. Re: Obtaining electromagnetic radiation from accelerating electrons

Newsgroup: rec.radio.amateur.antenna
Date: 2009-07-06 15:22:19 UTC
From: Jim Lux <james.p.lux@jpl.nasa.gov>
Message-ID: <h2t4rchdj1@news.jpl.nasa.gov>
Source record: 14382

Cecil Moore wrote:
> Jim Lux wrote:
>> Another problem.. there's no net charge on your coffee.. so no
>> radiated field when you move it back and forth.
>
> How many free electrons in coffee? How about salt water?

pH = -log hydrogen ion concentration

the pH is about 7, so hydrogen ion concentration is 1E-7. It's
neutral, so there's an equal number of negative ions. How many of them
are free electrons is another question.

But the important thing is that there's an equal number of positive and
negative charges floating around there, so there's zero net charge. An
possible radiated field from a negatively charged electron will be
exactly matched by the opposite field from a positively charged
something else.

771. Ham gear (used) cheap

Newsgroup: rec.radio.amateur.antenna
Date: 2009-07-06 16:22:46 UTC
From: Anon bozo <anon@bozo.to>
Message-ID: <0001HW.C67772E6007F6A94B08A39AF@news.sf.sbcglobal.net>
Source record: 14383
Cross-posted to:
rec.radio.amateur,rec.radio.amateur.antenna,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc

Friend is getting out of amateur:

http://dat7.com/sale/

772. Re: 2 baluns on doublet feedline to overcome impedance changes?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-07-06 16:29:44 UTC
From: "bugzilla.97@googlemail.com" <bugzilla.97@googlemail.com>
Message-ID: <97de6083-22e2-4f3e-9963-a7d158474022@h18g2000yqj.googlegroups.com>
Source record: 14384

On 6 July, 14:41, Cecil Moore <nos...@w5dxp.com> wrote:
> The antenna is balanced. The feedline is balanced. What you
> would need is a BALBAL, not a Balun. I haven't seen any
> BALBALs advertised lately.

one thing i neglected to mention is that the rig is grounded;
according to the roy lewallen document i referred to, the ground
connection causes imbalance, regardless of the ladder line;

> When I ran into the same problem, I decided to adjust my
> ladder-line length per band so the balun would always be
> looking into an impedance between 35 ohms and 85 ohms.
>
> http://www.w5dxp.com/notuner.htm

i used that link in a posting just the other day; i always liked your
design; but i'm not interested in it here;

i'm also aware of the link-coupled transmatch;

73

773. Re: 2 baluns on doublet feedline to overcome impedance changes?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-07-06 16:52:54 UTC
From: "bugzilla.97@googlemail.com" <bugzilla.97@googlemail.com>
Message-ID: <9bd3b02e-2a6c-48d6-992c-254abdc2f598@h31g2000yqd.googlegroups.com>
Source record: 14385

another clarification; my lower-case typing back there caused a
counter-intuitive reproduction of the phrase `L-match'; the match
between the feeder and the rig is an L-match; it does not isolate the
ladder line from earth

774. Re: i am going to put a tv ant on my 100ft tower

Newsgroup: rec.radio.amateur.antenna
Date: 2009-07-06 17:31:31 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <52d455had7pv412lgh29pbptmc4qa8om8p@4ax.com>
Source record: 14386

On Sun, 5 Jul 2009 23:45:01 -0700, "Sal M. Onella"
<salmonella@food.poisoning.org> wrote:

>
>"Bill" <bbaka@comcast.net> wrote in message
>news:5Ab4m.11177$aX1.2744@nlpi067.nbdc.sbc.com...
>
>< snip >
>
>> I lived in Chicago in 1962-63 and DX'ed channel 2 in Miami at 5:30 A.M.
>> in the winter. Sometimes it pays off and sometimes not. That was back in
>> the days of test signals, many with the Indian, and I took snapshots of
>> the screen with my camera. No VCR's back then either.
>
>I never did that well. Late night Buffalo NY received in Norfolk VA was my
>best (1969). The picture was good enough a bunch of us sat around and
>watched the movie!
>
>Norfolk was an interesting location -- just a few local stations in those
>days, so it was good for DX. I was at sea level, but I had a 50-foot mast
>and no surrounding obstacles.
>
>Channel 5 was funny. With the antenna aimed approx northeast, we got
>Channel 5 from Washington DC. Then, without changing the channel, we
>rotated CCW and got Channel 5 in Washington again, but it was Washington,
>NC, a completely different station.
>
>Sal
>

Hi All,

With a small TV antenna from Sears (like Sal, back in the mid 60s), up
5 feet above the roof (split level), on the crest of a hill (6200 feet
in Colorado Springs), I was able to DX Calgary and Edmonton.

73's
Richard Clark, KB7QHC

775. Re: Obtaining electromagnetic radiation from accelerating electrons

Newsgroup: rec.radio.amateur.antenna
Date: 2009-07-06 17:37:56 UTC
From: Rich Griffiths <richgrif@one.net>
Message-ID: <1s-dna7rCfrpq8_XnZ2dnUVZ_vZi4p2d@posted.nuvoxcommunications>
Source record: 14387

On Mon, 06 Jul 2009 08:22:19 -0700, Jim Lux wrote:

> Cecil Moore wrote:
>> Jim Lux wrote:
>>> Another problem.. there's no net charge on your coffee.. so no
>>> radiated field when you move it back and forth.
>>
>> How many free electrons in coffee? How about salt water?
>
> pH = -log hydrogen ion concentration
>
> the pH is about 7, so hydrogen ion concentration is 1E-7. It's
> neutral, so there's an equal number of negative ions. How many of them
> are free electrons is another question.
>
>
> But the important thing is that there's an equal number of positive and
> negative charges floating around there, so there's zero net charge. An
> possible radiated field from a negatively charged electron will be
> exactly matched by the opposite field from a positively charged
> something else.

The pH of water in contact with the atmosphere tends to be about 6.5, due to CO2 dissolving in the water and forming carbonic acid. Other commonly-occurring ions that "match" the H+ are sulfate and nitrate. Of course in salt water, most of the ions are sodium (Na+) and chloride (Cl-). Not many free electrons. The motion of any ions could create electromagnetic radiation, but as you note, the net charge is zero, so no radiation, regardless how the cup is accelerated or what speed it travels at ;-)

--
Rich

776. Re: Obtaining electromagnetic radiation from accelerating electrons

Newsgroup: rec.radio.amateur.antenna
Date: 2009-07-06 18:19:09 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <Cer4m.4587$3o6.1939@newsfe24.iad>
Source record: 14388

Jim Lux wrote:
> But the important thing is that there's an equal number of positive and
> negative charges floating around there, so there's zero net charge. An
> possible radiated field from a negatively charged electron will be
> exactly matched by the opposite field from a positively charged
> something else.

Does that mean a column of salt water could not be
used as an antenna?
--
73, Cecil, IEEE, OOTC, http://www.w5dxp.com

777. Re: 2 baluns on doublet feedline to overcome impedance changes?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-07-06 18:30:33 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <gpr4m.4588$3o6.1031@newsfe24.iad>
Source record: 14389

bugzilla.97@googlemail.com wrote:
> one thing i neglected to mention is that the rig is grounded;
> according to the roy lewallen document i referred to, the ground
> connection causes imbalance, regardless of the ladder line;

A grounded rig doesn't necessarily cause imbalance
in balanced systems. For instance, a primary/secondary
isolated transformer will cancel the common-mode
components at the transformer secondary windings.
(Such a transformer works best when optimized for
a single band.)

> i'm also aware of the link-coupled transmatch;

Unfortunately, the secondary winding in the Johnson
Matchbox is referenced to ground through the loading
capacitors. It appears the Johnson designers didn't
consider common-mode problems.
--
73, Cecil, IEEE, OOTC, http://www.w5dxp.com

778. Re: Obtaining electromagnetic radiation from accelerating electrons

Newsgroup: rec.radio.amateur.antenna
Date: 2009-07-06 19:41:36 UTC
From: Rich Griffiths <richgrif@one.net>
Message-ID: <1s-dnanrCfrtzs_XnZ2dnUVZ_vZi4p2d@posted.nuvoxcommunications>
Source record: 14390

On Mon, 06 Jul 2009 13:19:09 -0500, Cecil Moore wrote:

> Jim Lux wrote:
>> But the important thing is that there's an equal number of positive and
>> negative charges floating around there, so there's zero net charge. An
>> possible radiated field from a negatively charged electron will be
>> exactly matched by the opposite field from a positively charged
>> something else.
>
> Does that mean a column of salt water could not be used as an antenna?

It just means that moving the water back and forth won't cause
radiation. Waves on the surface of the ocean don't make radio signals.
(C'mon, Cecil. You knew the answer to your question, didn't you? ;-))

The column of water will conduct a current, which will radiate, but I
think I'd rather use copper or aluminum :-)

--
Rich

779. Re: Obtaining electromagnetic radiation from accelerating electrons

Newsgroup: rec.radio.amateur.antenna
Date: 2009-07-06 20:39:34 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <dit4m.13758$K24.12995@newsfe19.iad>
Source record: 14391

Rich Griffiths wrote:
> (C'mon, Cecil. You knew the answer to your question, didn't you? ;-))

Actually, I had never thought about it. I assumed that any
conductor would radiate.

I've been working on a particle beam that ionizes 33 feet
of air for use as an efficient mobile antenna on 40m. Have
I been wasting my time?
--
73, Cecil, IEEE, OOTC, http://www.w5dxp.com

780. Re: Obtaining electromagnetic radiation from accelerating electrons

Newsgroup: rec.radio.amateur.antenna
Date: 2009-07-06 21:12:19 UTC
From: Mike Lucas <w5chr@bellsouth.net>
Message-ID: <QDt4m.20187$Xl4.11363@bignews5.bellsouth.net>
Source record: 14392

"Cecil Moore" wrote
>
> I've been working on a particle beam that ionizes 33 feet
> of air for use as an efficient mobile antenna on 40m. Have
> I been wasting my time?

Unless you can stuff that antenna into a container the size
of two shoe-boxes, and achieve a 9 point something dBi
gain on 160M at the same time, yeah, you're wasting time.
Art's already beat you to it. And Art's antenna doesn't
care one never-mind about the phase information in the
standing wave current ;>) good luck in the contest.

Mike W5CHR
Memphis

781. Re: 2 baluns on doublet feedline to overcome impedance changes?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-07-06 21:43:32 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <w-KdnSm5QcCR7c_XnZ2dnUVZ_sGdnZ2d@giganews.com>
Source record: 14393

bugzilla.97@googlemail.com wrote:
> hi, everybody;
>
> i am interested in constructing a choke balun for balancing a doublet
> 75 metres long, centre-fed with 30 metres of ladder line, an l-match
> between the rig and the feeder;
>
> i have read around a bit, including roy lewallen's splendid article
> below; it seems that a balun maintains balance best when its inductive
> reactance outweighs the line impedance by a factor of at least 4;
>
> at about 2 mhz, the impedance at the bottom of my feeder will be high,
> resulting in considerable imbalance on the line (more so that the
> frequency is low, where the balun's inductive reactance is lower); i
> have two questions;
>
> 1) would a balun at the antenna end of the line (where the impedance
> is much lower) maintain balance in both antenna and line?

The impedance seen between the two line conductors isn't what determines how well a balun works. What's important is that the common mode impedance of the balun is at least several times (ideally ten or more times) the common mode impedance seen at the balun insertion point. The latter isn't easy to determine. If the balun has adequate impedance relative to the common mode impedance, it will maintain balance at that point. Basically, if you put the balun at a point where the common mode current is high (which is a point of low common mode impedance), it'll reduce the common mode current at that point to a low value. If there's no substantial current due to mutual coupling (due, for example, to a non-symmetrically placed feedline), this will balance the entire system. If you put it at a point where the common mode current is low, it won't change things much.

If there's common mode current due to coupling, putting a balun at one point will change the current distribution but not necessarily balance the whole system; you can still have common mode current on the feedline but with a different distribution. When that happens, two baluns placed about a quarter wavelength apart will usually disrupt all possible distributions and result in good balance.

But the points of maximum and minimum common mode current will be different for each band, and will depend on the length of the feedline and the total path to the Earth. So there's no single solution that's best for all circumstances. You're usually stuck with trying various combinations until a satisfactory solution is found.

> 2) and then how about another balun at the l-match end of the line,
> for frequencies where the antenna-end impedance is high?

What this will do is assure that you don't have a significant amount of common mode current at the rig, which is a good thing. Putting one at the antenna assures that the antenna legs have equal and opposite currents, which is another good thing. What happens between depends, as I described above, on a number of factors.

Roy Lewallen, W7EL

782. Re: Obtaining electromagnetic radiation from accelerating electrons

Newsgroup: rec.radio.amateur.antenna
Date: 2009-07-06 22:47:53 UTC
From: Rich Griffiths <richgrif@one.net>
Message-ID: <1s-dnajrCfqE4s_XnZ2dnUVZ_vahnZ2d@posted.nuvoxcommunications>
Source record: 14394

On Mon, 06 Jul 2009 15:39:34 -0500, Cecil Moore wrote:

<snip>
>
> I've been working on a particle beam that ionizes 33 feet of air for use
> as an efficient mobile antenna on 40m. Have I been wasting my time?

Wasting your time? Heavens no! That would be WAY cool!

Even if it didn't work as an antenna, think how exciting it would be for
birds, people watching the highway from overpasses, ...

--
Rich

783. nike clothing,nike shoes,online store,http://www.maidi2008.net air Jordan Shoes,Nike Air Jordans, Air Force Ones,Retro Air Jordan, Bape Hoodies,Bape shoes-Tencent Traveler|Jordan Shoes,Nike Air Jordans, Air Force Ones,Retro Air Jordan, Bape Hood

Newsgroup: rec.radio.amateur.antenna
Date: 2009-07-07 02:30:14 UTC
From: wmiemeimqim imrimieimeiem <imwimiemeimeemi@gmail.com>
Message-ID: <818ed4d5-2a8d-43dc-989b-fc2fd8febde5@x6g2000prc.googlegroups.com>
Source record: 14395

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784. Re: i am going to put a tv ant on my 100ft tower

Newsgroup: rec.radio.amateur.antenna
Date: 2009-07-07 04:44:36 UTC
From: "Sal M. Onella" <salmonella@food.poisoning.org>
Message-ID: <VoA4m.17117$Wx7.7290@newsfe04.iad>
Source record: 14396

"Richard Clark" <kb7qhc@comcast.net> wrote in message
news:52d455had7pv412lgh29pbptmc4qa8om8p@4ax.com...

< snip >

> ... 6200 feet in Colorado Springs

Now, THAT'S a tower!

785. Re: Obtaining electromagnetic radiation from accelerating electrons

Newsgroup: rec.radio.amateur.antenna
Date: 2009-07-07 05:08:12 UTC
From: "Sal M. Onella" <salmonella@food.poisoning.org>
Message-ID: <2LA4m.3373$5A4.1982@newsfe14.iad>
Source record: 14397

"Cecil Moore" <nospam@w5dxp.com> wrote in message
news:Cer4m.4587$3o6.1939@newsfe24.iad...
> Jim Lux wrote:
> > But the important thing is that there's an equal number of positive and
> > negative charges floating around there, so there's zero net charge. An
> > possible radiated field from a negatively charged electron will be
> > exactly matched by the opposite field from a positively charged
> > something else.
>
> Does that mean a column of salt water could not be
> used as an antenna?

If a VEE antenna were formed of two hoses, these "elements" could be
partially filled with brine and tuned by draining or adding brine. The
metal fittings on the lower ends of the VEE elements would be the feedpoint.

Reductio ad absurdum

LXXIII,
Sal

786. Seeking New FAQ/Intro Maintainers for rec.radio.amateur.*

Newsgroup: rec.radio.amateur.antenna
Date: 2009-07-07 06:05:01 UTC
From: rram@panix.com
Message-ID: <radio/ham-radio/recruitment-1-1246946700@panix.com>
Source record: 14398
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.dx,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.policy,rec.radio.info

```
Posted-By: auto-faq 3.3.2 beta (PGPMoose V2.0, Perl 5.005)
Archive-name: radio/ham-radio/recruitment
Revision: 1.1 2007/09/29 18:42:47
Posting-Frequency: posted monthly
URL: http://www.faqs.org/faqs/radio/personal-intro/

Changes followed by "|".

The rec.radio.info newsgroup, first established in 1993, has been
recently revived by an active moderation team. We are currently seeking
suitable information, FAQ, and bulletin articles from the entire
rec.radio.* newsgroup hierarchy for simultaneous cross-posting to our
newsgroup.

We are seeking a replacement maintainer for the following information
bulletin formerly posted to rec.radio.amateur.* (and currently archived
at http://www.faqs.org/faqs/radio/personal-intro/ ):

radio/personal-intro
Subject: Guide to the rec.radio Newsgroups
Maintainer: jeffreyh@Hawaii.Edu (Jeffrey Herman)
Last Posted: 9 Nov 2001 06:18:17 GMT
Posting-Frequency: 15th of each month

We are willing to provide any technical support necessary to get this
article updated and automatically posted again at a regular interval.
This would include establishing contact with the original maintainer for
any necessary permissions. We would prefer to seek a new, dedicated
maintainer at this time, rather than start auto-posting the original
article ourselves.

For more information about our newsgroup, see:

http://www.panix.com/~rram/usenet/rri/index.html

Please direct any comments, questions, or criticisms to
rec-radio-info-request@panix.com.
```

787. Re: Obtaining electromagnetic radiation from accelerating electrons

Newsgroup: rec.radio.amateur.antenna
Date: 2009-07-07 23:55:38 UTC
From: Jim Lux <james.p.lux@jpl.nasa.gov>
Message-ID: <h30n9p$7q3$2@news.jpl.nasa.gov>
Source record: 14399

Sal M. Onella wrote:
> "Cecil Moore" <nospam@w5dxp.com> wrote in message
> news:Cer4m.4587$3o6.1939@newsfe24.iad...
>> Jim Lux wrote:
>>> But the important thing is that there's an equal number of positive and
>>> negative charges floating around there, so there's zero net charge. An
>>> possible radiated field from a negatively charged electron will be
>>> exactly matched by the opposite field from a positively charged
>>> something else.
>> Does that mean a column of salt water could not be
>> used as an antenna?
>
> If a VEE antenna were formed of two hoses, these "elements" could be
> partially filled with brine and tuned by draining or adding brine. The
> metal fittings on the lower ends of the VEE elements would be the feedpoint.
>

been done, been patented too, I think.

(conductive liquid as a changeable antenna element)

788. nike clothing,nike shoes,online store,http://www.nbashoe.com air Jordan Shoes,Nike Air Jordans, Air Force Ones,Retro Air Jordan, Bape Hoodies,Bape shoes-Tencent Traveler|Jordan Shoes,Nike Air Jordans, Air Force Ones,Retro Air Jordan, Bape Hoodie

Newsgroup: rec.radio.amateur.antenna
Date: 2009-07-08 01:06:14 UTC
From: wkmiwmgimq imeegimwimw <imwimeniwmwim@gmail.com>
Message-ID: <e05d071b-6269-46d7-a15f-258d5cee3bf7@y28g2000prd.googlegroups.com>
Source record: 14400

nike clothing,nike shoes,online store,http://www.nbashoe.com air
Jordan Shoes,Nike Air Jordans, Air Force Ones,Retro Air Jordan, Bape
Hoodies,Bape shoes-Tencent Traveler|Jordan Shoes,Nike Air Jordans,
Air Force Ones,Retro Air Jordan, Bape Hoodies,Bape shoes-Tencent
Traveler|Jordan Shoes,Nike Air Jordans, Air Force Ones,Retro Air
Jordan, Bape Hoodies,Bape shoes-Tencent Traveler
nike clothing,nike shoes,online store,http://www.nbashoe.com air
Jordan Shoes,Nike Air Jordans, Air Force Ones,Retro Air Jordan, Bape
Hoodies,Bape shoes-Tencent Traveler|Jordan Shoes,Nike Air Jordans,
Air Force Ones,Retro Air Jordan, Bape Hoodies,Bape shoes-Tencent
Traveler|Jordan Shoes,Nike Air Jordans, Air Force Ones,Retro Air
Jordan, Bape Hoodies,Bape shoes-Tencent Traveler
best quality
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AIR Jordan 1 (paypal payment)(http://www.nbashoe.com)
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AIR Jordan Size 14 Jordan
AIR Jordan Size 15 shoes
AIR Jordan DMP
Nike air force one, air force 1, air force one low cut, air force one high cut, air force one release date
Air force one, air foce one 25TH, af 1, af 1 25TH, Nike air force one new releases, limited version
Air Force One (paypal payment)(http://www.nbashoe.com)
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AIR Jordans Fusion 1 Jordan 2 Fusion AIR Jordan 3 Nike Jordan Fusion 4
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Nike air force one, air force 1, air force one low cut, air force one
high cut, air force one release date
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Nike air force one, air force 1, air force one low cut, air force one high cut, air force one release date
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Nike SB Dunk Pro Nike SB Dunk Dunk SB
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Dunk shoes for woman (paypal payment)(http://www.nbashoe.com)
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AIR Jordans Fusion 1 Jordan 2 Fusion AIR Jordan 3 Nike Jordan Fusion
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Jordan 5 shoes Nike Air Jordan 6 VI Force 1 Jordan Fusion AJF 6 AJF6
AJ6F Jordan 6 Rings Jordan 6 fusion (paypal payment)(http://
www.nbashoe.com)

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16 Fusion Jordan 17 shoes Nike Air Jordans 18 XVIII Force 1 Jordan
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(paypal payment)(http://www.nbashoe.com)

AIR Jordan Fusions 7 NIKE Jordan Fusion 8 AIR Jordans 9 Nikes Jordan
Fusion 10 Jordan 11 shoes Nike Air Jordan 12 XII Force 1 Jordan
Fusion AJF 12 AJF12 AJ12F Jordans 12 fusions
(paypal payment)(http://www.nbashoe.com)

NIKE AIR JORDAN FORCE FUSION SHOES AJF 5 V JORDANs 5 FUSION NIKE
JORDAN 5 FUSION SHOES AJF5 Nike Air Jordan XXIII 23 Force 1 Jordan
Fusion AJF 23 AJF23 AJ23F
(paypal payment)(http://www.nbashoe.com)

Nike Jordans Fusion 23 AIR Jordan 22 Jordan Fusions 21 AIR Jordans
Fusion 20 Jordan 19 shoes Air Jordan Force Fusion VIII (8), AJF 8
Nike (paypal payment)(http://www.nbashoe.com)
Air Jordan 17 XVII Force 1 Jordan Fusions AJF 17 AJF17 AJ17F Jordan
our website : http://www.nbashoe.com

789. dogie n8wwm antenna (no ground)

Newsgroup: rec.radio.amateur.antenna
Date: 2009-07-08 02:46:02 UTC
From: KC8QJP <kc8qjp@slather.com>
Message-ID: <4a540873@x-privat.org>
Source record: 14301
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.antenna

anyone ever try the n8wwm dogie design for a no ground plane?

790. get kelp

Newsgroup: rec.radio.amateur.antenna
Date: 2009-07-08 04:02:46 UTC
From: steve the lying ham <stevenrobeson@yahoo.com>
Message-ID: <ii6855l1i41l39ohndjc123sjjm43pkfvd@4ax.com>
Source record: 14302
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.antenna

On Tue, 7 Jul 2009 22:46:02 -0400, "KC8QJP" <kc8qjp@slather.com>
wrote:

>anyone ever try the n8wwm dogie design for a no ground plane?
>
grow up

791. Re: Obtaining electromagnetic radiation from accelerating electrons

Newsgroup: rec.radio.amateur.antenna
Date: 2009-07-08 05:03:49 UTC
From: "Sal M. Onella" <salmonella@food.poisoning.org>
Message-ID: <XMV4m.10430$Il.5718@newsfe16.iad>
Source record: 14303

"Jim Lux" <james.p.lux@jpl.nasa.gov> wrote in message
news:h30n9p$7q3$2@news.jpl.nasa.gov...

< snip

> > If a VEE antenna were formed of two hoses, these "elements" could be
> > partially filled with brine and tuned by draining or adding brine. The
> > metal fittings on the lower ends of the VEE elements would be the
feedpoint.
> >
>
> been done, been patented too, I think.
>
> (conductive liquid as a changeable antenna element)

Aw, phooey! I never get to invent ANYTHING!

792. Re: i am going to put a tv ant on my 100ft tower

Newsgroup: rec.radio.amateur.antenna
Date: 2009-07-08 06:57:20 UTC
From: Bill <bbaka@comcast.net>
Message-ID: <lrX4m.13$Ad2.10@nlpi067.nbdc.sbc.com>
Source record: 14304

Sal M. Onella wrote:
> "Bill" <bbaka@comcast.net> wrote in message
> news:5Ab4m.11177$aX1.2744@nlpi067.nbdc.sbc.com...
>
> < snip >
>
>> I lived in Chicago in 1962-63 and DX'ed channel 2 in Miami at 5:30 A.M.
>> in the winter. Sometimes it pays off and sometimes not. That was back in
>> the days of test signals, many with the Indian, and I took snapshots of
>> the screen with my camera. No VCR's back then either.
>
> I never did that well. Late night Buffalo NY received in Norfolk VA was my
> best (1969). The picture was good enough a bunch of us sat around and
> watched the movie!
>
> Norfolk was an interesting location -- just a few local stations in those
> days, so it was good for DX. I was at sea level, but I had a 50-foot mast
> and no surrounding obstacles.
>
> Channel 5 was funny. With the antenna aimed approx northeast, we got
> Channel 5 from Washington DC. Then, without changing the channel, we
> rotated CCW and got Channel 5 in Washington again, but it was Washington,
> NC, a completely different station.
>
> Sal
>
>
Miami was my best ever. Sometimes I could get WCCO in Minneapolis, Grand
Rapids, Michigan, and a few stations from Iowa. I had the biggest
antenna you could buy with a CDR (real) rotator and a nuvistor amp at
the antenna. Plus a 30' mast on top of the house. A bit over the top for
a 13 year old but it kept me out of trouble and drove my parents nuts to
have the TV turned on at 5:00 A.M. When that was not giving me signals I
went to my room and fired up the Hallicrafters S-108 with a 200' antenna
out to the fence in the back yard. Not ideal but I got the whole world
at one point or another.
I was not your average 13 year old, more like a prototype geek.
Bill Baka

793. Re: i am going to put a tv ant on my 100ft tower

Newsgroup: rec.radio.amateur.antenna
Date: 2009-07-08 07:02:24 UTC
From: Bill <bbaka@comcast.net>
Message-ID: <5wX4m.14$Ad2.10@nlpi067.nbdc.sbc.com>
Source record: 14305

Richard Clark wrote:
> On Sun, 5 Jul 2009 23:45:01 -0700, "Sal M. Onella"
> <salmonella@food.poisoning.org> wrote:
>
>> "Bill" <bbaka@comcast.net> wrote in message
>> news:5Ab4m.11177$aX1.2744@nlpi067.nbdc.sbc.com...
>>
>> < snip >
>>
>>> I lived in Chicago in 1962-63 and DX'ed channel 2 in Miami at 5:30 A.M.
>>> in the winter. Sometimes it pays off and sometimes not. That was back in
>>> the days of test signals, many with the Indian, and I took snapshots of
>>> the screen with my camera. No VCR's back then either.
>> I never did that well. Late night Buffalo NY received in Norfolk VA was my
>> best (1969). The picture was good enough a bunch of us sat around and
>> watched the movie!
>>
>> Norfolk was an interesting location -- just a few local stations in those
>> days, so it was good for DX. I was at sea level, but I had a 50-foot mast
>> and no surrounding obstacles.
>>
>> Channel 5 was funny. With the antenna aimed approx northeast, we got
>> Channel 5 from Washington DC. Then, without changing the channel, we
>> rotated CCW and got Channel 5 in Washington again, but it was Washington,
>> NC, a completely different station.
>>
>> Sal
>>
>
> Hi All,
>
> With a small TV antenna from Sears (like Sal, back in the mid 60s), up
> 5 feet above the roof (split level), on the crest of a hill (6200 feet
> in Colorado Springs), I was able to DX Calgary and Edmonton.
>
> 73's
> Richard Clark, KB7QHC

In California we would call that hill a mountain. DX'ing here is only north and south since I am in the central valley north of Sacramento, but I did sometimes get Reno, Nevada. It only worked up to channel 5 and then 6 and 7 were somewhere higher, then 8 to 13 were too high for any DX'ing stuff. UHF barely even existed back then unless you got a converter box, which I did not.

Now I am back to my Hammarlund HQ-129 and an RME DB-20 tuned pre-amp.
The Hammarlund barely needs it but it does help some for getting C.B. on
the top.

Bill Baka

794. Re: i am going to put a tv ant on my 100ft tower

Newsgroup: rec.radio.amateur.antenna
Date: 2009-07-08 08:00:44 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <RK6dnfhxHfOrz8nXnZ2dnUVZ_tWdnZ2d@giganews.com>
Source record: 14306

Bill wrote:
> Richard Clark wrote:
>>
>> Hi All,
>>
>> With a small TV antenna from Sears (like Sal, back in the mid 60s), up
>> 5 feet above the roof (split level), on the crest of a hill (6200 feet
>> in Colorado Springs), I was able to DX Calgary and Edmonton.
>>
>> 73's
>> Richard Clark, KB7QHC
>
> In California we would call that hill a mountain. . .

Depending on where you are in Colorado Springs, you could be at 6200 feet without being on a hill at all, and it probably wasn't any more than 200 feet high since the lowest point in town is more than 6000 feet above sea level. The propagation wouldn't be any better than on top of that size hill anywhere else. Here in Oregon, a 200 footer is barely a "hill", and certainly not a "mountain".

So if 200 feet is a "mountain" in California, what do you call Whitney and Shasta, and the Sierra?

Roy Lewallen, W7EL
-- who used to live in a valley at 5200 feet above sea level. . .

795. Twin lead versous Ladder LIne:

Newsgroup: rec.radio.amateur.antenna
Date: 2009-07-08 13:52:47 UTC
From: Howard Kowall <hkowall@shaw.ca>
Message-ID: <Xw15m.22627$_S2.10371@newsfe17.iad>
Source record: 14307

Hello to all
Going to build a Mystery Antenna to take to the lake for 2 weeks
http://www.w5gi.com/mysteryantenna.htm
It says to use 300 or 450 ohm window line.What I am asking if there is a real big diff if I use 300 Twin Lead.
I realize that the power handling capacity is reduced,but I will be only running a max of 100w for a short duty cycle(not a big talker).
And I also realize that it is not mechanically as strong.Has anyone have some thoughts on this.
I will be using a manual tuner on this type of antenna.
Thanks to all in advance
Howard
VE4ISP

796. Re: Twin lead versous Ladder LIne:

Newsgroup: rec.radio.amateur.antenna
Date: 2009-07-08 14:57:50 UTC
From: Tim Shoppa <shoppa@trailing-edge.com>
Message-ID: <99824364-3dec-4f49-9948-a1cce202fa5a@h11g2000yqb.googlegroups.com>
Source record: 14308

On Jul 8, 9:52 am, "Howard Kowall" <hkow...@shaw.ca> wrote:
> Hello to all
> Going to build a Mystery Antenna to take to the lake for 2
weekshttp://www.w5gi.com/mysteryantenna.htm
> It says to use 300 or 450 ohm window line.What I am asking if there is a
> real big diff if I use 300 Twin Lead.
> I realize that the power handling capacity is reduced,but I will be only
> running a max of 100w for a short duty cycle(not a big talker).
> And I also realize that it is not mechanically as strong.Has anyone have
> some thoughts on this.
> I will be using a manual tuner on this type of antenna.
> Thanks to all in advance
> Howard
> VE4ISP

TV-type twin lead will in general have markedly worse characteristics
when there's water on the line. 100W won't be a problem until moisture
soaks in.

There are several different types of ham window line with different
gauge conductors and solid vs stranded. Copper-plated-steel window
line like sold by Wireman and others has a handy property: it
remembers that it was originally coiled which can help with stowing it
for portable/occasional use. Handle it wrong and it'll wrap around you
like a cobra :-).

True ladder line (all empty space except for spacer rods) will be
superior to either twinlead or window line.

Any antenna beats no antenna, so don't fret the details too much in an
effort to perfectly clone someone else's setup. Just getting any wire
into the air and loading up into it ought to be the first goal, not
making the pefect clone of someone else's mystery antenna.

Tim.

797. Re: i am going to put a tv ant on my 100ft tower

Newsgroup: rec.radio.amateur.antenna
Date: 2009-07-08 17:05:26 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <kui955d1nbh7vdlbtjdrdv603e42d38das@4ax.com>
Source record: 14309

On Wed, 08 Jul 2009 00:02:24 -0700, Bill <bbaka@comcast.net> wrote:

>> With a small TV antenna from Sears (like Sal, back in the mid 60s), up
>> 5 feet above the roof (split level), on the crest of a hill (6200 feet
>> in Colorado Springs), I was able to DX Calgary and Edmonton.
>
>In California we would call that hill a mountain.

Hi Bill,

No, in Colorado, mountains don't really begin before 8-9,000 feet
(with 100 peaks above 10,000 feet). Last year I was driving through
passes at 11,000 feet.

6200 feet in the Springs is basically out on the prairie on a slight
rise. The antenna thus was only 20 odd feet above average ground, and
that average ground was a slight hill of 300 - 400 feet. I had a
clear view of the front range and Denver's TV antennas were on that 60
to 80 miles north-north-west - probably just line of sight through the
Black Forest given the marginal signal. Denver, the Mile High City,
actually sits in a bowl. The generally lowest point in Colorado (if I
am not mistaken) is out on the SE corner at about 3500 feet where it
is definitely in the great plains (as you would have been for hours
driving to get there).

>DX'ing here is only
>north and south since I am in the central valley north of Sacramento,
>but I did sometimes get Reno, Nevada. It only worked up to channel 5 and
>then 6 and 7 were somewhere higher, then 8 to 13 were too high for any
>DX'ing stuff. UHF barely even existed back then unless you got a
>converter box, which I did not.

The TVDX was during the summer, late afternoon, on the low VHF and
lasted 20 minutes up to 90 minutes - I got to see a full movie out of
Edmonton. On other occasions I would get a long, slow flutter that I
convinced myself was from a freight train tracking along the distant
skyline. Even though the antenna was pointed towards Denver, the
Canadian cities were not particularly at the peak of the lobe.

At one time, I lived within a mile of the blast doors of NORAD in
Cheyenne Mountain. Back then they kept a free fire zone in front of
it - what with the Red Scare and all. Now the slopes are littered
with suburb ranch style homes. I guess many of those occupants are
not Heinlein fans of his "The Moon is a Harsh Mistress." My chemistry
teacher used to cheer us up by saying the Ruskies would probably send
enough missiles to turn Colorado Springs into a plain of glass if

things got bad.

73's
Richard Clark, KB7QHC

798. Looking for Cushcraft Antenna Repair Kit

Newsgroup: rec.radio.amateur.antenna
Date: 2009-07-08 19:15:26 UTC
From: Robert Smits <bob@rsmits.ca>
Message-ID: <5b53398d31e37695454f312741851dcd@grapevine.islandnet.com>
Source record: 14310

Hi, folks.

I'm looking for either an E41 or a GENXHA repair kit to replace an element on a cushcraft 10 el 2 meter beam.

Cushcraft won't sell them to me because I live in Canada, and I can't find any Canadian dealer that stocks any, either.

Anyone know of a dealer that a: stocks parts or will order them and b: may ship them to Canada?

Thanks, Bob VE7HS

--
bob@rsmits.ca

799. Re: Twin lead versous Ladder LIne:

Newsgroup: rec.radio.amateur.antenna
Date: 2009-07-08 21:24:10 UTC
From: Owen Duffy <none@no.where>
Message-ID: <Xns9C434B4E7B9D8nonenowhere@61.9.191.5>
Source record: 14311

"Howard Kowall" <hkowall@shaw.ca> wrote in
news:Xw15m.22627$_S2.10371@newsfe17.iad:

> Hello to all
> Going to build a Mystery Antenna to take to the lake for 2 weeks
> http://www.w5gi.com/mysteryantenna.htm
> It says to use 300 or 450 ohm window line.What I am asking if there is
> a real big diff if I use 300 Twin Lead.

FWIW, W5GI does say on his web page "Window-type 18 gauge 300 ohm ribbon
works best."

> I realize that the power handling capacity is reduced,but I will be
> only running a max of 100w for a short duty cycle(not a big talker).
> And I also realize that it is not mechanically as strong.Has anyone
> have some thoughts on this.

I have written some notes on the "Mystery Antenna" at
http://www.w5gi.com/mysteryantenna.htm .

Owen

800. Re: Twin lead versous Ladder LIne:

Newsgroup: rec.radio.amateur.antenna
Date: 2009-07-08 23:11:26 UTC
From: Jim Lux <james.p.lux@jpl.nasa.gov>
Message-ID: <h3392vbqj2@news.jpl.nasa.gov>
Source record: 14312

```
Owen Duffy wrote:
> "Howard Kowall" <hkowall@shaw.ca> wrote in
> news:Xw15m.22627$_S2.10371@newsfe17.iad:
>
>> Hello to all
>> Going to build a Mystery Antenna to take to the lake for 2 weeks
>> http://www.w5gi.com/mysteryantenna.htm
>> It says to use 300 or 450 ohm window line.What I am asking if there is
>> a real big diff if I use 300 Twin Lead.
>
> FWIW, W5GI does say on his web page "Window-type 18 gauge 300 ohm ribbon
> works best."
>
>> I realize that the power handling capacity is reduced,but I will be
>> only running a max of 100w for a short duty cycle(not a big talker).
>> And I also realize that it is not mechanically as strong.Has anyone
>> have some thoughts on this.
>
> I have written some notes on the "Mystery Antenna" at
> http://www.w5gi.com/mysteryantenna.htm .
>
> Owen
>
>
I assume you meant here:
http://vk1od.net/antenna/W5GI/
```

801. Re: Twin lead versous Ladder LIne:

Newsgroup: rec.radio.amateur.antenna
Date: 2009-07-09 00:38:26 UTC
From: Owen Duffy <none@no.where>
Message-ID: <Xns9C436C3DE9E4Bnonenowhere@61.9.191.5>
Source record: 14313

Jim Lux <james.p.lux@jpl.nasa.gov> wrote in
news:h3392vbqj2@news.jpl.nasa.gov:

> Owen Duffy wrote:
...
>> I have written some notes on the "Mystery Antenna" at
>> http://www.w5gi.com/mysteryantenna.htm .
>>
>> Owen
>>
>>
> I assume you meant here:
> http://vk1od.net/antenna/W5GI/
>

I did too... thanks Jim.

802. Re: i am going to put a tv ant on my 100ft tower

Newsgroup: rec.radio.amateur.antenna
Date: 2009-07-09 01:07:42 UTC
From: Bill <bbaka@comcast.net>
Message-ID: <ypb5m.57$Ad2.22@nlpi067.nbdc.sbc.com>
Source record: 14314

Roy Lewallen wrote:
> Bill wrote:
>> Richard Clark wrote:
>>>
>>> Hi All,
>>>
>>> With a small TV antenna from Sears (like Sal, back in the mid 60s), up
>>> 5 feet above the roof (split level), on the crest of a hill (6200 feet
>>> in Colorado Springs), I was able to DX Calgary and Edmonton.
>>>
>>> 73's
>>> Richard Clark, KB7QHC
>>
>> In California we would call that hill a mountain. . .
>
> Depending on where you are in Colorado Springs, you could be at 6200
> feet without being on a hill at all, and it probably wasn't any more
> than 200 feet high since the lowest point in town is more than 6000 feet
> above sea level. The propagation wouldn't be any better than on top of
> that size hill anywhere else. Here in Oregon, a 200 footer is barely a
> "hill", and certainly not a "mountain".

The weather forecasters seem to call anything over 2,500 feet (In the
mountains) so don't blame me. They are still hills and I have hiked
mount Hood so I know what a real mountain is.
>
> So if 200 feet is a "mountain" in California, what do you call Whitney
> and Shasta, and the Sierra?
>
> Roy Lewallen, W7EL
> -- who used to live in a valley at 5200 feet above sea level. . .
Those I call mountains, too.
Bill Baka

803. Re: i am going to put a tv ant on my 100ft tower

Newsgroup: rec.radio.amateur.antenna
Date: 2009-07-09 01:14:02 UTC
From: Bill <bbaka@comcast.net>
Message-ID: <4Db5m.6127$lv5.3782@flpi149.ffdc.sbc.com>
Source record: 14315

Richard Clark wrote:
> On Wed, 08 Jul 2009 00:02:24 -0700, Bill <bbaka@comcast.net> wrote:
>
>>> With a small TV antenna from Sears (like Sal, back in the mid 60s), up
>>> 5 feet above the roof (split level), on the crest of a hill (6200 feet
>>> in Colorado Springs), I was able to DX Calgary and Edmonton.
>> In California we would call that hill a mountain.
>
> Hi Bill,
>
> No, in Colorado, mountains don't really begin before 8-9,000 feet
> (with 100 peaks above 10,000 feet). Last year I was driving through
> passes at 11,000 feet.

I went through the Eisenhower tunnel but drove to the top at 11,000
something feet and had a blast running around and not getting out of
breath. No smoking has definite pluses.
>
> 6200 feet in the Springs is basically out on the prairie on a slight
> rise. The antenna thus was only 20 odd feet above average ground, and
> that average ground was a slight hill of 300 - 400 feet. I had a
> clear view of the front range and Denver's TV antennas were on that 60
> to 80 miles north-north-west - probably just line of sight through the
> Black Forest given the marginal signal. Denver, the Mile High City,
> actually sits in a bowl. The generally lowest point in Colorado (if I
> am not mistaken) is out on the SE corner at about 3500 feet where it
> is definitely in the great plains (as you would have been for hours
> driving to get there).

I know this but thought the DX'ing would be great to the East but not to
the West.
>
>> DX'ing here is only
>> north and south since I am in the central valley north of Sacramento,
>> but I did sometimes get Reno, Nevada. It only worked up to channel 5 and
>> then 6 and 7 were somewhere higher, then 8 to 13 were too high for any
>> DX'ing stuff. UHF barely even existed back then unless you got a
>> converter box, which I did not.
>
> The TVDX was during the summer, late afternoon, on the low VHF and
> lasted 20 minutes up to 90 minutes - I got to see a full movie out of
> Edmonton. On other occasions I would get a long, slow flutter that I
> convinced myself was from a freight train tracking along the distant
> skyline. Even though the antenna was pointed towards Denver, the
> Canadian cities were not particularly at the peak of the lobe.

>
> At one time, I lived within a mile of the blast doors of NORAD in
> Cheyenne Mountain. Back then they kept a free fire zone in front of
> it - what with the Red Scare and all. Now the slopes are littered
> with suburb ranch style homes. I guess many of those occupants are
> not Heinlein fans of his "The Moon is a Harsh Mistress."

I have read most of Heinlein. My favorite was "Stranger in a Strange Land.".

My chemistry
> teacher used to cheer us up by saying the Ruskies would probably send
> enough missiles to turn Colorado Springs into a plain of glass if
> things got bad.

Technically it could be done but an H bomb and not a bunch of fission
types would do it much better.
>
> 73's
> Richard Clark, KB7QHC

Cheers,
Bill Baka

804. Is there a sort of G5RV dipole.....

Newsgroup: rec.radio.amateur.antenna
Date: 2009-07-09 08:06:46 UTC
From: Claude Frantz <r31dmaeu@unibw.de>
Message-ID: <h348emfai1@news.mixmin.net>
Source record: 14316

Is there a sort of G5RV dipole covering all bands from 80 m to 10 m ?
Any good recommendation is welcome.

73 de Claude

805. Re: ATU: Correct way to specify impedance range

Newsgroup: rec.radio.amateur.antenna
Date: 2009-07-09 08:19:46 UTC
From: Claude Frantz <r31dmaeu@unibw.de>
Message-ID: <h34972fkn1@news.mixmin.net>
Source record: 14317

K7ITM wrote:

> It would be good if they plotted the range on something like a Smith
> chart. It should be done for different frequencies; it's rare indeed
> for a tuner to be able to match the same range of impedances over its
> frequency range. Some tuner topologies even have "holes" in their
> coverage.

Exactly ! You will find here an example:
http://www.darc.de/distrikte/c/09/Claude/Z-Match.pdf

73 de Claude

806. Re: Is there a sort of G5RV dipole.....

Newsgroup: rec.radio.amateur.antenna
Date: 2009-07-09 13:36:12 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <jnm5m.29933$8P7.8627@newsfe21.iad>
Source record: 14318

Claude Frantz wrote:
> Is there a sort of G5RV dipole covering all bands from 80 m to 10 m ?
> Any good recommendation is welcome.

If you are willing to vary the length of the series
matching section, a G5RV will indeed cover all HF
bands. The necessary lengths are on a graph at the
bottom of this web page:

http://www.w5dxp.com/G5RV.HTM

Someone was supposed to author a magazine article
about how to perform the length selection using
relays but I never saw it published.
--
73, Cecil, IEEE, OOTC, http://www.w5dxp.com

807. Re: Is there a sort of G5RV dipole.....

Newsgroup: rec.radio.amateur.antenna
Date: 2009-07-09 13:52:08 UTC
From: F8BOE <f8boe@bluemail.ch>
Message-ID: <4a55f610$0$23516$426a74cc@news.free.fr>
Source record: 14319

Claude Frantz wrote:

> Is there a sort of G5RV dipole covering all bands from 80 m to 10 m ?
> Any good recommendation is welcome.
>
> 73 de Claude

It's called Levy antenna.

808. Canadian Cushcraft

Newsgroup: rec.radio.amateur.antenna
Date: 2009-07-09 14:10:22 UTC
From: Rollie <rollie@iowatelecom.net>
Message-ID: <h34toivnl1@news.netins.net>
Source record: 14320

Canadian Dealers

New Brunswick / Nova Scotia
R&S Electronics Ltd., 306 Prince Albert Road, Dartmouth, NS Canada 82Y IN2

Ontario
Durham Radio - 1380 Hopkins St., Unit 10, Whitby, Ontario, LIN 2C3
905-665-5466
Fax: 905-665-5460
Toll Free: 1-800-426-1688 (orders only)
E-mail: info@durhamradio.com

NTF Communications Inc. - #136, 3132-26 Street N.E., Calgary, Alberta,
Canada TIY 6Z1
403-219-0555
Fax: 403-291-2555
E-mail: sales@ntfc.ca
Website: www.ntfc.ca

Radio World - 4373 Steeles Ave. W North York M3N 1V7 (416-667-1000)

MacFarland Electronics - RR #2 Battersea K0H 1H0 (613-353-2800)

Quebec
Produits Electroniques Elekel - 2575 rue Girard, Trois Rivieres G8Z 2M3
(819-378-5457)

809. Re: Is there a sort of G5RV dipole.....

Newsgroup: rec.radio.amateur.antenna
Date: 2009-07-09 14:21:20 UTC
From: Claude Frantz <r31dmaeu@unibw.de>
Message-ID: <h34ud0$9t4$1@news.mixmin.net>
Source record: 14321

F8BOE wrote:

> It's called Levy antenna.

And double zepp outside of France.

810. Re: Is there a sort of G5RV dipole.....

Newsgroup: rec.radio.amateur.antenna
Date: 2009-07-09 14:23:02 UTC
From: Claude Frantz <r31dmaeu@unibw.de>
Message-ID: <h34ug6$9t4$2@news.mixmin.net>
Source record: 14322

Cecil Moore wrote:

> If you are willing to vary the length of the series
> matching section, a G5RV will indeed cover all HF
> bands. The necessary lengths are on a graph at the
> bottom of this web page:
>
> http://www.w5dxp.com/G5RV.HTM

Thank you Cecil ! In other words, your matching unit with the switchable line segments and with the variable capacitor will do the job. Right ?

811. Re: Is there a sort of G5RV dipole.....

Newsgroup: rec.radio.amateur.antenna
Date: 2009-07-09 15:27:16 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <q%n5m.33820$S16.32414@newsfe23.iad>
Source record: 14323

Claude Frantz wrote:
> Thank you Cecil ! In other words, your matching unit with the switchable
> line segments and with the variable capacitor will do the job. Right ?

Yes, it will *theoretically* do the job. But remember
it must be attached to the feedline at a point 12 feet
from the antenna feedpoint. That probably limits the
device to a relay-driven, waterproof box ~30 feet in
the air. It can be done but there may be a better way.

With my notuner dipole, the ladder-line length selector
can be located at the operating position.

With a G5RV, the ladder-line length selector must be
located 12 feet from the antenna feedpoint.
--
73, Cecil, IEEE, OOTC, http://www.w5dxp.com

812. Re: i am going to put a tv ant on my 100ft tower

Newsgroup: rec.radio.amateur.antenna
Date: 2009-07-09 15:48:02 UTC
From: Jim Lux <james.p.lux@jpl.nasa.gov>
Message-ID: <h353fk$213$1@news.jpl.nasa.gov>
Source record: 14325

Bill wrote:
> Roy Lewallen wrote:
>>
>> So if 200 feet is a "mountain" in California, what do you call Whitney
>> and Shasta, and the Sierra?
>>
>> Roy Lewallen, W7EL
>> -- who used to live in a valley at 5200 feet above sea level. . .
> Those I call mountains, too.
> Bill Baka

In the antenna context, I think one needs to consider HAAT when making the hill/mountain determination.

I would consider Mt. Wilson (about 5000 ft above Los Angeles) a legitimate mountain.

Is a hump at 13500 above a valley at 13200 a mountain, or a local hill?

813. Tracking down power line noise

Newsgroup: rec.radio.amateur.antenna
Date: 2009-07-09 15:58:38 UTC
From: Rick <ricknj10@hotmail.com>
Message-ID: <Oso5m.222$N5.28@nwrddc01.gnilink.net>
Source record: 14324

I have been wrestling with power line noise here for almost a year.
Power company hasn't been very successful in locating it so I started a
coordinated search
on my own. Thinking if I can tell them for certain which poles have the
problem they can confirm and maybe fix.

The noise is a deafening 20 over 9 on 80 meters which makes DXing on 80 and
160 impossible.
The noise can be heard at my QTH as high as 10 and 6 meters but it isn't
troublesome on those bands because it can only be heard at about an S7 level
when the yagi is pointed at 210 degrees.
I thought maybe my means of analysis might be interesting to discuss and
maybe others would have other suggestions.

There are 7000 volt lines running on a highway past my house. Tracking the
source on 80m seems impossible.
I made a 2 ft square loop antenna, which has some directivity but the noise
level using it seems to not change
much as I travel the highway. On 10 meters, using a 4 ft whip on the car,
the noise is also hard to localize but
seems to increase in the vicinity of 1 mile from home. 6 meters using a
whip is similar. I found that if I'm close
enough that the 6 meter signal is around S7 I can switch to 2 meters and
again peak the noise by driving slowly up and down the road.

So using this technique and driving 2 miles in each direction I have managed
to find 2 spots, one on the highway and one on a cross road, each about 1.2
miles from the QTH. I then built a 432 MHz 8 element quagi beam which
enabled me to pinpoint the offending pole at these two locations. (I have
put a LOT of effort into this project !)

At this time I am waiting (hoping) for a return call from the power company
to verify my dicovery.

So my question for the group - Can either of these locations 1.2 miles
distant cause such horrendous noise levels on 80 meters? Is it possible
that a weaker noise source much closer to me is the culprit or are all of
the power line malfunctions detectable on 440 MHz?

Rick K2XT

814. Re: i am going to put a tv ant on my 100ft tower

Newsgroup: rec.radio.amateur.antenna
Date: 2009-07-09 16:24:30 UTC
From: Bill <bbaka@comcast.net>
Message-ID: <2Ro5m.2658$Wj7.676@nlpi065.nbdc.sbc.com>
Source record: 14326

Jim Lux wrote:
> Bill wrote:
>> Roy Lewallen wrote:
>>>
>>> So if 200 feet is a "mountain" in California, what do you call
>>> Whitney and Shasta, and the Sierra?
>>>
>>> Roy Lewallen, W7EL
>>> -- who used to live in a valley at 5200 feet above sea level. . .
>> Those I call mountains, too.
>> Bill Baka
>
>
> In the antenna context, I think one needs to consider HAAT when making
> the hill/mountain determination.
>
> I would consider Mt. Wilson (about 5000 ft above Los Angeles) a
> legitimate mountain.
>
> Is a hump at 13500 above a valley at 13200 a mountain, or a local hill?
>
>
Depends who you talk to. I thought California's definition of mountains
was ridiculous when my parents decided to move here. Maybe just the
highest hill in the bunch. Great place to put an antenna though.

Bill Baka

815. Re: i am going to put a tv ant on my 100ft tower

Newsgroup: rec.radio.amateur.antenna
Date: 2009-07-09 17:08:59 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <qh7c55h6krtt4opi2lsbrshh8o7eeah8ft@4ax.com>
Source record: 14327

On Thu, 09 Jul 2009 08:48:02 -0700, Jim Lux <james.p.lux@jpl.nasa.gov>
wrote:

>Is a hump at 13500 above a valley at 13200 a mountain, or a local hill?

It is a mountain. The valley (more probably a saddle at that
elevation for that shallow a depression) is a feature of the same
mountain.

73's
Richard Clark, KB7QHC

816. Re: Tracking down power line noise

Newsgroup: rec.radio.amateur.antenna
Date: 2009-07-09 17:54:10 UTC
From: Michael Coslo <mjc5@psu.edu>
Message-ID: <h35as3$ig2e$1@tr22n12.aset.psu.edu>
Source record: 14328

Rick wrote:
> I have been wrestling with power line noise here for almost a year.
> Power company hasn't been very successful in locating it so I started a
> coordinated search
> on my own. Thinking if I can tell them for certain which poles have the
> problem they can confirm and maybe fix.
>
> The noise is a deafening 20 over 9 on 80 meters which makes DXing on 80 and
> 160 impossible.
> The noise can be heard at my QTH as high as 10 and 6 meters but it isn't
> troublesome on those bands because it can only be heard at about an S7 level
> when the yagi is pointed at 210 degrees.
> I thought maybe my means of analysis might be interesting to discuss and
> maybe others would have other suggestions.
>
> There are 7000 volt lines running on a highway past my house. Tracking the
> source on 80m seems impossible.
> I made a 2 ft square loop antenna, which has some directivity but the noise
> level using it seems to not change
> much as I travel the highway. On 10 meters, using a 4 ft whip on the car,
> the noise is also hard to localize but
> seems to increase in the vicinity of 1 mile from home. 6 meters using a
> whip is similar. I found that if I'm close
> enough that the 6 meter signal is around S7 I can switch to 2 meters and
> again peak the noise by driving slowly up and down the road.
>
> So using this technique and driving 2 miles in each direction I have managed
> to find 2 spots, one on the highway and one on a cross road, each about 1.2
> miles from the QTH. I then built a 432 MHz 8 element quagi beam which
> enabled me to pinpoint the offending pole at these two locations. (I have
> put a LOT of effort into this project !)
>
> At this time I am waiting (hoping) for a return call from the power company
> to verify my dicovery.
>
> So my question for the group - Can either of these locations 1.2 miles
> distant cause such horrendous noise levels on 80 meters? Is it possible
> that a weaker noise source much closer to me is the culprit or are all of
> the power line malfunctions detectable on 440 MHz?

There was an article in QST (or was it CQ?) about building a ultrasonic
"downconverter" to listen for noise sources. Yup, sound.. Many (most?)
Power pole RFI sources are mechanical in nature, and have an ultrasonic
component.

re the Power company. They might be more cooperative if they knew that you could involve the F.C.C. Especially if you decided to "help" them by finding many more sources of noise.

817. Re: Tracking down power line noise

Newsgroup: rec.radio.amateur.antenna
Date: 2009-07-09 20:19:47 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <c1kc55t9o3jvi39knnevuu208b0pgt7ein@4ax.com>
Source record: 14329

On Thu, 09 Jul 2009 13:54:10 -0400, Michael Coslo <mjc5@psu.edu>
wrote:

>There was an article in QST (or was it CQ?) about building a ultrasonic
>"downconverter" to listen for noise sources. Yup, sound.. Many (most?)
>Power pole RFI sources are mechanical in nature, and have an ultrasonic
>component.

It would seem easier to build a multipole high pass filter (above 200
Hz, say) and feed a many turned loop into it, measure the AC out of
the filter.

73's
Richard Clark, KB7QHC

818. Re: Tracking down power line noise

Newsgroup: rec.radio.amateur.antenna
Date: 2009-07-09 20:53:01 UTC
From: KD7HB <co_farmer@yahoo.com>
Message-ID: <319641a1-55c2-4d3b-a056-1ba2c8ecd573@x5g2000prf.googlegroups.com>
Source record: 14330

> There was an article in QST (or was it CQ?) about building a ultrasonic
> "downconverter" to listen for noise sources. Yup, sound.. Many (most?)
> Power pole RFI sources are mechanical in nature, and have an ultrasonic
> component.
>
> re the Power company. They might be more cooperative if they knew that
> you could involve the F.C.C. Especially if you decided to "help" them by
> finding many more sources of noise.

Yup. Current (July) issue of QST. A kit that looks very interesting.

Paul, KD7HB

819. Re: Tracking down power line noise

Newsgroup: rec.radio.amateur.antenna
Date: 2009-07-09 21:49:47 UTC
From: Owen Duffy <none@no.where>
Message-ID: <Xns9C444FA63BBA5nonenowhere@61.9.191.5>
Source record: 14331

"Rick" <ricknj10@hotmail.com> wrote in
news:Oso5m.222$N5.28@nwrddc01.gnilink.net:

...
> Tracking the source on 80m seems impossible.
> I made a 2 ft square loop antenna, which has some directivity but the
> noise level using it seems to not change
> much as I travel the highway.

If you study the pattern of a small loop antenna, it has a pair of deep nulls. These are the most useful for locating the direction of the source.

The nulls will not be as deep, and not ideally located if the feedline is also part of the antenna, ie if the loop is not well balanced. So much so that common mode current effects may render the antenna fairly useless from a directivity point of view.

You did not mention the measures you took to assure loop balance / insignificant common mode current.

Realise also that you may be trying to locate the cause of the emission, but the loop (properly constructed and used) leads you to the radiation source, and the power lines are very large and very effective antennas. Nevertheless, it should be relatively easy to locate the cause of the emission.

From a practical point of view, I have used a small loop and portable receiver for locating and measuring emissions from BPL over HF, and noise due to fautly transformer bushings, cracked insulators etc. Worked a treat for me. One loop is described at http://www.vk1od.net/antenna/SmallUntunedSquareLoop/index.htm .

Owen

820. Telonic RHO-TECTOR TRB-50 schematic wanted

Newsgroup: rec.radio.amateur.antenna
Date: 2009-07-09 22:35:59 UTC
From: Jeff Liebermann <jeffl@cruzio.com>
Message-ID: <jdrc551ag3lohohjmn7nonao75tdp625nn@4ax.com>
Source record: 14332

I just bought a Telonic RHO-TECTOR TRB-50 return loss bridge off eBay.
It's suitable for swept antenna measurements of 0.5Mhz to 1GHz.
Amazingly, it functions. However, I'm curious as to exactly how it
works and what's inside. Duz anyone have a theory of operation,
schematic, or other useful clues?

The best I have so far is:
<http://www.qsl.net/n9zia/rlb/texscan.png>
which may be the schematic, but I can't tell without tearing it apart
(which with my luck, will probably destroy it). Using my
ohms-guesser, it seems correct.

821. Re: Telonic RHO-TECTOR TRB-50 schematic wanted

Newsgroup: rec.radio.amateur.antenna
Date: 2009-07-09 23:00:01 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <q7tc55t1738fmst3iuihvd4uijtmlempnp@4ax.com>
Source record: 14333

On Thu, 09 Jul 2009 15:35:59 -0700, Jeff Liebermann <jeffl@cruzio.com>
wrote:

>I just bought a Telonic RHO-TECTOR TRB-50 return loss bridge off eBay.
>It's suitable for swept antenna measurements of 0.5Mhz to 1GHz.
>Amazingly, it functions. However, I'm curious as to exactly how it
>works and what's inside. Duz anyone have a theory of operation,
>schematic, or other useful clues?
>
>The best I have so far is:
><http://www.qsl.net/n9zia/rlb/texscan.png>
>which may be the schematic, but I can't tell without tearing it apart
>(which with my luck, will probably destroy it). Using my
>ohms-guesser, it seems correct.

First hit in google:
http://www.premerec.com/stock/k41.html10.html

73's
Richard Clark, KB7QHC

822. Re: Telonic RHO-TECTOR TRB-50 schematic wanted

Newsgroup: rec.radio.amateur.antenna
Date: 2009-07-09 23:14:01 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <v0uc559c48btb6tguf2dnnbnm18mkbqf3e@4ax.com>
Source record: 14334

On Thu, 09 Jul 2009 16:00:01 -0700, Richard Clark <kb7qhc@comcast.net>
wrote:

>First hit in google:

Recent article in the New York Times by Pogue (tech columnist) says
Micro$ofts "Bing" is better than Google. More than 200 blog postings
to the article suggest otherwise. One writer posed that when he
offered both search engines the keywords "lincoln jefferson adams",
that Bing's first match was to Kentucky Fried Chicken.

Another poster observed "everyone googles themself." He did likewise
in both engines and found Bing came up with bunk while google found
him easily.

This can be tested at:
http://bing-vs-google.com
where I put the keywords (no quotes) "Telonic RHO-TECTOR TRB-50 return
loss bridge" into the search line. Bing came back empty.
http://bing-vs-google.com/?q=Telonic+RHO-TECTOR+TRB-50+return+loss+bridge

73's
Richard Clark, KB7QHC

823. Re: Tracking down power line noise

Newsgroup: rec.radio.amateur.antenna
Date: 2009-07-10 00:11:52 UTC
From: Rick <ricknj10@hotmail.com>
Message-ID: <cHv5m.1744$P5.1601@nwrddc02.gnilink.net>
Source record: 14335

"Owen Duffy" wrote >
> ...
>
> If you study the pattern of a small loop antenna, it has a pair of deep
> nulls. These are the most useful for locating the direction of the
> source.
>
A possible explanation for why the 80 meter noise couldn't be nulled is that
at most I
was 100 yards from the line and the noise was radiating from all along the
line. That's what it
seemed to be. On the broadcast band, the loop was easily able to locate the
direction of
the NYC radio stations from here in central NJ so I think the antenna was
doing it's job..

> You did not mention the measures you took to assure loop balance /
> insignificant common mode current.

My loop was a square made out of ribbon cable. 1 foot on a side, 7 turns.
The ends of the multiturn loop were attached to a broadcast variable cap.
One turn of the same ribbon cable was the coupling loop, which I connected
to a 6 ft length of RG58 with a BNC connector. The cap peaked the signal or
noise up
nicely.
>
> Realize also that you may be trying to locate the cause of the emission,
> but the loop (properly constructed and used) leads you to the radiation
> source, and the power lines are very large and very effective antennas.

Understand, that's the conclusion I came to and the reason I switched to
10m-70 cm to
home in on it.

>
> From a practical point of view, I have used a small loop and portable
> receiver
The photo on that web site is essentially what I built, except mine was
multiturn, and had no balun.
I was listening at 2 MHz.

Rick

824. Re: Tracking down power line noise

Newsgroup: rec.radio.amateur.antenna
Date: 2009-07-10 00:36:55 UTC
From: Owen Duffy <none@no.where>
Message-ID: <Xns9C446BFC86309nonenowhere@61.9.191.5>
Source record: 14336

"Rick" <ricknj10@hotmail.com> wrote in
news:cHv5m.1744$P5.1601@nwrddc02.gnilink.net:

...
> The photo on that web site is essentially what I built, except mine
> was multiturn, and had no balun.

What you described is not IMHO a substitute for an effective balun, so you can expect shallower nulls, and a distorted pattern (ie unequal nulls and the nulls not orthogonal to the plane of the loop.

Although the power lines act as a very long antenna, I have had no difficulty locating BPL injection points using the loop nulls. If you stand under the power lines, you won't get a result, you need to move away from them, preferably at least a quarter wave, and not near other conductors (eg metal rainwater plumbing, other overhead metallic services, metal fences, motor vehicles, buildings with sarked walls etc). That is a big ask, but if you do that, and use the nulls, you should readily get a good set (ie reliable, convenrgent) of cross bearings.

Sure you can look for interference at 70cm or at ultrasonic frequencies... but that won't work unless the source is truly wideband. The other thing is that if you make a complaint, demonstrate emissions at 70cm, and they fix them at 70cm, what do you do if they didn't solve your primary problem. I have seen people do that, and the power company at significant expense solved the reported problem, but not he complainants real problem. Further complaints were treated as vexatious... 'quick as we fix one problem, you find another'.

IMHO, better to measure the problem at the primary frequency, report the real problem, not the cause, but the primary impact on yourself. Depending on the jurisdiction, power companies may not be obligated to eliminate the emission, merely to reduce it to comply with some standard, and in that case, absolute measures of field strength may become relevant.

Don't dismiss the loop and receiver, highly likely that if the regulator attend to establish whether there is a case or not, they will *measure* the emission field strength with a calibrated loop and receiver.

Owen

825. Re: Telonic RHO-TECTOR TRB-50 schematic wanted

Newsgroup: rec.radio.amateur.antenna
Date: 2009-07-10 01:49:36 UTC
From: Jeff Liebermann <jeffl@cruzio.com>
Message-ID: <gf5d55ldp2q3quo30q4v5kba5au1ohh4ag@4ax.com>
Source record: 14337

On Thu, 09 Jul 2009 15:35:59 -0700, Jeff Liebermann <jeffl@cruzio.com>
wrote:

>I just bought a Telonic RHO-TECTOR TRB-50 return loss bridge off eBay.
>It's suitable for swept antenna measurements of 0.5Mhz to 1GHz.
>Amazingly, it functions. However, I'm curious as to exactly how it
>works and what's inside. Duz anyone have a theory of operation,
>schematic, or other useful clues?
>
>The best I have so far is:
><http://www.qsl.net/n9zia/rlb/texscan.png>
>which may be the schematic, but I can't tell without tearing it apart
>(which with my luck, will probably destroy it). Using my
>ohms-guesser, it seems correct.

A bit more....

Photo of Texscan RCB-3 inside:
<http://www.qsl.net/n9zia/wireless/rtrn_loss-pics.html>

Photo of Telonic TRB-4 (similar to the TRB-50):
<http://www.mjs-electronics.se/images/Diverse/trb4.jpg>

Telonic is still around, but doesn't have any old info online:
<http://www.telonicberkeley.com>

I tried to find a patent that covers the return loss bridge, but
failed. Plenty of VSWR measuring devices, but nothing that looks like
the TRB-50 or the possible schematic at:
<http://www.qsl.net/n9zia/rlb/texscan.png>

Also, lots of similar devices by Wiltron, Aeroflex(IFR), Eagle, etc,
but no schematics found (yet). Eagle used to have some nifty app
notes on using an RLB on their web pile, but it appears to be trashed:
<http://www.eagle-1st.com>

Drivel: Bing produced fewer results, but far less garbage than
Google. The problem was that most of the hits for both Bing and
Google were various surplus dealers selling MW hardware at exhorbitant
prices.

826. Re: Tracking down power line noise

Newsgroup: rec.radio.amateur.antenna
Date: 2009-07-10 06:37:30 UTC
From: "Sal M. Onella" <salmonella@food.poisoning.org>
Message-ID: <LkB5m.9162$3o6.1254@newsfe24.iad>
Source record: 14338

"Rick" <ricknj10@hotmail.com> wrote in message
news:Oso5m.222$N5.28@nwrddc01.gnilink.net...
> I have been wrestling with power line noise here for almost a year.
> Power company hasn't been very successful in locating it so I started a
> coordinated search.

My local utility has one tech who does power line noise investigations and I'm happy that he solved my problem. He identified three "problem poles" and a week later, the noise was gone.

I can't answer your question about how far power line noise will travel but, since you've put so much effort into this already, this next may be worth doing, too.

One of the tech's tools was an audio detector, which he aimed toward the tops of all the poles on my block. It was a 16-inch clear parabolic reflector with a microphone mounted at the focal point and an amplifier feeding headphones and a meter. The tech was listening for the sound of the offending arc. Never mind the RF -- find the faint sizzling noise by ear!!

For a small fortune, these guys will sell you one: http://www.paradish.com/

You could definitely make one. This article http://www.solorb.com/elect/misc/bige/ illustrates the idea (from a Google search of <"big ear" microphone>) and it looks like he used an old wok. (Are woks parabolic.)

So, if you want to impress the power company ...

Sal

827. Re: Tracking down power line noise

Newsgroup: rec.radio.amateur.antenna
Date: 2009-07-10 09:24:23 UTC
From: Peter <colleenpeter@westnet.com.au>
Message-ID: <0fydnbeiQqdYlcrXnZ2dnUVZ8nCdnZ2d@westnet.com.au>
Source record: 14339

"Michael Coslo" <mjc5@psu.edu> wrote in message
news:h35as3$ig2e$1@tr22n12.aset.psu.edu...
> Rick wrote:
>> I have been wrestling with power line noise here for almost a year.
>> Power company hasn't been very successful in locating it so I started a
>> coordinated search
>> on my own. Thinking if I can tell them for certain which poles have the
>> problem they can confirm and maybe fix.
>>
>> The noise is a deafening 20 over 9 on 80 meters which makes DXing on 80
>> and 160 impossible.
>> The noise can be heard at my QTH as high as 10 and 6 meters but it isn't
>> troublesome on those bands because it can only be heard at about an S7
>> level when the yagi is pointed at 210 degrees.
>> I thought maybe my means of analysis might be interesting to discuss and
>> maybe others would have other suggestions.
>>
>> There are 7000 volt lines running on a highway past my house. Tracking
>> the source on 80m seems impossible.
>> I made a 2 ft square loop antenna, which has some directivity but the
>> noise level using it seems to not change
>> much as I travel the highway. On 10 meters, using a 4 ft whip on the
>> car, the noise is also hard to localize but
>> seems to increase in the vicinity of 1 mile from home. 6 meters using a
>> whip is similar. I found that if I'm close
>> enough that the 6 meter signal is around S7 I can switch to 2 meters and
>> again peak the noise by driving slowly up and down the road.
>>
>> So using this technique and driving 2 miles in each direction I have
>> managed to find 2 spots, one on the highway and one on a cross road, each
>> about 1.2 miles from the QTH. I then built a 432 MHz 8 element quagi
>> beam which enabled me to pinpoint the offending pole at these two
>> locations. (I have put a LOT of effort into this project !)
>>
>> At this time I am waiting (hoping) for a return call from the power
>> company to verify my dicovery.
>>
>> So my question for the group - Can either of these locations 1.2 miles
>> distant cause such horrendous noise levels on 80 meters? Is it possible
>> that a weaker noise source much closer to me is the culprit or are all of
>> the power line malfunctions detectable on 440 MHz?
>
> There was an article in QST (or was it CQ?) about building a ultrasonic
> "downconverter" to listen for noise sources. Yup, sound.. Many (most?)

> Power pole RFI sources are mechanical in nature, and have an ultrasonic
> component.
>
> re the Power company. They might be more cooperative if they knew that you
> could involve the F.C.C. Especially if you decided to "help" them by
> finding many more sources of noise.

Agree with last posting regarding an ultrasonic receiver, that is most likely what the power company was using. Other equipment for locating powerline noise is a VHF AM receiver and foxhunting type yagi, the signal will be much weaker at VHF which should make the source more obvious when found.
A common feature of powerline noise is that it is intermittent and may disappear for days and vary in intensity from one hour or day too the next. Power line noise is often the result of loose hardware and dirty insulators with the noise being generated by small spark gaps between fittings. Therefore a bit of rain the dry gaps become conductive of the leakage current and the noise disappears. I mention this because if the noise is continuous and un-varying it may not be generated by the powerline equipment, but may be generated from another source and simply travelling and radiating from the powerline. R.F. welding for example.
Power companies or the F.C.C. may have an information brochures for TVI complaints which may show examples of various source types as they appear on TV screens, this may assist in identifying the interferance source.
That shows my age, 'brochures' check their website! And this will not work for digital TV.

If the F.C.C. is anything like Australian authorities TVI will carry more weight than ham radio, therefore if you also have an accompanying TVI problem report that for prompt action.

Best of luck

Peter VK6YSF

http://members.optushome.com.au/vk6ysf/vk6ysf/main.htm

828. nike clothing,nike shoes,online store,http://www.nbashoe.com air Jordan Shoes,Nike Air Jordans, Air Force Ones,Retro Air Jordan, Bape Hoodies,Bape shoes-Tencent Traveler|Jordan Shoes,Nike Air Jordans, Air Force Ones,Retro Air Jordan, Bape Hoodie

Newsgroup: rec.radio.amateur.antenna
Date: 2009-07-10 11:17:22 UTC
From: wxowmgiemeime inxiwngemiemrimeiem <ixnwigmeengimwnem@gmail.com>
Message-ID: <d5175ff2-3719-40f3-bbf8-8d37cdbc506b@f30g2000vbf.googlegroups.com>
Source record: 14340

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AIR Jordan Size 15 shoes
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Nike Dunk shoes
Dunk shoes for woman (paypal payment)(http://www.nbashoe.com)
Dunk low cut
Dunk high cut

AIR Jordans Fusion 1 Jordan 2 Fusion AIR Jordan 3 Nike Jordan Fusion 4
Jordan 5 shoes Nike Air Jordan 6 VI Force 1 Jordan Fusion AJF 6 AJF6 AJ6F Jordan 6 Rings Jordan 6 fusion (paypal payment)(http://www.nbashoe.com)

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(paypal payment)(http://www.nbashoe.com)

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AIR Jordan 21.5
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AIR Jordan Size 14 Jordan
AIR Jordan Size 15 shoes
AIR Jordan DMP
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Jordan 5 shoes Nike Air Jordan 6 VI Force 1 Jordan Fusion AJF 6 AJF6
AJ6F Jordan 6 Rings Jordan 6 fusion (paypal payment)(http://
www.nbashoe.com)

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829. Re: Tracking down power line noise

Newsgroup: rec.radio.amateur.antenna
Date: 2009-07-10 13:44:47 UTC
From: Rick <ricknj10@hotmail.com>
Message-ID: <jBH5m.406$N5.43@nwrddc01.gnilink.net>
Source record: 14341

Owen,
You bring up some very interesting points, precisely what I was asking for in my original post.
Thank you very much for your assistance.
My theory right now is this:

I have found 2 noisy poles using 440 MHz, both 1.2 miles from me. I HOPED that they would solve my 80 meter problem, once repaired.
As I go lower in frequency, down to 10 meters using vertical whips, I confirm that the noise can be heard farther away, as much as about 1/2 mile on 10 meters.
I am assuming that the 2 MHz component of the broadband noise is being conducted on the lines with very little attenuation for the 1.2 miles to my house where it is 20 over 9 on a Beverage parallel to the lines.
Using my loop at 2 MHz I am essentially unable to get any bearing because the source is essentially a couple miles in length. ???????? And I can't get any significant distance away from the power lines. (One place on my property is 200 yards from the lines but the loop can't determine a null. Yet it does fine with locating BCB stations, so I think it should be usable if the noise was a point source).

> Although the power lines act as a very long antenna, I have had no
> difficulty locating BPL injection points using the loop nulls.
What frequency do you look at for BPL? upper HF (10-20 MHz, where it looks more like a point source?)

> If you stand under the power lines, you won't get a result, you need to
> move
> away from them, you should readily get a good set (ie reliable,
> convenrgent) of cross bearings.

I am failing at that so far, see above.

>
> Sure you can look for interference at 70cm or at ultrasonic
> frequencies... but that won't work unless the source is truly wideband.

This statement puzzles me. Can you please explain more? Can it be that the poles which clearly
show lots of noise at 440 are NOT the ones causing my problem at 80 meters? i.e. can there be defects which generate noise peaking at LF and not detectable on 440?

> The other thing is that if you make a complaint, demonstrate emissions at
> 70cm, and they fix them at 70cm, what do you do if they didn't solve your
> primary problem.

That would be my worst nightmare. That's why I am looking for a better understanding as I asked above.

>
> IMHO, better to measure the problem at the primary frequency, report the
> real problem, not the cause, but the primary impact on yourself.

I did that, starting 11 months ago. I played dumb, just said here's my problem.
The power company guy who has been trying to help me has a wideband spectrum analyzer, and uses a 300 MHz-1GHz LP antenna, hand held. For low frequencies just a pull-out whip. He prefers to use his hand held ultrasonic device with headphones, probably because he has had good success with it. He let me experience it once and it definitely can hear a problem on a pole. So I'd say right now he has the best capabilities at ultrasonic, and I do at UHF (with my 8 element Quagi and sensitive receiver), and neither of us does at low HF.

Rick

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Newsgroup: rec.radio.amateur.antenna
Date: 2009-07-10 14:02:45 UTC
From: djfkdjkjdk djkfjjklwkj <jdkfj.juwoudj@gmail.com>
Message-ID: <90b1492f-004b-49d4-ab0f-2002ad29ee12@f30g2000vbf.googlegroups.com>
Source record: 14342

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831. Re: Tracking down power line noise

Newsgroup: rec.radio.amateur.antenna
Date: 2009-07-10 14:39:46 UTC
From: Michael Coslo <mjc5@psu.edu>
Message-ID: <h37jrk$n03m$1@tr22n12.aset.psu.edu>
Source record: 14343

Sal M. Onella wrote:
> "Rick" <ricknj10@hotmail.com> wrote in message
> news:Oso5m.222$N5.28@nwrddc01.gnilink.net...
>> I have been wrestling with power line noise here for almost a year.
>> Power company hasn't been very successful in locating it so I started a
>> coordinated search.
>
>
> My local utility has one tech who does power line noise investigations and
> I'm happy that he solved my problem. He identified three "problem poles"
> and a week later, the noise was gone.
>
> I can't answer your question about how far power line noise will travel but,
> since you've put so much effort into this already, this next may be worth
> doing, too.
>
> One of the tech's tools was an audio detector, which he aimed toward the
> tops of all the poles on my block. It was a 16-inch clear parabolic
> reflector with a microphone mounted at the focal point and an amplifier
> feeding headphones and a meter. The tech was listening for the sound of the
> offending arc. Never mind the RF -- find the faint sizzling noise by ear!!

You got it.

> For a small fortune, these guys will sell you one: http://www.paradish.com/
>
> You could definitely make one. This article
> http://www.solorb.com/elect/misc/bige/ illustrates the idea (from a Google
> search of <"big ear" microphone>) and it looks like he used an old wok.
> (Are woks parabolic.)

The old style cheap woks are parabolic. The newer ones which have a flat
bottom are not. I have a 24 inch Al parabolic dish. It isn't very
stealthy, but it's lighter and bigger than the woks.

There are some nice features about hunting down RFI problems with sound.
That parabolic reflector can be aimed right at the pole, and in
combination with the short wavelength esp at ultrasonic frequencies will
let you zoom in on the problem pretty quickly. Trying to close up DF
with HF is like trying to change directions on a cruise ship.

> So, if you want to impress the power company ...

If you are doing it near your own house, DO check in with the neighbors
telling them that you are locating the source of noise, and it might
eliminate any interference they might be getting now.

- 73 de Mike N3LI -

832. Re: Tracking down power line noise

Newsgroup: rec.radio.amateur.antenna
Date: 2009-07-10 18:33:57 UTC
From: Michael Coslo <mjc5@psu.edu>
Message-ID: <h381in$ec5i$1@tr22n12.aset.psu.edu>
Source record: 14344

Rick wrote:
> Owen,
> You bring up some very interesting points, precisely what I was asking for
> in my original post.
> Thank you very much for your assistance.
> My theory right now is this:
>
> I have found 2 noisy poles using 440 MHz, both 1.2 miles from me. I HOPED
> that they would solve my 80 meter problem, once repaired.
> As I go lower in frequency, down to 10 meters using vertical whips, I
> confirm that the noise can be heard farther away, as much as about 1/2 mile
> on 10 meters.
> I am assuming that the 2 MHz component of the broadband noise is being
> conducted on the lines with very little attenuation for the 1.2 miles to my
> house where it is 20 over 9 on a Beverage parallel to the lines.
> Using my loop at 2 MHz I am essentially unable to get any bearing because
> the source is essentially a couple miles in length. ???????? And I can't
> get any significant distance away from the power lines. (One place on my
> property is 200 yards from the lines but the loop can't determine a null.
> Yet it does fine with locating BCB stations, so I think it should be usable
> if the noise was a point source).
>
>> Although the power lines act as a very long antenna, I have had no
>> difficulty locating BPL injection points using the loop nulls.
> What frequency do you look at for BPL? upper HF (10-20 MHz, where it looks
> more like a point source?)
>
>
>> If you stand under the power lines, you won't get a result, you need to
>> move
>> away from them, you should readily get a good set (ie reliable,
>> convenrgent) of cross bearings.
>
> I am failing at that so far, see above.
>
>> Sure you can look for interference at 70cm or at ultrasonic
>> frequencies... but that won't work unless the source is truly wideband.
>
> This statement puzzles me. Can you please explain more? Can it be that the
> poles which clearly
> show lots of noise at 440 are NOT the ones causing my problem at 80 meters?
> i.e. can there be defects which generate noise peaking at LF and not
> detectable on 440?

Absolutely. The closest analogy I can think of is RFI in a vehicle. I had rfi sources in my vehicle that were bad on 80, and not heard on other bands, and vice versa. Some sources are broadband, some are not.

>> The other thing is that if you make a complaint, demonstrate emissions at
>> 70cm, and they fix them at 70cm, what do you do if they didn't solve your
>> primary problem.
>
> That would be my worst nightmare. That's why I am looking for a better
> understanding as I asked above.

1. Locate what you think is the problem via the method of your choice (though I would suggest multiple verifications. I thiink that is the key to isolation of your noise source.

2. Determine that the problem is also on 80 meters. You might use a radio with a poor antenna. Work your wy towards and away from the suspected source.

3. Realize that if you go looking for RFI sources, you will find more than one. Likely you'll find many.

If you have 30 over 9 RFI on 80 meters, I would not suspect the source to be very far away. I'd expect it to be much closer. It might even be a non-power line source, if you can't locate it on the lines.

>> IMHO, better to measure the problem at the primary frequency, report the
>> real problem, not the cause, but the primary impact on yourself.
>
> I did that, starting 11 months ago. I played dumb, just said here's my
> problem.
> The power company guy who has been trying to help me has a wideband spectrum
> analyzer, and uses a 300 MHz-1GHz LP antenna, hand held. For low
> frequencies just a pull-out whip. He prefers to use his hand held
> ultrasonic device with headphones, probably because he has had good success
> with it.

I don't doubt it, If I fire up my Spectrum analyzer at home, there's a cacophony of signals to look at. The best way to find RFI is if there are harmonics of the signal.

He let me experience it once and it definitely can hear a problem
> on a pole. So I'd say right now he has the best capabilities at ultrasonic,
> and I do at UHF (with my 8 element Quagi and sensitive receiver), and
> neither of us does at low HF.

And there is a clue in that, Rick - I think. There is a possibility that the noise is local. Does anyone have a fence charger, golf cart battery charger, treadmill, CO2 detector, even possibly a wall wart that might be making strong local noises? Can you run your rig on 12 volts and turn off the power at the breaker box? Can you get the neighbors to do the same?

note: saying that you heard the electrical noise, and a little chat about how if there is electrical noise coming from their house, and it

might just pose fire danger might just convince them to help.

If the power goes off, and so does the noise, you've traced it down to a lot smaller area.

You may have tried this already, but those levels are just so high that I have to wonder.

- 73 de Mike N3LI -

833. Re: Tracking down power line noise

Newsgroup: rec.radio.amateur.antenna
Date: 2009-07-10 19:00:09 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <bl3f55hmk5ud3el7c2774uole8c72q21pe@4ax.com>
Source record: 14345

On Fri, 10 Jul 2009 14:33:57 -0400, Michael Coslo <mjc5@psu.edu>
wrote:

>Some sources are broadband, some are not.

It is quite often related to the pulse width and the pulse shape
coming from the source. Some shapes offer odd harmonics 3-5-7-9, some
even 2-4-6-8 (primary products, that is, as they all offer a full
complement of odd and even).

73's
Richard Clark, KB7QHC

834. Re: Tracking down power line noise

Newsgroup: rec.radio.amateur.antenna
Date: 2009-07-10 23:29:20 UTC
From: Owen Duffy <none@no.where>
Message-ID: <Xns9C456086CF01Cnonenowhere@61.9.191.5>
Source record: 14346

"Rick" <ricknj10@hotmail.com> wrote in
news:jBH5m.406$N5.43@nwrddc01.gnilink.net:

> Owen,
> You bring up some very interesting points, precisely what I was asking
> for in my original post.
> Thank you very much for your assistance.
> My theory right now is this:
>
> I have found 2 noisy poles using 440 MHz, both 1.2 miles from me. I
> HOPED that they would solve my 80 meter problem, once repaired.
> As I go lower in frequency, down to 10 meters using vertical whips, I
> confirm that the noise can be heard farther away, as much as about 1/2
> mile on 10 meters.

I am not surprised. The directivity of the 'antenna' varies with
frequency, as may be the power radiated.

Trial BPL emissions that I measured could be heard above the noise on 40m
in a mobile station more than 1km from the trial area. Remember that this
was an emission that its promoters (including the FCC) asserted would not
cause interference.

> I am assuming that the 2 MHz component of the broadband noise is being
> conducted on the lines with very little attenuation for the 1.2 miles
> to my house where it is 20 over 9 on a Beverage parallel to the lines.

That antenna configuration maximises coupling to the currents flowing on
the power lines.

> Using my loop at 2 MHz I am essentially unable to get any bearing
> because the source is essentially a couple miles in length. ????????
> And I can't get any significant distance away from the power lines.
> (One place on my property is 200 yards from the lines but the loop
> can't determine a null. Yet it does fine with locating BCB stations,
> so I think it should be usable if the noise was a point source).

But you are not limited to taking bearings from on your own property.

I will say again, if you are close to the power lines, eg within say, a
quarter wave, the loop mutual coupling with the power lines will reduce
its effectiveness for obtaining a valid bearing.

>
>> Although the power lines act as a very long antenna, I have had no
>> difficulty locating BPL injection points using the loop nulls.
> What frequency do you look at for BPL? upper HF (10-20 MHz, where it

> looks more like a point source?)
>
>
>> If you stand under the power lines, you won't get a result, you need
>> to move
>> away from them, you should readily get a good set (ie reliable,
>> convenrgent) of cross bearings.

I can say that again!

>
> I am failing at that so far, see above.
>
>>
>> Sure you can look for interference at 70cm or at ultrasonic
>> frequencies... but that won't work unless the source is truly
>> wideband.
>
> This statement puzzles me. Can you please explain more? Can it be
> that the poles which clearly
> show lots of noise at 440 are NOT the ones causing my problem at 80
> meters? i.e. can there be defects which generate noise peaking at LF
> and not detectable on 440?

It is not just a matter of whether a fault (eg a leaking bushing) creates
emission of constant power density from DC to daylight, the lines,
earthing system etc all introduce frequency effects on amplitude. You
could easily discover a relatively noise fault on 440 that is not the
root cause of high 1.8MHz emissions at your location.

My advice is that if you sense emissions at some secondary frequency,
always relate it back to the primary problem. It is OK if the power
company wants to locate faulty insulators with an ultasonic detector, or
a UHF detector, but when they have 'repaired' the fault, the valid test
of whether *your* problem is fixed is measurement or observation at the
frequency at which you suffered interference.

It is just a matter of logic.

For example, if you report a problem on 1.8MHz, and the power company
attends. They report that they found 3 faulty insulators and 1 case of
loose hardware using their ultrasonic detector and sledge hammer and
fixed them. Your problem must now be solved.

No, your problem is only solved when the interference at 1.8MHz has gone
away, it doesn't matter how many other faults they found and fixed while
investigating, until they fix the one(s) that cause your problem, the
problem is resolved.

>
>> The other thing is that if you make a complaint, demonstrate
>> emissions at 70cm, and they fix them at 70cm, what do you do if they
>> didn't solve your primary problem.

>
> That would be my worst nightmare. That's why I am looking for a better
> understanding as I asked above.
>
>>
>> IMHO, better to measure the problem at the primary frequency, report
>> the real problem, not the cause, but the primary impact on yourself.
>
> I did that, starting 11 months ago. I played dumb, just said here's
> my problem.
> The power company guy who has been trying to help me has a wideband
> spectrum analyzer, and uses a 300 MHz-1GHz LP antenna, hand held. For
> low frequencies just a pull-out whip. He prefers to use his hand held
> ultrasonic device with headphones, probably because he has had good
> success with it. He let me experience it once and it definitely can

Ok, they are all techniques for finding faulty equipment... but if they don't measure the emissions at your place before and after, they have not proven that the faults found contributed to the interference problem.

Is that hard to grasp?

> hear a problem on a pole. So I'd say right now he has the best
> capabilities at ultrasonic, and I do at UHF (with my 8 element Quagi
> and sensitive receiver), and neither of us does at low HF.

Again, I earlier made the point that detectable noise is not necessarily actionable. It would be unreasonable to require power line emissions to be undetectable. In that environment, measurement of the emission level either in absolute terms or relative to ambient noise (the degradation caused, if you like) may be relevant to whether the case is actionable.

My experience with BPL particularly, and also with weak signal working is that hams, by and large, don't have much interest in noise, and therefore much knowledge of noise as it limits the communications channel.

An anecdote: A notable VHF weak signal operator reported "I am suffering interference at S9 to 40 over S9 on 2m" led to my question given that he has a high gain array with masthead preamp etc "what does S9 mean?". I was told that his system was 'calibrated', he adjusts the transceiver input attenuator so that the S meter reads zero on band noise.

In the jurisdiction, there is a standard that limits power line emission field strength (specified in uV/m) from power lines, and if it could be demonstrated that the emission exceeded that, there was no question, it needed to be reduced, not eliminated, but reduced to comply with the standard.

But, S9 mean't nothing in terms of the standard, it did not providing a compelling case of non-compliance.

BTW, in this jurisdiction, if a leaky insulator also affects local broadcast reception, a report along those lines is more likely to get

action.

Owen

835. Re: Tracking down power line noise

Newsgroup: rec.radio.amateur.antenna
Date: 2009-07-11 02:29:31 UTC
From: Bill <Joe@from.somewhere.org>
Message-ID: <fOS5m.13278$Rb6.4321@flpi147.ffdc.sbc.com>
Source record: 14347

On Fri, 10 Jul 2009 10:39:46 -0400, Michael Coslo wrote:

>
> If you are doing it near your own house, DO check in with the neighbors
> telling them that you are locating the source of noise, and it might
> eliminate any interference they might be getting now.
>
> - 73 de Mike N3LI -

I use a slightly different approach. I have a battery powered marine RDF and all I have to do is align it and follow it to the offending pole, or house. Poles I can usually get fixed if I convince them it is a fire hazard. Houses tend to have people who could care less about your hobby unless you use the fire hazard thing again.
Bill Baka

836. Re: Tracking down power line noise

Newsgroup: rec.radio.amateur.antenna
Date: 2009-07-11 03:48:13 UTC
From: "Sal M. Onella" <salmonella@food.poisoning.org>
Message-ID: <kWU5m.19733$II.2539@newsfe16.iad>
Source record: 14348

"Michael Coslo" <mjc5@psu.edu> wrote in message
news:h37jrk$n03m$1@tr22n12.aset.psu.edu...

< snip

> There are some nice features about hunting down RFI problems with sound.
> That parabolic reflector can be aimed right at the pole, and in
> combination with the short wavelength esp at ultrasonic frequencies will
> let you zoom in on the problem pretty quickly.

Funny ... how our minds work -- or don't work. I wrestled with the idea of ultrasonic, trying to make sense of snooping for weak, high-order harmonics, vice audible sounds. Despite a quarter century of regular exposure to satellite dishes, personal and professional, I overlooked the fact that dishes are more directive at shorter wavelengths.

Doh!

Sal

837. Re: Tracking down power line noise

Newsgroup: rec.radio.amateur.antenna
Date: 2009-07-12 04:56:47 UTC
From: Noskosteve <noskosteve@gmail.com>
Message-ID: <6ab5ed2d-0f0d-45d4-91ea-e5075b924fe7@l5g2000vbp.googlegroups.com>
Source record: 14349

This is a long thread and I hope I read enough and am not repeating.

I've been involved in a power line noise problems here in McHenry Illinois for the last year and can make a few comments.

There are some very good references on the ARRL Web site. I've read them, one of the books and consulted with Gene Preston, K5GP a pro and one of the paper's authors. They should be top on your list of things to read.

Main page:
http://www.arrl.org/tis/info/rfi-elec.html

This is good, but long:
http://www.arrl.org/tis/info/rfi-elec.html

A good summary:
http://www.ctdxcc.org/powerlines/

Some others:
http://www.arrl.org/tis/info/pdf/0112068.pdf
http://www.egpreston.com/RFItalk.ppt

There's lots more on-line, but these will make you an expert quickly. (:-)...

Power line noise is almost always quite broadband. It won't just be on one band. Therefore, it is best to hunt on the highest frequency available that hears the noise. The noise travels further at lower frequencies and pinpointing a source is more difficult. Three pros I have talked to say this. The author of one of the books uses a modified TV antenna to get up to 900 MHz and above. An Engineer at the equipment manufacturer, Radar Engineers, says the same thing : hhtp//:www.radarengineers.com

They make an ultrasonic ear, a 330 MHz beam/Rx, and a wide range receiver/spec analyzer for power line noise hunting. The local power co here (ComEd) uses all these.

In addition, at higher frequencies you can get more gain in a relatively small size and a resulting narrower beamwidth to better ID the pole. I happen to have the same Cushcraft beam Gene Preston uses (shown in his paper below) and it works nicely to pinpoint a pole or when further away, a region of radiation.

My measurements show the same thing. The noise is at a lower level at higher frequencies, so some gain may be in order. I also use preamps at times.

I have access to the very same ultrasonic and 330 MHz.equipment. I also have a 2M beam, 450 beam, 700 beam and 1296 beam, spec analyzer, yadda, yadda....

We're pretty heavy into this and getting impatient with ComEd.

The ultrasonic will ONLY hear arcing that is in the air OUTSIDE things. Our arrester problem has NO ultrasonic signature (our problem appears to be up to 100 arresters causing noise 15dB above the level when the line is de-energized).
The ultrasonic dish can identify an individual insulator or arcing component.
Hot clamps and ground wires, yes ground wires, can be a significant source. Including the large staples that hold the ground wire to the wooden pole !!

The comments about making sure *your* noise is fixed is right on as well. Identifying the particular signature of the noise should also be done. This is with an O-scope so you can see the time signature (the wave shape) This can also help identify multiple sources.

We currently are waiting for the manufacturer to test 30 arresters that were swapped out. These arresters are 100% tested for RF noise and I'm worried that the test is bad.

FYI:
They also have a 22 blank cartridge in them. If the arrester fails such that is conducts and heats up, the cartridge fires and blows the snot out of the ground connection to free up the line.

Good luck
73, Steve, K9DCI at arrl dot net

838. Re: Can you ID this antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2009-07-12 05:25:32 UTC
From: Noskosteve <noskosteve@gmail.com>
Message-ID: <bc911fce-d5c7-4578-afe3-26172072cf4a@p23g2000vbl.googlegroups.com>
Source record: 14350

On Jun 22, 7:11 am, Gary KW4Z <gkend...@gmail.com> wrote:
> ... I noticed a
> new antenna mounted to their tower. It was in an inverted Vee form
> ...approximately three white insulators ...
> running between the two wires of this antenna. ...
> The [bottom] wire proceeded out from the balun ...
> and at each end appeared to ...be attached to the top wire ...
> which ... ended up meeting the other side ...
> The top (middle) of the antenna had no
> contact with the bottom middle (of the antenna), ...
> Any input would be appreciated.

What you describe is a common Folded Dipole. Whether or not it is
the B&W model can't be determined without a photo. However, in the
form you describe with the "top" wire going straight across with
nothing breaking it, makes it a simple folded dipole. It is cut for a
single band (it is a 1/2 wave long, end-to-end) and is a little wider
in bandwidth that the single wire equivalent that you are probably
familiar with. With a tuner, it can work effectively on several
bands, similar to the ordinary dipole.
It'll actually work at ODD harmonics fairly well without a tuner. As
a 40 meter dipole on 15 meters.

These two wires are in parallel as far as the antenna is concerned,
but the feed point (coax and balun) only sees HALF of the current.
With half the current, but the same power, means the feed voltage is
twice. This makes the impedance four times the ordinary dipole. 2V /
0.5I = 4Z Playing either with the diameters of the conductors (make
the top thicker), or adding more "straight through" wires (on "top")
raises the impedance more since less and less of the total antenna
current flows at the feed point.

Help?

73, Steve, K9DCI

839. Re: Tracking down power line noise

Newsgroup: rec.radio.amateur.antenna
Date: 2009-07-12 09:53:47 UTC
From: Bill <Joe@from.somewhere.org>
Message-ID: <Loi6m.7755$Wj7.1654@nlpi065.nbdc.sbc.com>
Source record: 14251

On Sat, 11 Jul 2009 21:56:47 -0700, Noskosteve wrote:

> This is a long thread and I hope I read enough and am not repeating.
>
> I've been involved in a power line noise problems here in McHenry
> Illinois for the last year and can make a few comments.

McHenry? I lived there from 1948 to 1955 in the McCollum lake area.
Corn fields everywhere. When I went back in 1993 the old neighborhood was
still there but the cornfields had turned into condo-fields.
I would have hoped the new construction would have put the new wiring
underground so you would not have a problem.
Are things still on poles?

>
> There are some very good references on the ARRL Web site. I've read
> them, one of the books and consulted with Gene Preston, K5GP a pro and
> one of the paper's authors. They should be top on your list of things to
> read.
>
> Main page:
> http://www.arrl.org/tis/info/rfi-elec.html
>
> This is good, but long:
> http://www.arrl.org/tis/info/rfi-elec.html
>
> A good summary:
> http://www.ctdxcc.org/powerlines/
>
> Some others:
> http://www.arrl.org/tis/info/pdf/0112068.pdf
> http://www.egpreston.com/RFItalk.ppt
>
> There's lots more on-line, but these will make you an expert quickly.
> (:-)...
>
> Power line noise is almost always quite broadband. It won't just be on
> one band. Therefore, it is best to hunt on the highest frequency
> available that hears the noise. The noise travels further at lower
> frequencies and pinpointing a source is more difficult. Three pros I
> have talked to say this. The author of one of the books uses a modified
> TV antenna to get up to 900 MHz and above. An Engineer at the
> equipment manufacturer, Radar Engineers, says the same thing :
> hhtp//:www.radarengineers.com
>
> They make an ultrasonic ear, a 330 MHz beam/Rx, and a wide range

> receiver/spec analyzer for power line noise hunting. The local power co
> here (ComEd) uses all these.
>
>
> In addition, at higher frequencies you can get more gain in a relatively
> small size and a resulting narrower beamwidth to better ID the pole. I
> happen to have the same Cushcraft beam Gene Preston uses (shown in his
> paper below) and it works nicely to pinpoint a pole or when further
> away, a region of radiation.
>
> My measurements show the same thing. The noise is at a lower level at
> higher frequencies, so some gain may be in order. I also use preamps at
> times.
>
> I have access to the very same ultrasonic and 330 MHz.equipment. I also
> have a 2M beam, 450 beam, 700 beam and 1296 beam, spec analyzer, yadda,
> yadda....
>
> We're pretty heavy into this and getting impatient with ComEd.
>
> The ultrasonic will ONLY hear arcing that is in the air OUTSIDE things.
> Our arrester problem has NO ultrasonic signature (our problem appears to
> be up to 100 arresters causing noise 15dB above the level when the line
> is de-energized).
> The ultrasonic dish can identify an individual insulator or arcing
> component.
> Hot clamps and ground wires, yes ground wires, can be a significant
> source. Including the large staples that hold the ground wire to the
> wooden pole !!

Still poles?
>
> The comments about making sure *your* noise is fixed is right on as
> well. Identifying the particular signature of the noise should also
> be done. This is with an O-scope so you can see the time signature (the
> wave shape) This can also help identify multiple sources.

A good O-scope can be many kilobucks. Mine was, Tektronix, but worth it.
>
>
> We currently are waiting for the manufacturer to test 30 arresters that
> were swapped out. These arresters are 100% tested for RF noise and I'm
> worried that the test is bad.
>
> FYI:
> They also have a 22 blank cartridge in them. If the arrester fails such
> that is conducts and heats up, the cartridge fires and blows the snot
> out of the ground connection to free up the line.

I can just imagine a really hot day.
>

> Good luck
> 73, Steve, K9DCI at arrl dot net

Bill Baka
Real mail is bbaka@comcast.net
My parents transplanted me to California.

840. Re: Tracking down power line noise

Newsgroup: rec.radio.amateur.antenna
Date: 2009-07-12 18:43:41 UTC
From: JIMMIE <JIMMIEDEE123@YAHOO.COM>
Message-ID: <d4d37222-c1ed-4b15-9846-f1acc55bb48b@q35g2000vbi.googlegroups.com>
Source record: 14252

On Jul 9, 11:58 am, "Rick" <rickn...@hotmail.com> wrote:
> I have been wrestling with power line noise here for almost a year.
> Power company hasn't been very successful in locating it so I started a
> coordinated search
> on my own. Thinking if I can tell them for certain which poles have the
> problem they can confirm and maybe fix.
>
> The noise is a deafening 20 over 9 on 80 meters which makes DXing on 80 and
> 160 impossible.
> The noise can be heard at my QTH as high as 10 and 6 meters but it isn't
> troublesome on those bands because it can only be heard at about an S7 level
> when the yagi is pointed at 210 degrees.
> I thought maybe my means of analysis might be interesting to discuss and
> maybe others would have other suggestions.
>
> There are 7000 volt lines running on a highway past my house. Tracking the
> source on 80m seems impossible.
> I made a 2 ft square loop antenna, which has some directivity but the noise
> level using it seems to not change
> much as I travel the highway. On 10 meters, using a 4 ft whip on the car,
> the noise is also hard to localize but
> seems to increase in the vicinity of 1 mile from home. 6 meters using a
> whip is similar. I found that if I'm close
> enough that the 6 meter signal is around S7 I can switch to 2 meters and
> again peak the noise by driving slowly up and down the road.
>
> So using this technique and driving 2 miles in each direction I have managed
> to find 2 spots, one on the highway and one on a cross road, each about 1.2
> miles from the QTH. I then built a 432 MHz 8 element quagi beam which
> enabled me to pinpoint the offending pole at these two locations. (I have
> put a LOT of effort into this project !)
>
> At this time I am waiting (hoping) for a return call from the power company
> to verify my dicovery.
>
> So my question for the group - Can either of these locations 1.2 miles
> distant cause such horrendous noise levels on 80 meters? Is it possible
> that a weaker noise source much closer to me is the culprit or are all of
> the power line malfunctions detectable on 440 MHz?
>
> Rick K2XT

Sounds about like a problem I had. I used an AM 60s vintange shirt
pocket AM receiver to find the offending transformer. When I called up

the power company I gave them the pole number and street address and didnt tell them I was a ham radio operator. Instead I told them it was interfering with me listening to my favorite talk show. They came out the next day.

Jimmie

841. Re: Tracking down power line noise

Newsgroup: rec.radio.amateur.antenna
Date: 2009-07-12 19:17:18 UTC
From: Noskosteve <noskosteve@gmail.com>
Message-ID: <cf0ce732-9fc6-43f3-ae48-0a6fa99d673e@z28g2000vbl.googlegroups.com>
Source record: 14253

>
> ...I used a ... shirt pocket AM receiver to find the offending transformer.

Thansformers themselves VERY, VERY, VERY rarely make noise.
Insulators, connections and other connecting hardware are the cause.

RE: Mchenry / McCollum Lake

Poles.

I'm actually in Wonder Lake. It's a Wonder it's still a Lake because
no one wants to have it dredged (but they surely want the "lake").

73, Steve, K9DCI atarrl point net

842. Re: Tracking down power line noise

Newsgroup: rec.radio.amateur.antenna
Date: 2009-07-12 19:23:36 UTC
From: Noskosteve <noskosteve@gmail.com>
Message-ID: <af070db0-6b45-4369-aec8-16b28ef4e1e8@r25g2000vbn.googlegroups.com>
Source record: 14254

> A good O-scope can be many kilobucks. Mine was, Tektronix, but worth it.

Sometimes fate smiles on us. A friend, K9PGN SK, of my Dad's, W9EHS SK, found two "in a dumpster" when some place was closing down. Gave one to Dad.

100 MHz. HP Dual trace storage. works 100%

73, K9DCI via the arrl reflector CallSIgn atsymbol ARRL period NET

843. Re: Tracking down power line noise

Newsgroup: rec.radio.amateur.antenna
Date: 2009-07-12 19:35:06 UTC
From: JIMMIE <JIMMIEDEE123@YAHOO.COM>
Message-ID: <31804695-657e-4093-ad8c-cea03ef335a3@l28g2000vba.googlegroups.com>
Source record: 14255

On Jul 12, 3:23 pm, Noskosteve <noskost...@gmail.com> wrote:
> > A good O-scope can be many kilobucks. Mine was, Tektronix, but worth it.
>
> Sometimes fate smiles on us. A friend, K9PGN SK, of my Dad's, W9EHS
> SK, found two "in a dumpster" when some place was closing down.   Gave
> one to Dad.
>
> 100 MHz. HP Dual trace storage. works 100%
>
> 73, K9DCI via the arrl reflector CallSIgn atsymbol ARRL period NET

Yeah, I picked up an HP 54645A like that. I hauled some trash off to
the dump and there it was in the recycling area so I recycled it. It
even had a recent cal sticker.

Jimmie

844. Re: Tracking down power line noise

Newsgroup: rec.radio.amateur.antenna
Date: 2009-07-13 10:42:52 UTC
From: Bill <bbaka@comcast.net>
Message-ID: <McE6m.11636$j84.6919@nlpi061.nbdc.sbc.com>
Source record: 14256

JIMMIE wrote:
> On Jul 12, 3:23 pm, Noskosteve <noskost...@gmail.com> wrote:
>>> A good O-scope can be many kilobucks. Mine was, Tektronix, but worth it.
>> Sometimes fate smiles on us. A friend, K9PGN SK, of my Dad's, W9EHS
>> SK, found two "in a dumpster" when some place was closing down. Gave
>> one to Dad.
>>
>> 100 MHz. HP Dual trace storage. works 100%
>>
>> 73, K9DCI via the arrl reflector CallSIgn atsymbol ARRL period NET
>
> Yeah, I picked up an HP 54645A like that. I hauled some trash off to
> the dump and there it was in the recycling area so I recycled it. It
> even had a recent cal sticker.
>
> Jimmie

Now if only someone would give me an old 547 with a spectrum analyzer
plug-in.
Bill

845. Re: Tracking down power line noise

Newsgroup: rec.radio.amateur.antenna
Date: 2009-07-13 10:44:20 UTC
From: Bill <bbaka@comcast.net>
Message-ID: <8eE6m.11637$j84.424@nlpi061.nbdc.sbc.com>
Source record: 14257

Noskosteve wrote:
>> ...I used a ... shirt pocket AM receiver to find the offending transformer.
>
>
> Thansformers themselves VERY, VERY, VERY rarely make noise.
> Insulators, connections and other connecting hardware are the cause.
>
> RE: Mchenry / McCollum Lake
>
> Poles.
>
> I'm actually in Wonder Lake. It's a Wonder it's still a Lake because
> no one wants to have it dredged (but they surely want the "lake").
>
> 73, Steve, K9DCI atarrl point net

Sad to hear that. I used to swim in it and in 1954 I could watch the
steam engines hauling the daytime commuters to Chicago on the far side
of the lake.
Times change.
Bill Baka

846. Anybody want Swan SWR-1A faceplate or internal workings?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-07-13 16:40:58 UTC
From: "Myron A. Calhoun" <mcalhoun@freeshell.org>
Message-ID: <h3fo2q$332$1@chessie.cirr.com>
Source record: 14258
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.antenna,rec.radio.amateur.boatanchors

Crossposted to rec.radio.amateur.homebrew, rec.radio.amateur.antenna, and rec.radio.amateur.boatanchors

I wanted a dual-meter voltmeter to mount atop an LDG battery booster to continuously indicate input and output voltages, so I rebuilt an old SWAN Electronics SWR-1A meter and now have the faceplate and the internal SWR sensor unit left over.

I'll mail (without charge in the USA) the faceplate to the first person who wants to restore hizer scratched-up SWR-1A faceplate.

Although it weighs less than five ounces, the sensor unit is obviously a bit bulkier (about 5" x 2" x 1.5") than the flat faceplate!-) It includes two integrally-mounted SO-239 connectors, two diodes, two resistors, two capacitors, the dual pot and its knob, and the really-sturdy sensor (but NOT the two 100 microamp meters which I used in my project!-), all connected as they were in the original unit. If someone wants it, it should mail well and shouldn't take too much postage.

--73, W0PBV at ARRL dot net

847. Re: FS Yaesu G-400RC Rotor and Controller

Newsgroup: rec.radio.amateur.antenna
Date: 2009-07-13 22:16:19 UTC
From: jfahrenh <jfahrenh@yahoo.com>
Message-ID: <0612e3b3-7a2e-42b6-b356-bcc62cb55301@d4g2000vbm.googlegroups.com>
Source record: 14259

Hello Charlie-

Is this item still FS? If so, could you forward pix? TU.

Joe Fahrenholtz KC8RKL

On Jun 3, 4:01 pm, "Charlie Hugg" <k5...@sbcglobal.net> wrote:
> FS: Yaesu G-400RC(like G-450A except no special plugs required for cable
> hookup). The rotator and controller work well and are in very good shape
> cosmetically. Cable hooks directly to rotor and controller/no plugs
> required. This rotor and controller have not been used much. I can send
> pictures upon request. Price is $140 plus shipping. Thanks, Charlie Hugg,
> K5MBX

848. Re: an ontopic post about code

Newsgroup: rec.radio.amateur.antenna
Date: 2009-07-14 07:18:28 UTC
From: kb9rqz@yahoooo.com
Message-ID: <2aco551egan9n4c03qua0kjbeev74042ap@4ax.com>
Source record: 14260
Cross-posted to: alt.ham-radio.vhf-uhf,rec.radio.amateur.policy,rec.radio.amateur.antenna

On Fri, 01 Dec 2006 09:36:47 -0800, John Smith
<assemblywizard@gmail.com> wrote:

>K4YZ wrote:
>> Nope.
>>
>> The IP Address and servers are complete proof that I do NOT share
>> any annonymous character's "address".
>>
>> Sounds like Lennie, to me....
>>
>> Steve, K4YZ
>>
>
>To anyone with even an elementary understanding of anonymous proxies,
>anonymous remailers, zombie backdoors, etc., the ability to change ones
>IP address and header details is simplistic, indeed, with little time
>spent anyone can appear to be "coming" from anywhere in the world.
>
>You waste my time. Worse, you think us all idiots here. You remind me
>of the "street smart" prosecutors and defense attorneys who stack jurys
>with members of little or no technical knowledge and then call in
>"expert witnesses" and propose arguments of technical details to boggle
>their minds.
>
>You have only proven that you, yourself are either ignorant to such
>technical details, or else you are indeed street smart, I favor the
>latter in this case (however, if you in the dark about such things, 15
>minutes on google will enlighten you.)
>
>JS

"one useless man is disgrace 2 become a law firm 3 or more become a congress"
adams

woger you are a Congress all in your own head
"http://www.3ix.org/sys/aff.php?aff=7439" target="_blank"

altopia is never used by KB9RQZ
http://kb9rqz.cc.cc
http://kd8ctl.com
nor is Konstans@hotmail.com ever
btw i can be found at
17366 N River Rd

Chassel Mi

but the cowards asking lack the gut to act

849. How Can you Make a VHF TV Antenna for an Attic

Newsgroup: rec.radio.amateur.antenna
Date: 2009-07-15 04:55:11 UTC
From: wdoe999@yahoo.com
Message-ID: <fd0a86cc-2039-485c-b8a5-243f7b7bff03@m11g2000yqh.googlegroups.com>
Source record: 14261
Cross-posted to: rec.video.cable-tv,sci.electronics.repair,rec.radio.amateur.antenna

Hi - I need to receive VHF TV (channels 6,7,9,13) and would like to make a super-duper antenna for inside my attic. I would have thought that I could easily find (simple) instructions on the internet but can't. Does anybody have a simple idea that just uses wire (wire should be easy to attach in an attic).

I've seen some instructions (mostly UHF or DTV) and some of them do calculations for wavelength (let's say 5 feet). And then, with no explanation, the guy just says "I made it 10 feet for better reception". So I ask, can I not then just use the entire length of my attic for super-duper reception? Wire is cheap after all, and I only want to crawl up there once.

I don;t have a PhD in antenna making, so a lot of the instructions/ terms don't mean much to me (dipole, balun, etc). I'm hoping for instructions such as:
1. Cut a piece of 18gauge coppr wire 5 feet long
2. attach one end to a rafter.
3. solder the other end to the centre wire of the coax
4 insert tab A into slot B
etc
etc.

Also, I see instructions that say you should aim the antenna without defining "aim". Do you allign the wire in the direction of the transmission antenna, or should the wire by perpendicular?

Thanks

850. Re: How Can you Make a VHF TV Antenna for an Attic

Newsgroup: rec.radio.amateur.antenna
Date: 2009-07-15 06:28:21 UTC
From: "Sal M. Onella" <salmonella@food.poisoning.org>
Message-ID: <bGe7m.53$ZU1.30@newsfe16.iad>
Source record: 14262
Cross-posted to: rec.video.cable-tv,sci.electronics.repair,rec.radio.amateur.antenna

<wdoe999@yahoo.com> wrote in message
news:fd0a86cc-2039-485c-b8a5-243f7b7bff03@m11g2000yqh.googlegroups.com...
> Hi - I need to receive VHF TV (channels 6,7,9,13) and would like to
> make a super-duper antenna for inside my attic. I would have thought
> that I could easily find (simple) instructions on the internet but
> can't. Does anybody have a simple idea that just uses wire (wire
> should be easy to attach in an attic).

I'd like the answer to be YES, but it's NO.. If you wanted to make an antenna for just one channel, I'd say yes. I already did it for some guy who wanted a channel 2 antenna over a year ago.
>
> I've seen some instructions (mostly UHF or DTV) and some of them do
> calculations for wavelength (let's say 5 feet).

It's a multi-step process. You have to look up the channel frequency for a TV channel. Then, you take the number 300 and divide it by the frequency. The result is the wavelength. The elements are then cut for approximately a half-wavelength. More details below, if you want 'em.

Multi-channel antennas have multiple elements, all differing lengths. If you have one element, you can expect to receive one channel well and other channels maybe but not as well. A single channel antenna can be made of TV twinlead and attached to a piece of wood. It's called a "folded dipole." More below.

> And then, with no
> explanation, the guy just says "I made it 10 feet for better
> reception". So I ask, can I not then just use the entire length of my
> attic for super-duper reception?

Nope. He's full of it to say that. The only thing that gets longer to make a better antenna is the boom, the center long rod of a long antenna, and it gets longer because additional elements are added to it to improve the performance. However, you have to know how many, how long and where to put them. That's why we study this stuff.

> Wire is cheap after all, and I only > want to crawl up there once.

Crawl up there once and bring a TV antenna with you ... a STORE-BOUGHT TV antenna. Hang it flat from the rafters. A balun is a little matching transformer with side-by-side wire connections on one side and a round coaxial cable connection on the other side. Picture here:

www.summitsource.com/images/products/COTRAN.jpg

Most antennas have two screws for attaching one side of a balun. Connect your coaxial cable to the other side.

> Also, I see instructions that say you should aim the antenna without
> defining "aim". Do you align the wire in the direction of the
> transmission antenna, or should the wire by perpendicular?

The outline of many TV antennas, viewed from above or below, resembles the outline of an arrowhead. That's it. The smaller elements are on the end that's nearer to the TV station. The signal arrives perpendicular to the alignment of the elements.
http://www.radioshack.com/pwr/content/05/72/2112695_31954_thumbnail.jpg is an antenna which illustrates the arrowhead concept. The stations are off to the right side in this picture. I have no idea whether the antenna in the picture is any good.

If you make a single element antenna, you align it perpendicular with the arriving signal. These do work pretty well, by the way.
http://www.wfu.edu/~matthews/misc/dipole.html has some step-by-step instructions for making a folded dipole with ordinary tools.

One last thing: It's not beyond the realm of possibility to make one folded dipole attic antenna for Channel 6 and a second folded dipole attic antenna for Channel 9. The Channel 9 antenna just MIGHT also handle 7 and 13 if you're in a good reception area. You can cable both of them to the TV and switch between them.

Sal

851. Yen Falls for Third Day as Stocks Rise Before U.S. Factory Output Report

Newsgroup: rec.radio.amateur.antenna
Date: 2009-07-15 09:13:59 UTC
From: angelna hot <mastermind706@gmail.com>
Message-ID: <a909c82b-00f5-4d7b-955b-cf98759893e0@b15g2000yqd.googlegroups.com>
Source record: 14263

http://forexnews-4all.blogspot.com/2009/07/july-15-yen-and-dollar-weakened-against.html
July 15 The yen and the dollar weakened against the euro before a U.S.
report today that economists said will show the contraction in
industrial production slowed, damping demand for safer assets.
Asian currencies strengthened, led by South Korea’s won and
Indonesia’s rupiah, as regional stocks gained and foreign- exchange
and equity-market volatility declined, spurring investors to buy
higher-yielding assets. The yen declined against 13 of the 16 major
currencies after the Bank of Japan lowered its forecasts for the
economy, reducing the appeal of the currency.
read more visit now

852. Re: How Can you Make a VHF TV Antenna for an Attic

Newsgroup: rec.radio.amateur.antenna
Date: 2009-07-15 12:15:15 UTC
From: Rich Webb <bbew.ar@mapson.nozirev.ten>
Message-ID: <r7hr555kj1hn60ivni1ep2l5hfiivrdhel@4ax.com>
Source record: 14264
Cross-posted to: rec.video.cable-tv,sci.electronics.repair,rec.radio.amateur.antenna

On Tue, 14 Jul 2009 23:28:21 -0700, "Sal M. Onella"
<salmonella@food.poisoning.org> wrote:

>
[snippety snip some good info from Sal]

Also, to the OP, if you're interested in playing with this some, even
just to the point of seeing what some of the radiation/reception
patterns look like (goes-out signal strength is the same pattern as the
goes-in sensitivity, btw) hop over to http://home.ict.nl/~arivoors/ and
d/l a copy of Arie's version of the 4nec2 antenna modeling software.

There are example files that are similar to typical TV antennas, among
others. You can get a list of channel assignments versus frequency on
Wikipedia.

--
Rich Webb Norfolk, VA

853. Re: Tracking down power line noise

Newsgroup: rec.radio.amateur.antenna
Date: 2009-07-16 01:09:00 UTC
From: Noskosteve <noskosteve@gmail.com>
Message-ID: <c97eb29e-0534-4c34-962e-1ef3b330e765@h21g2000yqa.googlegroups.com>
Source record: 14265

On Jul 13, 5:44 am, Bill <bb...@comcast.net> wrote:
> ... I used to swim in it and in 1954 I could watch the
> steam engines hauling the daytime commuters to Chicago on the far side
> of the lake.
> Times change.
> Bill Baka

Hmmm. Wonder where that rail line could have been. None near Wonder
lake now.
Perhaps it was McCullom Lake you mentioned - there *is* a rail line
near it.

73, Steve, K9DCI

854. Re: Tracking down power line noise

Newsgroup: rec.radio.amateur.antenna
Date: 2009-07-16 01:59:30 UTC
From: Bill <bbaka@comcast.net>
Message-ID: <PGv7m.12405$vO4.676@flpi145.ffdc.sbc.com>
Source record: 14266

Noskosteve wrote:
> On Jul 13, 5:44 am, Bill <bb...@comcast.net> wrote:
>> ... I used to swim in it and in 1954 I could watch the
>> steam engines hauling the daytime commuters to Chicago on the far side
>> of the lake.
>> Times change.
>> Bill Baka
>
> Hmmm. Wonder where that rail line could have been. None near Wonder
> lake now.
> Perhaps it was McCullom Lake you mentioned - there *is* a rail line
> near it.
>
> 73, Steve, K9DCI

It was McCullom lake, about 8 houses to the right of mine down the road.
My grandparents lived about 6 houses to the left, so it was ideal for
me as a young child. I once hiked through the corn fields (now condo
fields) to downtown McHenry and was about 100 feet from a steamer
spinning those huge wheels on startup. That was something I will never
forget, just the raw power and mechanical stuff up close.
That, to me, was American life. I also got into early morning television
DX'ing at about 5:00 A.M. turning the rabbit ears and seeing what I
could get. I got Grand Rapids, Mich once and Racine's test pattern once
and a few more buried in the snow. At any rate I was hooked on radio and
television stuff.

Bill Baka

855. Re: How Can you Make a VHF TV Antenna for an Attic

Newsgroup: rec.radio.amateur.antenna
Date: 2009-07-16 06:28:54 UTC
From: Robert Macy <macy@california.com>
Message-ID: <e846422d-9d16-47b7-99c6-2eda447adfa9@x25g2000prf.googlegroups.com>
Source record: 14267
Cross-posted to: rec.video.cable-tv,sci.electronics.repair,rec.radio.amateur.antenna

On Jul 14, 9:55 pm, wdoe...@yahoo.com wrote:
> Hi - I need to receive VHF TV (channels 6,7,9,13) and would like to
> make a super-duper antenna for inside my attic. I would have thought
> that I could easily find (simple) instructions on the internet but
> can't. Does anybody have a simple idea that just uses wire (wire
> should be easy to attach in an attic).
>
> I've seen some instructions (mostly UHF or DTV) and some of them do
> calculations for wavelength (let's say 5 feet). And then, with no
> explanation, the guy just says "I made it 10 feet for better
> reception". So I ask, can I not then just use the entire length of my
> attic for super-duper reception? Wire is cheap after all, and I only
> want to crawl up there once.
>
> I don;t have a PhD in antenna making, so a lot of the instructions/
> terms don't mean much to me (dipole, balun, etc). I'm hoping for
> instructions such as:
> 1. Cut a piece of 18gauge coppr wire 5 feet long
> 2. attach one end to a rafter.
> 3. solder the other end to the centre wire of the coax
> 4 insert tab A into slot B
> etc
> etc.
>
> Also, I see instructions that say you should aim the antenna without
> defining "aim". Do you allign the wire in the direction of the
> transmission antenna, or should the wire by perpendicular?
>
> Thanks

Just saw this thread and some very good suggestions.

One thought. Unless your close to the TV Transmitters, stay away from using wire as the antenna. There is a good reason antennas are made of tubes, not wire. At high frequency, like television transmission frequencies, the current creates a repulsion field that pushes the current away from the center of the conductor. In other words, all the current travels on the outside surface of the wire. Look up the term, "skin depth". At frequencies as low as 20MHz, more than 99% of the current will be within 3 mils of the surface. The only easy way to lower the losses in the antenna is to use large diameter conductors, but since the inside of the conductor carries no current, you don't need metal there, so it is ok to use hollow tubes.

Antenna manufacturers save themselves money by lowering material costs and shipping weight. They use hollow tubes. If you don't care about weight or material cost, go ahead and use solid rods, 1/4 inch, or even 3/8, but stay away from 18 Awg, way too small.

One other thing, nature abhors sharp edges, that's why bubbles are round, so don't use square tubes or sharp bar stock either. Use rounded tubes or rods. Even smoothing and polishing the surface lowers the resistance. When you're done, passivate the surface of the conductors to prevent corrosion over time. [meaning: paint the antenna] Over time, corrosion will deteriorate your antenna's performance. Rounded surfaces also means make your connections smooth with nice transitions. As in, "if it looks good, it works good." You can use aluminum if the lengths are continuous and/or you make connections using constant mechanical pressure, like a "lots of teeth" star washer that has bitten down through the insulating oxide layer held with a bolt.

All in all, it seems a lot easier to buy a fringe field antenna and put that in your attic. But if you do it yourself, hope you're successful, document what you built, and share it here.

Robert

856. Re: How Can you Make a VHF TV Antenna for an Attic

Newsgroup: rec.radio.amateur.antenna
Date: 2009-07-16 17:58:31 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <XZmdnVyJnffL98LXnZ2dnUVZ_uqdnZ2d@giganews.com>
Source record: 14268
Cross-posted to: rec.video.cable-tv,sci.electronics.repair,rec.radio.amateur.antenna

I'm sorry, this response contains some misleading advice.

Robert Macy wrote:
>
> Just saw this thread and some very good suggestions.
>
> One thought. Unless your close to the TV Transmitters, stay away from
> using wire as the antenna. There is a good reason antennas are made
> of tubes, not wire.

The reason usually is physical strength and rigidity. The larger diameter also increases bandwidth, but often this isn't necessary to proper operation.

> At high frequency, like television transmission
> frequencies, the current creates a repulsion field that pushes the
> current away from the center of the conductor. In other words, all
> the current travels on the outside surface of the wire. Look up the
> term, "skin depth". At frequencies as low as 20MHz, more than 99% of
> the current will be within 3 mils of the surface. The only easy way
> to lower the losses in the antenna is to use large diameter
> conductors, but since the inside of the conductor carries no current,
> you don't need metal there, so it is ok to use hollow tubes.

This is true. However, in almost all cases the loss caused by using wire, even very small wire is still negligible. Exceptions are antennas which are very short in terms of wavelength, particularly at low frequencies. As frequency increases, the length of an antenna of equal performance decreases in direct proportion. However, the loss decreases only as the square root of frequency. So antennas of the same wavelength size become proportionally less lossy at higher frequencies.

> Antenna manufacturers save themselves money by lowering material costs
> and shipping weight. They use hollow tubes.

Another important reason for using hollow tubes is structural weight.

> If you don't care about
> weight or material cost, go ahead and use solid rods, 1/4 inch, or
> even 3/8, but stay away from 18 Awg, way too small.

18 AWG wire won't result in appreciable loss for nearly any antenna.

> One other thing, nature abhors sharp edges, that's why bubbles are
> round, so don't use square tubes or sharp bar stock either.

Square stock is slightly lossier than round, but the loss will be
negligible when unsing any practical size.

> Use
> rounded tubes or rods. Even smoothing and polishing the surface
> lowers the resistance.

Polishing won't make any detectable difference.

> When you're done, passivate the surface of the
> conductors to prevent corrosion over time. [meaning: paint the
> antenna] Over time, corrosion will deteriorate your antenna's
> performance.

It depends on the type of corrosion. But it would have to be severe
before becoming so bad as to cause an appreciable reduction in
performance. Aluminum, tin, and some other metals passivate themselves
by forming a hard insulating oxide layer on the outside. Unless you're
in a maritime climate, copper won't deteriorate in a way that matters,
either. Insulated wire is an easy way to prevent corrosion in an
unfavorable climate.

> Rounded surfaces also means make your connections smooth
> with nice transitions. As in, "if it looks good, it works good."

If only that were true! But unfortunately it isn't.

> You
> can use aluminum if the lengths are continuous and/or you make
> connections using constant mechanical pressure, like a "lots of teeth"
> star washer that has bitten down through the insulating oxide layer
> held with a bolt.

This can cause more problems than it solves, if the bolt and washer are
the wrong metal such as steel. A good book on Yagi antenna construction
will tell you about techniques for working with aluminum.

> All in all, it seems a lot easier to buy a fringe field antenna and
> put that in your attic. But if you do it yourself, hope you're
> successful, document what you built, and share it here.

With that I agree.

Roy Lewallen, W7EL

857. Re: How Can you Make a VHF TV Antenna for an Attic

Newsgroup: rec.radio.amateur.antenna
Date: 2009-07-16 19:57:12 UTC
From: RickMerrill <Rick0.merrill@gmail.NOSPAM.com>
Message-ID: <h3o121$5b7$1@news.eternal-september.org>
Source record: 14269
Cross-posted to: rec.video.cable-tv,sci.electronics.repair,rec.radio.amateur.antenna

Roy Lewallen wrote:
> I'm sorry, this response contains some misleading advice.
>
> Robert Macy wrote:
>>
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>> One thought. Unless your close to the TV Transmitters, stay away from
>> using wire as the antenna. There is a good reason antennas are made
>> of tubes, not wire.
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> The reason usually is physical strength and rigidity. The larger
> diameter also increases bandwidth, but often this isn't necessary to
> proper operation.
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>> At high frequency, like television transmission
>> frequencies, the current creates a repulsion field that pushes the
>> current away from the center of the conductor. In other words, all
>> the current travels on the outside surface of the wire. Look up the
>> term, "skin depth". At frequencies as low as 20MHz, more than 99% of
>> the current will be within 3 mils of the surface. The only easy way
>> to lower the losses in the antenna is to use large diameter
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> This is true. However, in almost all cases the loss caused by using
> wire, even very small wire is still negligible. Exceptions are antennas
> which are very short in terms of wavelength, particularly at low
> frequencies. As frequency increases, the length of an antenna of equal
> performance decreases in direct proportion. However, the loss decreases
> only as the square root of frequency. So antennas of the same wavelength
> size become proportionally less lossy at higher frequencies.
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>> Antenna manufacturers save themselves money by lowering material costs
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>> weight or material cost, go ahead and use solid rods, 1/4 inch, or
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>> rounded tubes or rods. Even smoothing and polishing the surface
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>> conductors to prevent corrosion over time. [meaning: paint the
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> before becoming so bad as to cause an appreciable reduction in
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> by forming a hard insulating oxide layer on the outside. Unless you're
> in a maritime climate, copper won't deteriorate in a way that matters,
> either. Insulated wire is an easy way to prevent corrosion in an
> unfavorable climate.
>
>> Rounded surfaces also means make your connections smooth
>> with nice transitions. As in, "if it looks good, it works good."
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> If only that were true! But unfortunately it isn't.
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>> You
>> can use aluminum if the lengths are continuous and/or you make
>> connections using constant mechanical pressure, like a "lots of teeth"
>> star washer that has bitten down through the insulating oxide layer
>> held with a bolt.
>
> This can cause more problems than it solves, if the bolt and washer are
> the wrong metal such as steel. A good book on Yagi antenna construction
> will tell you about techniques for working with aluminum.
>
>> All in all, it seems a lot easier to buy a fringe field antenna and
>> put that in your attic. But if you do it yourself, hope you're
>> successful, document what you built, and share it here.
>
> With that I agree.
>
> Roy Lewallen, W7EL

Just don't use stranded wire ...

858. Re: How Can you Make a VHF TV Antenna for an Attic

Newsgroup: rec.radio.amateur.antenna
Date: 2009-07-17 02:54:09 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <0OGdnWa0hulCesLXnZ2dnUVZ_hKdnZ2d@giganews.com>
Source record: 14270
Cross-posted to: rec.video.cable-tv,sci.electronics.repair,rec.radio.amateur.antenna

Correction:

Roy Lewallen wrote:
> . . .
> This is true. However, in almost all cases the loss caused by using
> wire, even very small wire is still negligible. Exceptions are antennas
> which are very short in terms of wavelength, particularly at low
> frequencies. As frequency increases, the length of an antenna of equal
> performance decreases in direct proportion. However, the loss decreases
> only as the square root of frequency. So antennas of the same wavelength
> size become proportionally less lossy at higher frequencies.
> . . .

Loss increases, not decreases, with frequency, in proportion to the square root of frequency. But the conclusion stated in the last sentence is correct. If you quadruple the frequency, wires become four times shorter for the same type of antenna. Assuming you keep the same wire size, this length change results in one quarter the loss resistance. The decrease in skin depth due to quadrupling frequency causes an increase of loss only by a factor of sqrt(4) = 2. The net result is that quadrupling the frequency cuts the total loss in half.

Roy Lewallen, W7EL

859. Re: How Can you Make a VHF TV Antenna for an Attic

Newsgroup: rec.radio.amateur.antenna
Date: 2009-07-17 07:26:12 UTC
From: stratus46@yahoo.com
Message-ID: <538b1dfa-b68d-4d1c-933f-1009c95427c9@m11g2000yqh.googlegroups.com>
Source record: 14271
Cross-posted to: rec.video.cable-tv,sci.electronics.repair,rec.radio.amateur.antenna

On Jul 14, 9:55 pm, wdoe...@yahoo.com wrote:
> Hi - I need to receive VHF TV (channels 6,7,9,13) and would like to
> make a super-duper antenna for inside my attic. I would have thought
> that I could easily find (simple) instructions on the internet but
> can't. Does anybody have a simple idea that just uses wire (wire
> should be easy to attach in an attic).
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> I've seen some instructions (mostly UHF or DTV) and some of them do
> calculations for wavelength (let's say 5 feet). And then, with no
> explanation, the guy just says "I made it 10 feet for better
> reception". So I ask, can I not then just use the entire length of my
> attic for super-duper reception? Wire is cheap after all, and I only
> want to crawl up there once.
>
> I don;t have a PhD in antenna making, so a lot of the instructions/
> terms don't mean much to me (dipole, balun, etc). I'm hoping for
> instructions such as:
> 1. Cut a piece of 18gauge coppr wire 5 feet long
> 2. attach one end to a rafter.
> 3. solder the other end to the centre wire of the coax
> 4 insert tab A into slot B
> etc
> etc.
>
> Also, I see instructions that say you should aim the antenna without
> defining "aim". Do you allign the wire in the direction of the
> transmission antenna, or should the wire by perpendicular?
>
> Thanks

Good grief. Just buy an antenna and open it up in the attic. I've done
it several times and it will cost a lot less in time and aggravation.
Or is your time not worth anything?

G²

860. Re: How Can you Make a VHF TV Antenna for an Attic

Newsgroup: rec.radio.amateur.antenna
Date: 2009-07-17 08:10:35 UTC
From: "Sal M. Onella" <salmonella@food.poisoning.org>
Message-ID: <enW7m.10935$8B7.1388@newsfe20.iad>
Source record: 14272
Cross-posted to: rec.video.cable-tv,sci.electronics.repair,rec.radio.amateur.antenna

<stratus46@yahoo.com> wrote in message
news:538b1dfa-b68d-4d1c-933f-1009c95427c9@m11g2000yqh.googlegroups.com...
On Jul 14, 9:55 pm, wdoe...@yahoo.com wrote:
>> Hi - I need to receive VHF TV (channels 6,7,9,13) and would like to
>> make a super-duper antenna for inside my attic.

< snip >

> Good grief. Just buy an antenna and open it up in the attic. I've done
> it several times and it will cost a lot less in time and aggravation.
> Or is your time not worth anything?

Oh, what a shame! Is there no joy in experimenting any more? I have always felt the essence of our hobby has been somebody saying, "Let's try this and see what happens." Sometimes it's an enjoyable QSO and sometimes it's a cloud of acrid smoke. I've had both.

I, too, suggested a store-bought antenna but I went on to suggest other things to try. The OP seems to have an adventurous spark. I vote for ENCOURAGE.

73,
Sal
(KD6VKW)

861. 50 ohm Ground Plane Antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2009-07-17 08:42:27 UTC
From: Claude Frantz <r31dmaeu@unibw.de>
Message-ID: <h3pdhk$5us$1@news.mixmin.net>
Source record: 14273

What is the correct angle of the ground legs down of the horizontal
plane in order to get 50 ohm at the feed point ?

Thanks a lot !

Best 73 de Claude

862. Re: 50 ohm Ground Plane Antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2009-07-17 12:52:00 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <wrWdnZaRx9tg7v3XnZ2dnUVZ_vqdnZ2d@giganews.com>
Source record: 14274

Claude Frantz wrote:
> What is the correct angle of the ground legs down of the horizontal
> plane in order to get 50 ohm at the feed point ?
>
> Thanks a lot !
>
> Best 73 de Claude

About 45 degrees.

Roy Lewallen, W7EL

863. Re: 50 ohm Ground Plane Antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2009-07-17 16:16:49 UTC
From: Dave <noone@nowhere.com>
Message-ID: <Rt18m.19$MA3.1@nwrddc02.gnilink.net>
Source record: 14275

the answer is: 'it depends'. on the number of radials, their diameter, the vertical radiator diameter, height above ground, etc, etc, etc... my recommendation is to build it and bend until you are happy.

"Claude Frantz" <r31dmaeu@unibw.de> wrote in message news:h3pdhk$5us$1@news.mixmin.net...
> What is the correct angle of the ground legs down of the horizontal plane
> in order to get 50 ohm at the feed point ?
>
> Thanks a lot !
>
> Best 73 de Claude

864. Re: How Can you Make a VHF TV Antenna for an Attic

Newsgroup: rec.radio.amateur.antenna
Date: 2009-07-17 23:16:35 UTC
From: Robert Macy <macy@california.com>
Message-ID: <32c56d3f-950a-4b7d-85f4-52f1c4193bbb@i18g2000pro.googlegroups.com>
Source record: 14276
Cross-posted to: rec.video.cable-tv,sci.electronics.repair,rec.radio.amateur.antenna

On Jul 16, 10:58 am, Roy Lewallen <w...@eznec.com> wrote:
> I'm sorry, this response contains some misleading advice.
>
> Robert Macy wrote:
>
> > Just saw this thread and some very good suggestions.
>
> > One thought. Unless your close to the TV Transmitters, stay away from
> > using wire as the antenna. There is a good reason antennas are made
> > of tubes, not wire.
>
> The reason usually is physical strength and rigidity. The larger
> diameter also increases bandwidth, but often this isn't necessary to
> proper operation.
>
> > At high frequency, like television transmission
> > frequencies, the current creates a repulsion field that pushes the
> > current away from the center of the conductor. In other words, all
> > the current travels on the outside surface of the wire. Look up the
> > term, "skin depth". At frequencies as low as 20MHz, more than 99% of
> > the current will be within 3 mils of the surface. The only easy way
> > to lower the losses in the antenna is to use large diameter
> > conductors, but since the inside of the conductor carries no current,
> > you don't need metal there, so it is ok to use hollow tubes.
>
> This is true. However, in almost all cases the loss caused by using
> wire, even very small wire is still negligible. Exceptions are antennas
> which are very short in terms of wavelength, particularly at low
> frequencies. As frequency increases, the length of an antenna of equal
> performance decreases in direct proportion. However, the loss decreases
> only as the square root of frequency. So antennas of the same wavelength
> size become proportionally less lossy at higher frequencies.
>
> > Antenna manufacturers save themselves money by lowering material costs
> > and shipping weight. They use hollow tubes.
>
> Another important reason for using hollow tubes is structural weight.
>
> > If you don't care about
> > weight or material cost, go ahead and use solid rods, 1/4 inch, or
> > even 3/8, but stay away from 18 Awg, way too small.
>
> 18 AWG wire won't result in appreciable loss for nearly any antenna.

>
> > One other thing, nature abhors sharp edges, that's why bubbles are
> > round, so don't use square tubes or sharp bar stock either.
>
> Square stock is slightly lossier than round, but the loss will be
> negligible when unsing any practical size.
>
> > Use
> > rounded tubes or rods. Even smoothing and polishing the surface
> > lowers the resistance.
>
> Polishing won't make any detectable difference.
>
> > When you're done, passivate the surface of the
> > conductors to prevent corrosion over time. [meaning: paint the
> > antenna] Over time, corrosion will deteriorate your antenna's
> > performance.
>
> It depends on the type of corrosion. But it would have to be severe
> before becoming so bad as to cause an appreciable reduction in
> performance. Aluminum, tin, and some other metals passivate themselves
> by forming a hard insulating oxide layer on the outside. Unless you're
> in a maritime climate, copper won't deteriorate in a way that matters,
> either. Insulated wire is an easy way to prevent corrosion in an
> unfavorable climate.
>
> > Rounded surfaces also means make your connections smooth
> > with nice transitions. As in, "if it looks good, it works good."
>
> If only that were true! But unfortunately it isn't.
>
> > You
> > can use aluminum if the lengths are continuous and/or you make
> > connections using constant mechanical pressure, like a "lots of teeth"
> > star washer that has bitten down through the insulating oxide layer
> > held with a bolt.
>
> This can cause more problems than it solves, if the bolt and washer are
> the wrong metal such as steel. A good book on Yagi antenna construction
> will tell you about techniques for working with aluminum.
>
> > All in all, it seems a lot easier to buy a fringe field antenna and
> > put that in your attic. But if you do it yourself, hope you're
> > successful, document what you built, and share it here.
>
> With that I agree.
>
> Roy Lewallen, W7EL

My advice was NOT misleading. Yours was a very poor choice of word. Misleading means the suggested effort would result in moving away from an optimum solution. ALL of my advice leads to better solutions and is therefore "not misleading" and I stand behind my suggestions.

You are very correct on catching the lack of thoroughness addressing 'mixed metal' contacts. Yes, a lot of electrolytic action happens at the junction of dissimilar materials. One must be extremely careful when making such contacts.

Had you criticized my comments by suggesting that many of the efforts involved will not yield noticeable improvement [especially to a novice], I would have accepted that. After working for years in low noise, high performance systems these techniques have become de rigueur for initial construction. The OP probably would not notice improvements except in the most fringe of conditions.

Yes, the diameter of the rod will broaden bandwidth, but elements having ratios on the order of 80:1, the effect on bandwidth won't be very noticeable. Length variations and spacing will have more impact.

Regarding skin depth of a conductor: Always keep in mind that the skin depth equation is based upon the assumption of PLANAR wave. The equation is extremely simple and easily memorized as the square root of 2 divided by three terms:

skin depth(in meters) = sqrt(2/(p*o*w))
where p = magnetic permeability
o = conductivity
w = frequency in radians

for copper, p = 4 pi 10-7
o = 58 MS/m
w = 2*pi*f, with f in Hz

results are in meters, so I suggest using an Excel spreadsheet formula.

skin depth of copper at 80MHz is 0.3 mils! 99% of the current is in less than 1 mil of the conductor.

Using finite element analyses [femm 4.2] techniques it is easy to calculate the impedance of a conductor as long as the dimensions stay below 1/10 of wavelength. For 80MHz that would be 1.2 feet. At 80MHz, 18 Awg copper wire is approx 220 milliohms per foot and 3/8 inch aluminum tubing is approx 36 milliohms per foot. Neither of these impedances would have much impact to the signal coming from the 377 ohm source impedance of free space.

Normally we would have predicted the decrease in impedance by applying the ratio of the increased perimeter reduced by the less conductive aluminum. The ratio of perimeter is 0.375/.04 or approx 9.4, but aluminum is not as conductive as copper so the conductivity ratio is

25/58 for a total change in resistance by approx 0.375/.04*(25/58) = 4.04 improvement. Finite element analyses calculates the improvement to be more than 50% higher than that. [It's caused by the small radius of the wire.] Plotting the current density down into the conductors shows what happened. The 'effective' skin depth in the 18 Awg wire is about 50% less than in the aluminum, all due to the reduced radius of the outside of the conductor. As I said, nature hates sharp edges.

Again, as the element 'taps' into free space the 377 ohms of free space predicts a difference of less than 0.005 dB on the signal. So there will indeed be an extremely small effect from using 18 Awg wire or 3/8 tubing on the received signal strength.

If the antenna were to be much smaller than wavelengths and capacitance were added to resonate the elements, THEN the impedance dfference would become noticeable and affect how much signal is available to the receiver.

Regarding bar stock? picture the current concentrating at each of the four corner edges, with the current not being uniformly distributed around the perimeter. That would almost be equivalent to having 4 parallel small diameter wires mounted on 3/8 inch centers! Really wasted the metal.

Regarding the importance of smoothness: My outside antenna became badly pitted from atmosphere, even with aluminum developing an oxide layer, it still corroded. The roughness lowered the gain of the antenna enough to notice it on the reception from fringe stations. Years ago [and at higher frequencies] we plated metal in our resonators with silver *and* polished the silver to get the impedance down. We measured huge differences in impedance [measured as improved Q] as we polished the surface down to mirror finishes.

Whoever suggested the ARRL Antenna handbook is right. Great book.

Regards,
Robert

865. Re: How Can you Make a VHF TV Antenna for an Attic

Newsgroup: rec.radio.amateur.antenna
Date: 2009-07-17 23:45:33 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <6532655hd3i7656io0g6jighto6nj0s9af@4ax.com>
Source record: 14277
Cross-posted to: rec.video.cable-tv,sci.electronics.repair,rec.radio.amateur.antenna

On Fri, 17 Jul 2009 16:16:35 -0700 (PDT), Robert Macy
<macy@california.com> wrote:

> We measured huge differences in impedance [measured as improved
>Q]

What were the Qs? "Huge differences" is not a quantified, and thus
verifiable claim.

73's
Richard Clark, KB7QHC

866. Re: How Can you Make a VHF TV Antenna for an Attic

Newsgroup: rec.radio.amateur.antenna
Date: 2009-07-18 11:15:32 UTC
From: Alan Douglas <adouglasat@gis.net>
Message-ID: <4bb365dh892u6l911j71dasv889sjqpru1@4ax.com>
Source record: 14278
Cross-posted to: rec.video.cable-tv,sci.electronics.repair,rec.radio.amateur.antenna

>Hi - I need to receive VHF TV (channels 6,7,9,13) and would like to
>make a super-duper antenna for inside my attic. I would have thought
>that I could easily find (simple) instructions on the internet but
>can't. Does anybody have a simple idea that just uses wire (wire
>should be easy to attach in an attic).

There was an article in Electronics World in December 1967 by Harold Pruett titled "Designs for Log-Periodic FM & TV antennas". He used two lengths of hookup wire, attached to a wooden frame in a zigzag pattern, and gives all the dimensions needed. I built one then and it has worked fine ever since, though now there's nothing to receive in this area so I've switched to a UHF-only antenna in the attic. I can mail you xeroxes of the article. I'm adouglas (at) gis.net.

Alan

867. Re-broadcast of the Apollo mission as it happened 40 years later

Newsgroup: rec.radio.amateur.antenna
Date: 2009-07-18 12:48:22 UTC
From: Peter <colleenpeter@westnet.com.au>
Message-ID: <otednUN_xd0SWfzXnZ2dnUVZ8m-dnZ2d@westnet.com.au>
Source record: 14279

Re-broadcast of the Apollo 11 mission as it happened 40 years later

http://www.nasa.gov/externalflash/apollo11_radio/index.html

--
Peter VK6YSF

http://members.optushome.com.au/vk6ysf/vk6ysf/main.htm

868. Re: How Can you Make a VHF TV Antenna for an Attic

Newsgroup: rec.radio.amateur.antenna
Date: 2009-07-18 15:31:36 UTC
From: Robert Macy <macy@california.com>
Message-ID: <b36c7e63-23d3-426d-8d6c-da17f4c52fee@a37g2000prf.googlegroups.com>
Source record: 14280
Cross-posted to: rec.video.cable-tv,sci.electronics.repair,rec.radio.amateur.antenna

On Jul 17, 4:45 pm, Richard Clark <kb7...@comcast.net> wrote:
> On Fri, 17 Jul 2009 16:16:35 -0700 (PDT), Robert Macy
>
> <m...@california.com> wrote:
> > We measured huge differences in impedance [measured as improved
> >Q]
>
> What were the Qs? "Huge differences" is not a quantified, and thus
> verifiable claim.
>
> 73's
> Richard Clark, KB7QHC

Memory serves Q went from 400/600 range up to the 8000 range.

869. Re: How Can you Make a VHF TV Antenna for an Attic

Newsgroup: rec.radio.amateur.antenna
Date: 2009-07-18 15:54:29 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <b0s3651pmmht0d593uv4qesk92rt5pscm0@4ax.com>
Source record: 14281
Cross-posted to: rec.video.cable-tv,sci.electronics.repair,rec.radio.amateur.antenna

On Sat, 18 Jul 2009 08:31:36 -0700 (PDT), Robert Macy
<macy@california.com> wrote:

>> > We measured huge differences in impedance [measured as improved
>> >Q]
>>
>> What were the Qs? ï¿½"Huge differences" is not a quantified, and thus
>> verifiable claim.
>>
>
>Memory serves Q went from 400/600 range up to the 8000 range.

For what band?

73's
Richard Clark, KB7QHC

870. Re: 50 ohm Ground Plane Antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2009-07-18 16:09:26 UTC
From: M0WYM <Sansspam@peartreegreen.org>
Message-ID: <h3ss3m$8ul$1@news.albasani.net>
Source record: 14282

Dave wrote:
> the answer is: 'it depends'. on the number of radials, their diameter,
> the vertical radiator diameter, height above ground, etc, etc, etc...
> my recommendation is to build it and bend until you are happy.
>

Agreed, my home made loft mounted 4m groundplane has two radials and
it was simple job to get a perfect match using the MFJ259 and some
gentle bending.

Charlie.

--
M0WYM
www.radiowymsey.org

Sign today!
http://petitions.pm.gov.uk/SaveShortwave/

871. Re: 50 ohm Ground Plane Antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2009-07-18 16:45:02 UTC
From: jimp@specsol.spam.sux.com
Message-ID: <71a9j6-8th.ln1@mail.specsol.com>
Source record: 14283

Dave <noone@nowhere.com> wrote:
> the answer is: 'it depends'. on the number of radials, their diameter, the
> vertical radiator diameter, height above ground, etc, etc, etc... my
> recommendation is to build it and bend until you are happy.

Yeah, but if you start at about 45 degrees, you will likely have a lot
less bending to do, if any at all.

--
Jim Pennino

Remove .spam.sux to reply.

872. Re: 50 ohm Ground Plane Antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2009-07-18 18:25:37 UTC
From: JIMMIE <JIMMIEDEE123@YAHOO.COM>
Message-ID: <bc746e84-30b3-4833-84cc-a83ae3601762@y17g2000yqn.googlegroups.com>
Source record: 14284

On Jul 18, 12:45 pm, j...@specsol.spam.sux.com wrote:
> Dave <no...@nowhere.com> wrote:
> > the answer is: 'it depends'. on the number of radials, their diameter, the
> > vertical radiator diameter, height above ground, etc, etc, etc... my
> > recommendation is to build it and bend until you are happy.
>
> Yeah, but if you start at about 45 degrees, you will likely have a lot
> less bending to do, if any at all.
>
> --
> Jim Pennino
>
> Remove .spam.sux to reply.

45 below horizontal has always been the magic # for me..

Jimmie

873. dB relation TX/RX

Newsgroup: rec.radio.amateur.antenna
Date: 2009-07-19 02:20:04 UTC
From: ve2pid <ve2pid@videotron.ca>
Message-ID: <753fee20-bfec-4b9a-81b2-d132addf2276@d32g2000yqh.googlegroups.com>
Source record: 14285

Hi to all,

Hope that my question has some sense...: If we double the power
radiated by an antenna (+3 dB), how does it translate on the S-meter
at a receiver 'far' away.. i.e. is the difference in dB on that meter
has some mathematical relation to the 3 dB change at the transmitter?

73 de Pierre

874. Re: dB relation TX/RX

Newsgroup: rec.radio.amateur.antenna
Date: 2009-07-19 03:03:54 UTC
From: Jeff Liebermann <jeffl@cruzio.com>
Message-ID: <d63565pc4gc8jiakrkos2l4mq3cbsfo8jv@4ax.com>
Source record: 14286

On Sat, 18 Jul 2009 19:20:04 -0700 (PDT), ve2pid <ve2pid@videotron.ca>
wrote:

>Hope that my question has some sense...: If we double the power
>radiated by an antenna (+3 dB), how does it translate on the S-meter
>at a receiver 'far' away.. i.e. is the difference in dB on that meter
>has some mathematical relation to the 3 dB change at the transmitter?

One S unit is allegedly 6dB. Doubling the power would therefore be
about 1/2 an S unit.
<http://en.wikipedia.org/wiki/S_meter>
--
Jeff Liebermann jeffl@cruzio.com
150 Felker St #D http://www.LearnByDestroying.com
Santa Cruz CA 95060 http://802.11junk.com
Skype: JeffLiebermann AE6KS 831-336-2558

875. Re: dB relation TX/RX

Newsgroup: rec.radio.amateur.antenna
Date: 2009-07-19 03:55:09 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <xJWdnWbG7NyxBP_XnZ2dnUVZ_gWdnZ2d@giganews.com>
Source record: 14287

ve2pid wrote:
> Hi to all,
>
> Hope that my question has some sense...: If we double the power
> radiated by an antenna (+3 dB), how does it translate on the S-meter
> at a receiver 'far' away.. i.e. is the difference in dB on that meter
> has some mathematical relation to the 3 dB change at the transmitter?
>
> 73 de Pierre

No, none at all. S-meters almost always just measure the AGC voltage, which is only approximately logarithmic. And manufacturers adjust the sensitivity of the meter to please the customers, who don't like "dead" meters. So the sensitivity of S-meters varies greatly from rig type to type and from one end of the scale to the other. I measured the sensitivity of the S-meter on my Icom 730 on one band. Here's how big an S-unit is on my rig:

S1 - S2 1.4 dB
S2 - S3 1.3 dB
S3 - S4 1.6 dB
S4 - S5 2.3 dB
S5 - S6 1.8 dB
S6 - S7 3.2 dB
S7 - S8 3.1 dB
S8 - S9 4.0 dB
S9 - "S9 + 10 dB" 5.6 dB
"S9 + 10 dB" - "S9 + 20 dB" 7.3 dB
"S9 + 20 dB" - "S9 + 30 dB" 6.6 dB
"S9 + 30 dB" - "S9 + 40 dB" 10.5 dB
"S9 + 40 dB" - "S9 + 50 dB" 11.3 dB
"S9 + 50 dB" - "S9 + 60 dB" 13.5 dB

Now let's suppose that you built a new 5 element Yagi antenna and I honestly reported that your signal went from S2 to S6 when you switched to it from your dipole. The gain is really 7 dB, about par for the beam, but you read the postings on the Web and decide that an S-unit is "defined" as 6 dB, so the gain improvement must be 24 dB. Wow! Your modest beam has the same gain as a beam with a 25 WAVELENGTH boom and more than 50 elements! By making that incorrect assumption about the sensitivity of my S-meter, you've overestimated the gain by a factor of 63.

S-meter sensitivities vary all over the map, so any assumption you make about how many dB in an S-unit is very likely wrong, and often grossly wrong.

Roy Lewallen, W7EL

876. Re: dB relation TX/RX

Newsgroup: rec.radio.amateur.antenna
Date: 2009-07-19 05:26:19 UTC
From: "Sal M. Onella" <salmonella@food.poisoning.org>
Message-ID: <08y8m.7751$vp.3978@newsfe12.iad>
Source record: 14288

"Jeff Liebermann" <jeffl@cruzio.com> wrote in message
news:d63565pc4gc8jiakrkos2l4mq3cbsfo8jv@4ax.com...
> On Sat, 18 Jul 2009 19:20:04 -0700 (PDT), ve2pid <ve2pid@videotron.ca>
> wrote:
>
> >Hope that my question has some sense...: If we double the power
> >radiated by an antenna (+3 dB), how does it translate on the S-meter
> >at a receiver 'far' away.. i.e. is the difference in dB on that meter
> >has some mathematical relation to the 3 dB change at the transmitter?
>
> One S unit is allegedly 6dB. Doubling the power would therefore be
> about 1/2 an S unit.
> <http://en.wikipedia.org/wiki/S_meter>
>

I've heard the same thing, but the reality is that the S-meter usually
follows the AGC and the signal for S9 could be different for every design.
But Flex radio and others define S9 as 50 uV.

Long time past, I heard that S9 was a noise free signal. But "noise free"
is undefined. 30 dB SNR? 40 dB SNR?

Imagine that your S-meter is perfectly logarithmic and your SNR is 54 dB at
S9. That's one way to get 6 dB per S-unit.

877. re:db relation TX/RX

Newsgroup: rec.radio.amateur.antenna
Date: 2009-07-19 08:00:51 UTC
From: Rollie <rollie@iowatelecom.net>
Message-ID: <h3ujrm$8cp$1@news.netins.net>
Source record: 14289

www.qsl.net/k5lxp/projects/SMeter/SMeter.html

Check the chart to see actual input readings. I've always used the (6db per S unit) as a general rule-of-thumb.

878. Re: dB relation TX/RX

Newsgroup: rec.radio.amateur.antenna
Date: 2009-07-19 09:31:24 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <e7Gdneefg4-cdf_XnZ2dnUVZ_hCdnZ2d@giganews.com>
Source record: 14290

Sal M. Onella wrote:
>
> I've heard the same thing, but the reality is that the S-meter usually
> follows the AGC and the signal for S9 could be different for every design.
> But Flex radio and others define S9 as 50 uV. . .

Adjusting the S-meter to read a specific value for one signal strength is simple, and there's often an adjustment for doing it. I think it's fairly common to find S9 to be around 50 uV -- on one band at least -- although I wouldn't be surprised to see a fair amount of variation from band to band. But that has nothing to do with what the difference is between S7 and S8, S8 and S9, etc.

Roy Lewallen, W7EL

879. Re: db relation TX/RX

Newsgroup: rec.radio.amateur.antenna
Date: 2009-07-19 09:36:33 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <zsqdnffe9bOsdP_XnZ2dnUVZ_uCdnZ2d@giganews.com>
Source record: 14291

Rollie wrote:
. . .I've always used the (6db per
> S unit) as a general rule-of-thumb.

Which is fine if you don't mind possibly being off by a factor of 50 or more, mistaking the gain of a 3 element beam for the gain of a 150 element one. Or you might only be off by a factor of 10, thinking the 3 element beam only has the gain of a 30 element beam. Shucks, what's a few dB anyway.

Roy Lewallen, W7EL

880. Re: dB relation TX/RX

Newsgroup: rec.radio.amateur.antenna
Date: 2009-07-19 14:31:01 UTC
From: Jitt <tser827@yahoo.com>
Message-ID: <MPG.24cccde9af156c59896dc@news.bcsupernet.com>
Source record: 14292

In article <753fee20-bfec-4b9a-81b2-
d132addf2276@d32g2000yqh.googlegroups.com>,
ve2pid@videotron.ca says...
> Hi to all,
>
> Hope that my question has some sense...: If we double the power
> radiated by an antenna (+3 dB), how does it translate on the S-meter
> at a receiver 'far' away.. i.e. is the difference in dB on that meter
> has some mathematical relation to the 3 dB change at the transmitter?
>
> 73 de Pierre
>
Only in theory. It is possible to write an expression
which relates an increase in Tx power to Rx antenna power at
the remote site, but I doubt if it would agree with observed
values in the field.

881. Re: dB relation TX/RX

Newsgroup: rec.radio.amateur.antenna
Date: 2009-07-19 14:32:43 UTC
From: JB <nospam@goofball.net>
Message-ID: <f8G8m.275$MA3.4@nwrddc02.gnilink.net>
Source record: 14293

"Roy Lewallen" <w7el@eznec.com> wrote in message
news:xJWdnWbG7NyxBP_XnZ2dnUVZ_gWdnZ2d@giganews.com...
> ve2pid wrote:
> > Hi to all,
> >
> > Hope that my question has some sense...: If we double the power
> > radiated by an antenna (+3 dB), how does it translate on the S-meter
> > at a receiver 'far' away.. i.e. is the difference in dB on that meter
> > has some mathematical relation to the 3 dB change at the transmitter?
> >
> > 73 de Pierre
>
> No, none at all. S-meters almost always just measure the AGC voltage,
> which is only approximately logarithmic. And manufacturers adjust the
> sensitivity of the meter to please the customers, who don't like "dead"
> meters. So the sensitivity of S-meters varies greatly from rig type to
> type and from one end of the scale to the other. I measured the
> sensitivity of the S-meter on my Icom 730 on one band. Here's how big an
> S-unit is on my rig:
>
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> S2 - S3 1.3 dB
> S3 - S4 1.6 dB
> S4 - S5 2.3 dB
> S5 - S6 1.8 dB
> S6 - S7 3.2 dB
> S7 - S8 3.1 dB
> S8 - S9 4.0 dB
> S9 - "S9 + 10 dB" 5.6 dB
> "S9 + 10 dB" - "S9 + 20 dB" 7.3 dB
> "S9 + 20 dB" - "S9 + 30 dB" 6.6 dB
> "S9 + 30 dB" - "S9 + 40 dB" 10.5 dB
> "S9 + 40 dB" - "S9 + 50 dB" 11.3 dB
> "S9 + 50 dB" - "S9 + 60 dB" 13.5 dB
>
> Now let's suppose that you built a new 5 element Yagi antenna and I
> honestly reported that your signal went from S2 to S6 when you switched
> to it from your dipole. The gain is really 7 dB, about par for the beam,
> but you read the postings on the Web and decide that an S-unit is
> "defined" as 6 dB, so the gain improvement must be 24 dB. Wow! Your
> modest beam has the same gain as a beam with a 25 WAVELENGTH boom and
> more than 50 elements! By making that incorrect assumption about the
> sensitivity of my S-meter, you've overestimated the gain by a factor of
63.

>
> S-meter sensitivities vary all over the map, so any assumption you make
> about how many dB in an S-unit is very likely wrong, and often grossly
> wrong.
>
> Roy Lewallen, W7EL

Nail on the head. A step attenunator in line will be the fastest way to determine the linearity of your scale if you can't afford a calibrated generator. FM rigs are all over the map on this because some radios have better limiting than others, and it might be actual limiter reading or some other derived reading.

882. Re: db relation TX/RX

Newsgroup: rec.radio.amateur.antenna
Date: 2009-07-19 14:47:14 UTC
From: JIMMIE <JIMMIEDEE123@YAHOO.COM>
Message-ID: <40988de0-b217-49c6-a68e-c968ddd9e639@32g2000yqj.googlegroups.com>
Source record: 14294

On Jul 19, 5:36 am, Roy Lewallen <w...@eznec.com> wrote:
> Rollie wrote:
>
> . . .I've always used the (6db per
>
> > S unit) as a general rule-of-thumb.
>
> Which is fine if you don't mind possibly being off by a factor of 50 or
> more, mistaking the gain of a 3 element beam for the gain of a 150
> element one. Or you might only be off by a factor of 10, thinking the 3
> element beam only has the gain of a 30 element beam. Shucks, what's a
> few dB anyway.
>
> Roy Lewallen, W7EL

All of my radios are at least 15 years old before DSP. I was wondering manufactureres that had gone to DSP were using it to make S meter indications more accurate. I am seeing this type of signal correction being made in some of the equipment that I work on that has gone to DSP.

Jimmie

883. Re: dB relation TX/RX

Newsgroup: rec.radio.amateur.antenna
Date: 2009-07-19 14:58:09 UTC
From: Ian Jackson <ianREMOVETHISjackson@g3ohx.demon.co.uk>
Message-ID: <OyEj$3JBSzYKFwgB@g3ohx.demon.co.uk>
Source record: 14295

In message <MPG.24cccde9af156c59896dc@news.bcsupernet.com>, Jitt
<tser827@yahoo.com> writes
>In article <753fee20-bfec-4b9a-81b2-
>d132addf2276@d32g2000yqh.googlegroups.com>,
>ve2pid@videotron.ca says...
>> Hi to all,
>>
>> Hope that my question has some sense...: If we double the power
>> radiated by an antenna (+3 dB), how does it translate on the S-meter
>> at a receiver 'far' away.. i.e. is the difference in dB on that meter
>> has some mathematical relation to the 3 dB change at the transmitter?
>>
>> 73 de Pierre
>>
> Only in theory. It is possible to write an expression
>which relates an increase in Tx power to Rx antenna power at
>the remote site, but I doubt if it would agree with observed
>values in the field.

I don't know what that 'expression' might be, but if an increase of TX
power was not matched by a corresponding equal increase of RX power, I
would immediately suspect that a rift was occurring in the space-time
continuum. Whether that corresponds to the 'correct' S-meter reading is
another matter.
--
Ian

884. Re: dB relation TX/RX

Newsgroup: rec.radio.amateur.antenna
Date: 2009-07-19 15:04:44 UTC
From: Ian Jackson <ianREMOVETHISjackson@g3ohx.demon.co.uk>
Message-ID: <9i3vLTKMYzYKFwmf@g3ohx.demon.co.uk>
Source record: 14296

In message <f8G8m.275$MA3.4@nwrddc02.gnilink.net>, JB
<nospam@goofball.net> writes
>"Roy Lewallen" <w7el@eznec.com> wrote in message
>news:xJWdnWbG7NyxBP_XnZ2dnUVZ_gWdnZ2d@giganews.com...
>> ve2pid wrote:
>> > Hi to all,
>> >
>> > Hope that my question has some sense...: If we double the power
>> > radiated by an antenna (+3 dB), how does it translate on the S-meter
>> > at a receiver 'far' away.. i.e. is the difference in dB on that meter
>> > has some mathematical relation to the 3 dB change at the transmitter?
>> >
>> > 73 de Pierre
>>
>> No, none at all. S-meters almost always just measure the AGC voltage,
>> which is only approximately logarithmic. And manufacturers adjust the
>> sensitivity of the meter to please the customers, who don't like "dead"
>> meters. So the sensitivity of S-meters varies greatly from rig type to
>> type and from one end of the scale to the other. I measured the
>> sensitivity of the S-meter on my Icom 730 on one band. Here's how big an
>> S-unit is on my rig:
>>
>> S1 - S2 1.4 dB
>> S2 - S3 1.3 dB
>> S3 - S4 1.6 dB
>> S4 - S5 2.3 dB
>> S5 - S6 1.8 dB
>> S6 - S7 3.2 dB
>> S7 - S8 3.1 dB
>> S8 - S9 4.0 dB
>> S9 - "S9 + 10 dB" 5.6 dB
>> "S9 + 10 dB" - "S9 + 20 dB" 7.3 dB
>> "S9 + 20 dB" - "S9 + 30 dB" 6.6 dB
>> "S9 + 30 dB" - "S9 + 40 dB" 10.5 dB
>> "S9 + 40 dB" - "S9 + 50 dB" 11.3 dB
>> "S9 + 50 dB" - "S9 + 60 dB" 13.5 dB
>>
>> Now let's suppose that you built a new 5 element Yagi antenna and I
>> honestly reported that your signal went from S2 to S6 when you switched
>> to it from your dipole. The gain is really 7 dB, about par for the beam,
>> but you read the postings on the Web and decide that an S-unit is
>> "defined" as 6 dB, so the gain improvement must be 24 dB. Wow! Your
>> modest beam has the same gain as a beam with a 25 WAVELENGTH boom and
>> more than 50 elements! By making that incorrect assumption about the

>> sensitivity of my S-meter, you've overestimated the gain by a factor of
>63.
>>
>> S-meter sensitivities vary all over the map, so any assumption you make
>> about how many dB in an S-unit is very likely wrong, and often grossly
>> wrong.
>>
>> Roy Lewallen, W7EL
>
>Nail on the head. A step attenunator in line will be the fastest way to
>determine the linearity of your scale if you can't afford a calibrated
>generator. FM rigs are all over the map on this because some radios have
>better limiting than others, and it might be actual limiter reading or some
>other derived reading.
>
You'll need an adequately-screened signal generator to do this test. If
it isn't, the signals which leak out can bypass the attenuator and enter
a not-too-well-screened receiver. If this happens, the results you get
will be false.
--
Ian

885. Re: dB relation TX/RX

Newsgroup: rec.radio.amateur.antenna
Date: 2009-07-19 15:06:39 UTC
From: Ian Jackson <ianREMOVETHISjackson@g3ohx.demon.co.uk>
Message-ID: <0SrtHwK$ZzYKFwEg@g3ohx.demon.co.uk>
Source record: 14297

In message <e7Gdneefg4-cdf_XnZ2dnUVZ_hCdnZ2d@giganews.com>, Roy Lewallen
<w7el@eznec.com> writes
>Sal M. Onella wrote:
>> I've heard the same thing, but the reality is that the S-meter
>>usually
>> follows the AGC and the signal for S9 could be different for every design.
>> But Flex radio and others define S9 as 50 uV. . .
>
>Adjusting the S-meter to read a specific value for one signal strength
>is simple, and there's often an adjustment for doing it. I think it's
>fairly common to find S9 to be around 50 uV -- on one band at least --
>although I wouldn't be surprised to see a fair amount of variation from
>band to band. But that has nothing to do with what the difference is
>between S7 and S8, S8 and S9, etc.
>
Isn't there a school of thought which says that, above 1000MHz, an
S-point is 3dB? [Don't ask me why!]
--
Ian

886. Re: db relation TX/RX

Newsgroup: rec.radio.amateur.antenna
Date: 2009-07-19 16:28:41 UTC
From: Jeff Liebermann <jeffl@cruzio.com>
Message-ID: <5sh665l115vc967905v8m25s4e92jd82s7@4ax.com>
Source record: 14298

On Sun, 19 Jul 2009 03:00:51 -0500, "Rollie" <rollie@iowatelecom.net>
wrote:

>www.qsl.net/k5lxp/projects/SMeter/SMeter.html
>
>Check the chart to see actual input readings. I've always used the (6db per
>S unit) as a general rule-of-thumb.

More receiver S-meter testing:
<http://www.seed-solutions.com/gregordy/Amateur%20Radio/Experimentation/SMeterBlues.htm#>
<http://www.smeter.net/slc/signal/strengths.php>

--
Jeff Liebermann jeffl@cruzio.com
150 Felker St #D http://www.LearnByDestroying.com
Santa Cruz CA 95060 http://802.11junk.com
Skype: JeffLiebermann AE6KS 831-336-2558

887. Re: dB relation TX/RX

Newsgroup: rec.radio.amateur.antenna
Date: 2009-07-19 17:05:26 UTC
From: JB <nospam@goofball.net>
Message-ID: <qnI8m.309$MA3.156@nwrddc02.gnilink.net>
Source record: 14299

"Ian Jackson" <ianREMOVETHISjackson@g3ohx.demon.co.uk> wrote in message
news:9i3vLTKMYzYKFwmf@g3ohx.demon.co.uk...
> In message <f8G8m.275$MA3.4@nwrddc02.gnilink.net>, JB
> <nospam@goofball.net> writes
> >"Roy Lewallen" <w7el@eznec.com> wrote in message
> >news:xJWdnWbG7NyxBP_XnZ2dnUVZ_gWdnZ2d@giganews.com...
> >> ve2pid wrote:
> >> > Hi to all,
> >> >
> >> > Hope that my question has some sense...: If we double the power
> >> > radiated by an antenna (+3 dB), how does it translate on the S-meter
> >> > at a receiver 'far' away.. i.e. is the difference in dB on that meter
> >> > has some mathematical relation to the 3 dB change at the transmitter?
> >> >
> >> > 73 de Pierre
> >>
> >> No, none at all. S-meters almost always just measure the AGC voltage,
> >> which is only approximately logarithmic. And manufacturers adjust the
> >> sensitivity of the meter to please the customers, who don't like "dead"
> >> meters. So the sensitivity of S-meters varies greatly from rig type to
> >> type and from one end of the scale to the other. I measured the
> >> sensitivity of the S-meter on my Icom 730 on one band. Here's how big
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> >> S-unit is on my rig:
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> >> S7 - S8 3.1 dB
> >> S8 - S9 4.0 dB
> >> S9 - "S9 + 10 dB" 5.6 dB
> >> "S9 + 10 dB" - "S9 + 20 dB" 7.3 dB
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> >> "S9 + 50 dB" - "S9 + 60 dB" 13.5 dB
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> >> Now let's suppose that you built a new 5 element Yagi antenna and I
> >> honestly reported that your signal went from S2 to S6 when you switched
> >> to it from your dipole. The gain is really 7 dB, about par for the
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> >> but you read the postings on the Web and decide that an S-unit is
> >> "defined" as 6 dB, so the gain improvement must be 24 dB. Wow! Your
> >> modest beam has the same gain as a beam with a 25 WAVELENGTH boom and
> >> more than 50 elements! By making that incorrect assumption about the
> >> sensitivity of my S-meter, you've overestimated the gain by a factor of
> >63.
> >>
> >> S-meter sensitivities vary all over the map, so any assumption you make
> >> about how many dB in an S-unit is very likely wrong, and often grossly
> >> wrong.
> >>
> >> Roy Lewallen, W7EL
> >
> >Nail on the head. A step attenunator in line will be the fastest way to
> >determine the linearity of your scale if you can't afford a calibrated
> >generator. FM rigs are all over the map on this because some radios have
> >better limiting than others, and it might be actual limiter reading or
some
> >other derived reading.
> >
> You'll need an adequately-screened signal generator to do this test. If
> it isn't, the signals which leak out can bypass the attenuator and enter
> a not-too-well-screened receiver. If this happens, the results you get
> will be false.
> --
> Ian

Good point. If the signal is off the air it is less likely to be an issue. You need to seriously work on your setup to get better than 60 db of resolution. I homebrewed the 3, 6, 10, 20 step attenuator from one of the ARRL publications and find it quite useful. Output cable is double shielded.

888. Re: dB relation TX/RX

Newsgroup: rec.radio.amateur.antenna
Date: 2009-07-19 18:31:02 UTC
From: Ian Jackson <ianREMOVETHISjackson@g3ohx.demon.co.uk>
Message-ID: <xF9cilCmZ2YKFwVE@g3ohx.demon.co.uk>
Source record: 14300

```
In message <qnI8m.309$MA3.156@nwrddc02.gnilink.net>, JB
<nospam@goofball.net> writes
>"Ian Jackson" <ianREMOVETHISjackson@g3ohx.demon.co.uk> wrote in message
>news:9i3vLTKMYzYKFwmf@g3ohx.demon.co.uk...
>> In message <f8G8m.275$MA3.4@nwrddc02.gnilink.net>, JB
>> <nospam@goofball.net> writes
>> >"Roy Lewallen" <w7el@eznec.com> wrote in message
>> >news:xJWdnWbG7NyxBP_XnZ2dnUVZ_gWdnZ2d@giganews.com...
>> >> ve2pid wrote:
>> >> > Hi to all,
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>> >> > Hope that my question has some sense...: If we double the power
>> >> > radiated by an antenna (+3 dB), how does it translate on the S-meter
>> >> > at a receiver 'far' away.. i.e. is the difference in dB on that meter
>> >> > has some mathematical relation to the 3 dB change at the transmitter?
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>> >> No, none at all. S-meters almost always just measure the AGC voltage,
>> >> which is only approximately logarithmic. And manufacturers adjust the
>> >> sensitivity of the meter to please the customers, who don't like "dead"
>> >> meters. So the sensitivity of S-meters varies greatly from rig type to
>> >> type and from one end of the scale to the other. I measured the
>> >> sensitivity of the S-meter on my Icom 730 on one band. Here's how big
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>> >> S-unit is on my rig:
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>> >> S1 - S2 1.4 dB
>> >> S2 - S3 1.3 dB
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>> >> S5 - S6 1.8 dB
>> >> S6 - S7 3.2 dB
>> >> S7 - S8 3.1 dB
>> >> S8 - S9 4.0 dB
>> >> S9 - "S9 + 10 dB" 5.6 dB
>> >> "S9 + 10 dB" - "S9 + 20 dB" 7.3 dB
>> >> "S9 + 20 dB" - "S9 + 30 dB" 6.6 dB
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>> >> "S9 + 40 dB" - "S9 + 50 dB" 11.3 dB
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>> >> Now let's suppose that you built a new 5 element Yagi antenna and I
>> >> honestly reported that your signal went from S2 to S6 when you switched
```

>> >> to it from your dipole. The gain is really 7 dB, about par for the
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>> >> but you read the postings on the Web and decide that an S-unit is
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>> >> modest beam has the same gain as a beam with a 25 WAVELENGTH boom and
>> >> more than 50 elements! By making that incorrect assumption about the
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>> >63.
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>> >> about how many dB in an S-unit is very likely wrong, and often grossly
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>> >Nail on the head. A step attenunator in line will be the fastest way to
>> >determine the linearity of your scale if you can't afford a calibrated
>> >generator. FM rigs are all over the map on this because some radios have
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>> it isn't, the signals which leak out can bypass the attenuator and enter
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>> will be false.
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>Good point. If the signal is off the air it is less likely to be an issue.
>You need to seriously work on your setup to get better than 60 db of
>resolution. I homebrewed the 3, 6, 10, 20 step attenuator from one of the
>ARRL publications and find it quite useful. Output cable is double
>shielded.
>
But, with homebrew attenuators, beware of the RF 'jumping over' the
switches at the higher frequencies. This can limit the maximum
attenuation attainable to something which is a lot less than the
switches indicate. [Well, mine did, anyway!!]
--
Ian

889. Re: db relation TX/RX

Newsgroup: rec.radio.amateur.antenna
Date: 2009-07-19 19:20:40 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <LaidnZwyZ_GK7_7XnZ2dnUVZ_jednZ2d@giganews.com>
Source record: 14151

Thanks for the references.

Where does the fiction come from that an "S-unit", presumably the marks on our S-meters, is or for some reason should be, 6 dB -- that this is a "correct" or "ideal" value? To me it's the same as "defining" pi to be 3.2, as the Indiana House of Representatives once did. "Defining" an S-unit to be some value has no effect on our S-meters, any more than the proposed Indiana law changed the ratio of the circumference to diameter of a circle.

Roy Lewallen, W7EL

Jeff Liebermann wrote:
> On Sun, 19 Jul 2009 03:00:51 -0500, "Rollie" <rollie@iowatelecom.net>
> wrote:
>
>> www.qsl.net/k5lxp/projects/SMeter/SMeter.html
>>
>> Check the chart to see actual input readings. I've always used the (6db per
>> S unit) as a general rule-of-thumb.
>
> More receiver S-meter testing:
>
<http://www.seed-solutions.com/gregordy/Amateur%20Radio/Experimentation/SMeterBlues.htm#>
> <http://www.smeter.net/slc/signal/strengths.php>
>
>
>
>

890. Re: dB relation TX/RX

Newsgroup: rec.radio.amateur.antenna
Date: 2009-07-19 19:43:01 UTC
From: You <you@shadow.orgs>
Message-ID: <you-CBCB08.11430019072009@unknown.usenetserver.com>
Source record: 14152

In article <0SrtHwK$ZzYKFwEg@g3ohx.demon.co.uk>,
Ian Jackson <ianREMOVETHISjackson@g3ohx.demon.co.uk> wrote:

> In message <e7Gdneefg4-cdf_XnZ2dnUVZ_hCdnZ2d@giganews.com>, Roy Lewallen
> <w7el@eznec.com> writes
> >Sal M. Onella wrote:
> >> I've heard the same thing, but the reality is that the S-meter
> >>usually
> >> follows the AGC and the signal for S9 could be different for every design.
> >> But Flex radio and others define S9 as 50 uV. . .
> >
> >Adjusting the S-meter to read a specific value for one signal strength
> >is simple, and there's often an adjustment for doing it. I think it's
> >fairly common to find S9 to be around 50 uV -- on one band at least --
> >although I wouldn't be surprised to see a fair amount of variation from
> >band to band. But that has nothing to do with what the difference is
> >between S7 and S8, S8 and S9, etc.
> >
> Isn't there a school of thought which says that, above 1000MHz, an
> S-point is 3dB? [Don't ask me why!]

there are "Many Schools of thought".... but unless someone rewrites the
Laws of Physics, and increase in Tx Output will show and Increase of Rx
Input, on the same path, period. S-meters are NOT necessarily actually
showing Rx Receive Signal Strength, and they are rarely, either linear,
or even Logrythmnic in presentation of what they do represent. In the
Microwave Field if you measure a path, and also calculate that path,
comparing the two will show that they are very close, if you did it
right....

891. Re: dB relation TX/RX

Newsgroup: rec.radio.amateur.antenna
Date: 2009-07-19 20:24:33 UTC
From: Ian Jackson <ianREMOVETHISjackson@g3ohx.demon.co.uk>
Message-ID: <c4kH9nNBE4YKFwTQ@g3ohx.demon.co.uk>
Source record: 14153

In message <you-CBCB08.11430019072009@unknown.usenetserver.com>, You
<you@shadow.orgs> writes
>In article <0SrtHwK$ZzYKFwEg@g3ohx.demon.co.uk>,
> Ian Jackson <ianREMOVETHISjackson@g3ohx.demon.co.uk> wrote:
>
>> In message <e7Gdneefg4-cdf_XnZ2dnUVZ_hCdnZ2d@giganews.com>, Roy Lewallen
>> <w7el@eznec.com> writes
>> >Sal M. Onella wrote:
>> >> I've heard the same thing, but the reality is that the S-meter
>> >>usually
>> >> follows the AGC and the signal for S9 could be different for every design.
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>> >Adjusting the S-meter to read a specific value for one signal strength
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>> >although I wouldn't be surprised to see a fair amount of variation from
>> >band to band. But that has nothing to do with what the difference is
>> >between S7 and S8, S8 and S9, etc.
>> >
>> Isn't there a school of thought which says that, above 1000MHz, an
>> S-point is 3dB? [Don't ask me why!]
>
>there are "Many Schools of thought".... but unless someone rewrites the
>Laws of Physics, and increase in Tx Output will show and Increase of Rx
>Input, on the same path, period.

I'm not sure what statement you are arguing against. Has anyone said
otherwise?

>S-meters are NOT necessarily actually
>showing Rx Receive Signal Strength

So what DO they 'show'? OK, they may not 'show' it very accurately, and
the way they work is usually a very indirect way of 'measuring' the
signal power or voltage at the receiver input, but I'm sure that this is
what the do 'show'.

For convenience, most S-meters use the AGC voltage to provide an
indication of incoming signal level. However, some FM-only CB sets have
no AGC, and have to pick off an input level dependent voltage from
somewhere else in the circuit. These are usually VERY inaccurate. What
alternative methods do you suggest?

>, and they are rarely, either linear

No one is disagreeing. S-meters are renowned liars. Mind you, I have a CB set (which has an AGC line) which is converted to 10m, and this has an S-meter which has remarkably consistent 6dB S-points between S2 and S9 +20dB.
>,
>or even Logrythmnic

No one's disagreeing.

> in presentation of what they do represent. In the
>Microwave Field if you measure a path, and also calculate that path,
>comparing the two will show that they are very close, if you did it
>right....

You are undoubtedly correct. But did anyone say that this was not the case?
--
Ian

892. Re: db relation TX/RX

Newsgroup: rec.radio.amateur.antenna
Date: 2009-07-19 21:13:24 UTC
From: Jeff Liebermann <jeffl@cruzio.com>
Message-ID: <jrv6651q7b272sti3tcdalotmcfv3j2gun@4ax.com>
Source record: 14154

On Sun, 19 Jul 2009 12:20:40 -0700, Roy Lewallen <w7el@eznec.com>
wrote:

>Thanks for the references.

One more (in German):
<http://www.s-meter.de>
This one is rather interesting in that you can use the site to make an
S-meter scale.

Software to convert a perfectly good digital receiver data output,
into marginally useful S-Units:
<http://www.seed-solutions.com/gregordy/Software/SMeterLite.htm>

>Where does the fiction come from that an "S-unit", presumably the marks
>on our S-meters, is or for some reason should be, 6 dB -- that this is a
>"correct" or "ideal" value?

Using S-Units is its own punishment. I couldn't find anything on the
history of the S-Meter that would substantiate my guess that long ago
some major radio company incorporated a signal meter into their
receiver. Soon after, everyone had to have one. Whether they did
anything useful is probably debatable. I guess it's not considered a
proper ham radio unless it has an S-meter. For example, the new
Elecraft K3 now has a software S-Meter for those that just can't live
without one:
<http://www.sight.net/K3Meter/>

My guess(tm) is that the 6dB per S-Unit was probably fairly close for
the early tube type receivers. Below S-9 was probably below the AGC
threshold. Above S-9 was more compressed above the knee in the AGC
curve. AGC thresholds in old tube radios was probably a fairly strong
signal, mostly because the RF/IF chain didn't have much gain. 6dB per
S-Unit was probably fairly close and fairly linear below the AGC
threshold.

Roll forward 90 years and we have sensitive receivers that have an AGC
knee at a few dB above the noise floor, with lots of overload handling
ability to maintain a wide AGC range, and sensitivities much better
than tube radios. If I maintain my assertion that S9 is the AGC knee,
there would be perhaps one or two S-Units below S9, and the rest of
the scale would be highly compressed "dB over S9" units. That would
be a rather strange looking S-Meter, but might also be more useful
than the current dual range meter.

I'll give cellular designers minimal credit for replacing the
inaccurate S-Meter with a less accurate 5 bar graph. Not satisfied

with the bar graph abomination, they also invented that rather
non-linear RSSI indication, and then cut it in half again by using
0-100 instead of 0-255.

I suspect that in the future, when we're all carrying FTL sub-space
communicators, Tricorders, and direct thought transmission radios, the
associated projection or heads up display will probably include an
S-Meter.

>To me it's the same as "defining" pi to be
>3.2, as the Indiana House of Representatives once did. "Defining" an
>S-unit to be some value has no effect on our S-meters, any more than the
>proposed Indiana law changed the ratio of the circumference to diameter
>of a circle.

So it is written, so it must be.

Actually, I didn't think of it much until you mentioned it, but
6dB/S-Unit is rather improbable. The base line noise level for an
antique AM radio is probably about 10uv which I presume is S1. S9 is
loosely defined as 50uv. 6dB per S-unit implies a:
9*6 = 54dB
range, which is considerably larger than the:
20 log (50/10) = 14dB
range.

If the 14dB range from S1 to S9 were considered the basis for
calibration, then:
14dB / 9 S-Units = 1.5dB per S-Unit
nowhere close to 6dB per S-Unit

Or, if 6dB per S-unit, and S9=50uv are considered sacred, then 54dB
below 50uv (-72dBm) =
-72dBm -45dBm = -117dBm = 0.3uv, which is rather improbable.
However, that will work for a modern receiver, with fairly good front
end sensitivity and gain.

>Roy Lewallen, W7EL
>
>Jeff Liebermann wrote:
>> On Sun, 19 Jul 2009 03:00:51 -0500, "Rollie" <rollie@iowatelecom.net>
>> wrote:
>>
>>> www.qsl.net/k5lxp/projects/SMeter/SMeter.html
>>>
>>> Check the chart to see actual input readings. I've always used the (6db per
>>> S unit) as a general rule-of-thumb.
>>
>> More receiver S-meter testing:
>>
<http://www.seed-solutions.com/gregordy/Amateur%20Radio/Experimentation/SMeterBlues.htm#>
>> <http://www.smeter.net/slc/signal/strengths.php>

--
Jeff Liebermann jeffl@cruzio.com
150 Felker St #D http://www.LearnByDestroying.com
Santa Cruz CA 95060 http://802.11junk.com
Skype: JeffLiebermann AE6KS 831-336-2558

893. Re: re:db relation TX/RX

Newsgroup: rec.radio.amateur.antenna
Date: 2009-07-20 02:53:46 UTC
From: "Sal M. Onella" <salmonella@food.poisoning.org>
Message-ID: <HgR8m.25018$ZN.4839@newsfe23.iad>
Source record: 14157

"Rollie" <rollie@iowatelecom.net> wrote in message
news:h3ujrm$8cp$1@news.netins.net...
> www.qsl.net/k5lxp/projects/SMeter/SMeter.html
>
> Check the chart to see actual input readings. I've always used the (6db
per
> S unit) as a general rule-of-thumb.
>
>

The chart is interesting. Where the "S-Meter Standard" numbers come from, in blue on the left? If I were to create such an "S-Meter Standard" chart myself without source or authentication, I might be inclined to set S-9 equal to -73 dBm/50 uV and extend the S-values down from there at the popular rate of 6 dB per S-unit.

Chart values do decrease at 6 dB per S-unit but the chart sets -72 dBm/56.8 uV as S-9, vice 73 dBm, 50 uV. 1 dB isn't much to quibble about, but it does make me inquire about the source of the data.

Can anyone elaborate? TKS

BTW, http://en.wikipedia.org/wiki/S_meter provides a similar chart based around 73 dBm as S-9. It sources IARU Region 1 Technical Recommendation R.1. I looked for it; no luck.

Sal

894. rotator coax

Newsgroup: rec.radio.amateur.antenna
Date: 2009-07-20 02:58:18 UTC
From: ml <m@di.net>
Message-ID: <m-349CBF.22581819072009@news.optonline.net>
Source record: 14155

hi

Was going to put up some antennas turned via a rotator.

Normally I guess people use some 'flexible' type coax like a
RG213

Wondering if cost was no object is there some coax that is
better rated to withstand this type of repeated flexing ??

Thanks

895. Re: dB relation TX/RX

Newsgroup: rec.radio.amateur.antenna
Date: 2009-07-20 03:02:12 UTC
From: Owen Duffy <none@no.where>
Message-ID: <Xns9C4E849E0628Anonenowhere@61.9.191.5>
Source record: 14156

ve2pid <ve2pid@videotron.ca> wrote in news:753fee20-bfec-4b9a-81b2-d132addf2276@d32g2000yqh.googlegroups.com:

> Hi to all,
>
> Hope that my question has some sense...: If we double the power
> radiated by an antenna (+3 dB), how does it translate on the S-meter
> at a receiver 'far' away.. i.e. is the difference in dB on that meter
> has some mathematical relation to the 3 dB change at the transmitter?
>
> 73 de Pierre

Pierre,

There is a convention that S meters are calibrated for S9 at 50μV (CW) at the receiver terminals, and the other S units are spaced out at 6dB/Sunit. (Some of the other conventions mean the same thing, eg 100μV EMF as one manufacturer is want to specify).

So, if S9 is -73dBm, then S0 ought to be -127dBm.

In a typical receiver with a sensitivity of around -135dBm for 10dB S/N, the AGC will be delayed until the signal is about 20dB higher than that, or about -115dBm... so an AGC derived solution cannot indicate less than S2 on that scale. Nevertheless they do.

At the high end, extremely strong signals are a challenge for nice scale shape.

In my experience, modern transceivers that provide the facility for three point calibration of the S meter are reasonalby good between around S6 and S9+20dB... give or take. Reasonably means withing a dB or two per Sunit.

S meter calibration is invariably dependent on a particular setup of preamps and front end attenuators. Some of the outrageous 'measurements' one hears of are done in an 'uncalibrated' state (eg preamp ON when it is meant to be OFF.

The S meter behaves fairly similarly to a quasi peak detector, responding to most of the peaks, but not all, and much higher than average power. So applying the S meter to impulse type signals introduces another issue.

http://vk1od.net/software/fsm/ details another method of making more accurate measurements of signal level and field strength using a comms receiver. The system compared favourably in a field comparison with a commercial EMC receiver and active loop on a BPL measurement exercise.

Owen

896. Re: db relation TX/RX

Newsgroup: rec.radio.amateur.antenna
Date: 2009-07-20 03:12:38 UTC
From: "Sal M. Onella" <salmonella@food.poisoning.org>
Message-ID: <HgR8m.25019$ZN.1595@newsfe23.iad>
Source record: 14158

"Roy Lewallen" <w7el@eznec.com> wrote in message
news:LaidnZwyZ_GK7_7XnZ2dnUVZ_jednZ2d@giganews.com...
> Thanks for the references.
>
> Where does the fiction come from that an "S-unit", presumably the marks
> on our S-meters, is or for some reason should be, 6 dB -- that this is a
> "correct" or "ideal" value?

Might be IARU Region 1 Technical Recommendation R.1. See
http://www.algonet.se/~k-jarl/ssa/IARU/smeter.html

Do we have to adhere to it? No, but if enough equipment makers implemented
it, we might have a tough time ignoring it.

Sal

897. Re: dB relation TX/RX

Newsgroup: rec.radio.amateur.antenna
Date: 2009-07-20 03:14:41 UTC
From: tom <news4792@taring.org>
Message-ID: <4a63e14b$0$85067$8046368a@newsreader.iphouse.net>
Source record: 14159

Jitt wrote:
>>
> Only in theory. It is possible to write an expression
> which relates an increase in Tx power to Rx antenna power at
> the remote site, but I doubt if it would agree with observed
> values in the field.

And this is one place (of pretty much all in RF) where theory absolutely matches reality. Your doubts are misplaced.

Could you please give us an example, with all relevant data, where they did not agree?

tom
K0TAR

898. Re: re:db relation TX/RX

Newsgroup: rec.radio.amateur.antenna
Date: 2009-07-20 05:13:40 UTC
From: Owen Duffy <none@no.where>
Message-ID: <Xns9C4E9AE7D57CBnonenowhere@61.9.191.5>
Source record: 14160

"Sal M. Onella" <salmonella@food.poisoning.org> wrote in
news:HgR8m.25018$ZN.4839@newsfe23.iad:

...
> Chart values do decrease at 6 dB per S-unit but the chart sets -72
> dBm/56.8 uV as S-9, vice 73 dBm, 50 uV. 1 dB isn't much to quibble
> about, but it does make me inquire about the source of the data.

Actually, it is 146dB lower than that... 50ÿV in 50 ohms is -73dBm.

Owen

899. Re: 50 ohm Ground Plane Antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2009-07-20 05:48:07 UTC
From: Claude Frantz <r31dmaeu@unibw.de>
Message-ID: <h410enpvh1@news.mixmin.net>
Source record: 14161

Many thanks to you all !

Best 73 de Claude

900. All band Sterba Curtain

Newsgroup: rec.radio.amateur.antenna
Date: 2009-07-20 06:08:00 UTC
From: Claude Frantz <r31dmaeu@unibw.de>
Message-ID: <h411k1$r7k$1@news.mixmin.net>
Source record: 14162

N0KHQ and some other have recommended to use a Sterba Curtain antenna designed for 10 m, as an all band antenna for 160 to 10 m.

http://www.dxzone.com/cgi-bin/dir/jump2.cgi?ID=16537

Is this really a good recommendation ?

What makes this antenna so good as an all band antenna for 160 to 10 m ?

Thanks a lot !

Best 73 de Claude

901. Re: re:db relation TX/RX

Newsgroup: rec.radio.amateur.antenna
Date: 2009-07-20 06:38:54 UTC
From: "Sal M. Onella" <salmonella@food.poisoning.org>
Message-ID: <4iU8m.15450$YU5.9149@newsfe21.iad>
Source record: 14163

"Owen Duffy" <none@no.where> wrote in message
news:Xns9C4E9AE7D57CBnonenowhere@61.9.191.5...
> "Sal M. Onella" <salmonella@food.poisoning.org> wrote in
> news:HgR8m.25018$ZN.4839@newsfe23.iad:
>
> ...
> > Chart values do decrease at 6 dB per S-unit but the chart sets -72
> > dBm/56.8 uV as S-9, vice 73 dBm, 50 uV. 1 dB isn't much to quibble
> > about, but it does make me inquire about the source of the data.
>
> Actually, it is 146dB lower than that... 50�V in 50 ohms is -73dBm.
>
> Owen

Yeah, I missed a minus sign there, didn't I? Good catch.
Here it is: -

Sal

902. Re: rotator coax

Newsgroup: rec.radio.amateur.antenna
Date: 2009-07-20 11:57:27 UTC
From: John Passaneau <jxp16@psu.edu>
Message-ID: <h41m38$883m$1@tr22n12.aset.psu.edu>
Source record: 14164

ml wrote:
> hi
>
> Was going to put up some antennas turned via a rotator.
>
> Normally I guess people use some 'flexible' type coax like a
> RG213
>
> Wondering if cost was no object is there some coax that is
> better rated to withstand this type of repeated flexing ??
>
>
> Thanks
Hi Ml:

There used to be a "type" of RG-8 coax called "superflex" that was much more flexable than standard RG-8 (this was back when RG-8 was still a mil standard)but I've not seen it for some time. But I've used RG-213 for years with no problems just remember to leave a big enough loop so the coax is not stressed to much. The kind of coax with the foil under the braid is NOT good for this loop.

John Passaneau W3JXP

903. Re: re:db relation TX/RX

Newsgroup: rec.radio.amateur.antenna
Date: 2009-07-20 15:34:02 UTC
From: JB <nospam@goofball.net>
Message-ID: <K709m.183$646.108@nwrddc01.gnilink.net>
Source record: 14165

"Sal M. Onella" <salmonella@food.poisoning.org> wrote in message
news:4iU8m.15450$YU5.9149@newsfe21.iad...
>
> "Owen Duffy" <none@no.where> wrote in message
> news:Xns9C4E9AE7D57CBnonenowhere@61.9.191.5...
> > "Sal M. Onella" <salmonella@food.poisoning.org> wrote in
> > news:HgR8m.25018$ZN.4839@newsfe23.iad:
> >
> > ...
> > > Chart values do decrease at 6 dB per S-unit but the chart sets -72
> > > dBm/56.8 uV as S-9, vice 73 dBm, 50 uV. 1 dB isn't much to quibble
> > > about, but it does make me inquire about the source of the data.
> >
> > Actually, it is 146dB lower than that... 50ï¿½V in 50 ohms is -73dBm.
> >
> > Owen
>
> Yeah, I missed a minus sign there, didn't I? Good catch.
> Here it is: -
>
> Sal
>
I seem to recall that the KWM-2a was calibrated for 100uv for s9. 1db is
well within the resolution of a lot of lab gear. 50uv would be more
appropriate for a modern radio that should be that much hotter. The RST
system of reporting was supposed to be a relative thing anyway.

904. Re: dB relation TX/RX

Newsgroup: rec.radio.amateur.antenna
Date: 2009-07-20 15:34:44 UTC
From: JB <nospam@goofball.net>
Message-ID: <o809m.184$646.168@nwrddc01.gnilink.net>
Source record: 14166

"Ian Jackson" <ianREMOVETHISjackson@g3ohx.demon.co.uk> wrote in message
news:xF9cilCmZ2YKFwVE@g3ohx.demon.co.uk...
> In message <qnI8m.309$MA3.156@nwrddc02.gnilink.net>, JB
> <nospam@goofball.net> writes
> >"Ian Jackson" <ianREMOVETHISjackson@g3ohx.demon.co.uk> wrote in message
> >news:9i3vLTKMYzYKFwmf@g3ohx.demon.co.uk...
> >> In message <f8G8m.275$MA3.4@nwrddc02.gnilink.net>, JB
> >> <nospam@goofball.net> writes
> >> >"Roy Lewallen" <w7el@eznec.com> wrote in message
> >> >news:xJWdnWbG7NyxBP_XnZ2dnUVZ_gWdnZ2d@giganews.com...
> >> >> ve2pid wrote:
> >> >> > Hi to all,
> >> >> >
> >> >> > Hope that my question has some sense...: If we double the power
> >> >> > radiated by an antenna (+3 dB), how does it translate on the
S-meter
> >> >> > at a receiver 'far' away.. i.e. is the difference in dB on that
meter
> >> >> > has some mathematical relation to the 3 dB change at the
transmitter?
> >> >> >
> >> >> > 73 de Pierre
> >> >>
> >> >> No, none at all. S-meters almost always just measure the AGC
voltage,
> >> >> which is only approximately logarithmic. And manufacturers adjust
the
> >> >> sensitivity of the meter to please the customers, who don't like
"dead"
> >> >> meters. So the sensitivity of S-meters varies greatly from rig type
to
> >> >> type and from one end of the scale to the other. I measured the
> >> >> sensitivity of the S-meter on my Icom 730 on one band. Here's how
big
> >an
> >> >> S-unit is on my rig:
> >> >>
> >> >> S1 - S2 1.4 dB
> >> >> S2 - S3 1.3 dB
> >> >> S3 - S4 1.6 dB
> >> >> S4 - S5 2.3 dB
> >> >> S5 - S6 1.8 dB
> >> >> S6 - S7 3.2 dB
> >> >> S7 - S8 3.1 dB

> >> >> S8 - S9 4.0 dB
> >> >> S9 - "S9 + 10 dB" 5.6 dB
> >> >> "S9 + 10 dB" - "S9 + 20 dB" 7.3 dB
> >> >> "S9 + 20 dB" - "S9 + 30 dB" 6.6 dB
> >> >> "S9 + 30 dB" - "S9 + 40 dB" 10.5 dB
> >> >> "S9 + 40 dB" - "S9 + 50 dB" 11.3 dB
> >> >> "S9 + 50 dB" - "S9 + 60 dB" 13.5 dB
> >> >>
> >> >> Now let's suppose that you built a new 5 element Yagi antenna and I
> >> >> honestly reported that your signal went from S2 to S6 when you
switched
> >> >> to it from your dipole. The gain is really 7 dB, about par for the
> >beam,
> >> >> but you read the postings on the Web and decide that an S-unit is
> >> >> "defined" as 6 dB, so the gain improvement must be 24 dB. Wow! Your
> >> >> modest beam has the same gain as a beam with a 25 WAVELENGTH boom
and
> >> >> more than 50 elements! By making that incorrect assumption about the
> >> >> sensitivity of my S-meter, you've overestimated the gain by a factor
of
> >> >63.
> >> >>
> >> >> S-meter sensitivities vary all over the map, so any assumption you
make
> >> >> about how many dB in an S-unit is very likely wrong, and often
grossly
> >> >> wrong.
> >> >>
> >> >> Roy Lewallen, W7EL
> >> >
> >> >Nail on the head. A step attenunator in line will be the fastest way
to
> >> >determine the linearity of your scale if you can't afford a calibrated
> >> >generator. FM rigs are all over the map on this because some radios
have
> >> >better limiting than others, and it might be actual limiter reading or
> >some
> >> >other derived reading.
> >> >
> >> You'll need an adequately-screened signal generator to do this test. If
> >> it isn't, the signals which leak out can bypass the attenuator and
enter
> >> a not-too-well-screened receiver. If this happens, the results you get
> >> will be false.
> >> --
> >> Ian
> >
> >Good point. If the signal is off the air it is less likely to be an
issue.
> >You need to seriously work on your setup to get better than 60 db of

> >resolution. I homebrewed the 3, 6, 10, 20 step attenuator from one of
the
> >ARRL publications and find it quite useful. Output cable is double
> >shielded.
> >
> But, with homebrew attenuators, beware of the RF 'jumping over' the
> switches at the higher frequencies. This can limit the maximum
> attenuation attainable to something which is a lot less than the
> switches indicate. [Well, mine did, anyway!!]
> --
> Ian

http://www.arrl.org/notes/hbk-templates/stepatt.pdf
This is the one I based mine on. Fewer sections. The Slide switches are
superior because of lower inductance and the bulkheads help with isolation.
I found there was another version in the TIS section:
http://www.arrl.org/tis/info/pdf/9506033.pdf

I looked again at mine and it is actually 10, 10 and 20 built on G10 scraps.
The blue foam Color TV tuner cleaner helped with insertion loss performance
(if you can find it anymore). It seems to work well and in testing with
several FM service monitors, seems to be within 1db to UHF. I had built it
with T-hunting in mind. For more attenuation I use fixed BNC attenuators.

905. Re: All band Sterba Curtain

Newsgroup: rec.radio.amateur.antenna
Date: 2009-07-20 15:46:19 UTC
From: Rick <ricknj10@hotmail.com>
Message-ID: <fj09m.187$646.71@nwrddc01.gnilink.net>
Source record: 14167

> Is this really a good recommendation ?
No, not at all. I ran the model and it is less than 10 dbi on ten meters.
A 3 ele beam would blow it away.

> What makes this antenna so good as an all band antenna for 160 to 10 m ?
Nothing at all. A random piece of wire will do as well.

Rick K2XT

906. Re: dB relation TX/RX

Newsgroup: rec.radio.amateur.antenna
Date: 2009-07-20 15:56:05 UTC
From: Ian Jackson <ianREMOVETHISjackson@g3ohx.demon.co.uk>
Message-ID: <NIwDxKIVOJZKFwKT@g3ohx.demon.co.uk>
Source record: 14168

```
In message <o809m.184$646.168@nwrddc01.gnilink.net>, JB
<nospam@goofball.net> writes
>"Ian Jackson" <ianREMOVETHISjackson@g3ohx.demon.co.uk> wrote in message
>news:xF9cilCmZ2YKFwVE@g3ohx.demon.co.uk...
>> In message <qnI8m.309$MA3.156@nwrddc02.gnilink.net>, JB
>> <nospam@goofball.net> writes
>> >"Ian Jackson" <ianREMOVETHISjackson@g3ohx.demon.co.uk> wrote in message
>> >news:9i3vLTKMYzYKFwmf@g3ohx.demon.co.uk...
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>> >> <nospam@goofball.net> writes
>> >> >"Roy Lewallen" <w7el@eznec.com> wrote in message
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>> >> >> > radiated by an antenna (+3 dB), how does it translate on the
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>> >> >> > 73 de Pierre
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>> >> >> which is only approximately logarithmic. And manufacturers adjust
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>> >> >> meters. So the sensitivity of S-meters varies greatly from rig type
>to
>> >> >> type and from one end of the scale to the other. I measured the
>> >> >> sensitivity of the S-meter on my Icom 730 on one band. Here's how
>big
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>> >> >> S-unit is on my rig:
>> >> >>
>> >> >> S1 - S2 1.4 dB
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>> >> >> S3 - S4 1.6 dB
>> >> >> S4 - S5 2.3 dB
>> >> >> S5 - S6 1.8 dB
```

>> >> >> S6 - S7 3.2 dB
>> >> >> S7 - S8 3.1 dB
>> >> >> S8 - S9 4.0 dB
>> >> >> S9 - "S9 + 10 dB" 5.6 dB
>> >> >> "S9 + 10 dB" - "S9 + 20 dB" 7.3 dB
>> >> >> "S9 + 20 dB" - "S9 + 30 dB" 6.6 dB
>> >> >> "S9 + 30 dB" - "S9 + 40 dB" 10.5 dB
>> >> >> "S9 + 40 dB" - "S9 + 50 dB" 11.3 dB
>> >> >> "S9 + 50 dB" - "S9 + 60 dB" 13.5 dB
>> >> >>
>> >> >> Now let's suppose that you built a new 5 element Yagi antenna and I
>> >> >> honestly reported that your signal went from S2 to S6 when you
>switched
>> >> >> to it from your dipole. The gain is really 7 dB, about par for the
>> >beam,
>> >> >> but you read the postings on the Web and decide that an S-unit is
>> >> >> "defined" as 6 dB, so the gain improvement must be 24 dB. Wow! Your
>> >> >> modest beam has the same gain as a beam with a 25 WAVELENGTH boom
>and
>> >> >> more than 50 elements! By making that incorrect assumption about the
>> >> >> sensitivity of my S-meter, you've overestimated the gain by a factor
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>> >> >63.
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>> >> >> S-meter sensitivities vary all over the map, so any assumption you
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>> >> >> about how many dB in an S-unit is very likely wrong, and often
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>> >> >> wrong.
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>> >> >> Roy Lewallen, W7EL
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>> >> >Nail on the head. A step attenunator in line will be the fastest way
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>> >> >determine the linearity of your scale if you can't afford a calibrated
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>> >> >better limiting than others, and it might be actual limiter reading or
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>enter
>> >> a not-too-well-screened receiver. If this happens, the results you get
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>> >> --
>> >> Ian
>> >
>> >Good point. If the signal is off the air it is less likely to be an

>issue.
>> >You need to seriously work on your setup to get better than 60 db of
>> >resolution. I homebrewed the 3, 6, 10, 20 step attenuator from one of
>the
>> >ARRL publications and find it quite useful. Output cable is double
>> >shielded.
>> >
>> But, with homebrew attenuators, beware of the RF 'jumping over' the
>> switches at the higher frequencies. This can limit the maximum
>> attenuation attainable to something which is a lot less than the
>> switches indicate. [Well, mine did, anyway!!]
>> --
>> Ian
>
>http://www.arrl.org/notes/hbk-templates/stepatt.pdf
>This is the one I based mine on. Fewer sections. The Slide switches are
>superior because of lower inductance and the bulkheads help with isolation.
>I found there was another version in the TIS section:
>http://www.arrl.org/tis/info/pdf/9506033.pdf
>
As the pictures show, there is screening between the switches (even
though it's a bit skimpy on the second unit). Even in the first, for the
ultimate in isolation, it would be even better if there was an RF gasket
on the inside of the top cover which, when screwed down, makes contact
with the tops of all the screens, and makes each switch compartment
virtually watertight.

>I looked again at mine and it is actually 10, 10 and 20 built on G10 scraps.
>The blue foam Color TV tuner cleaner helped with insertion loss performance
>(if you can find it anymore). It seems to work well and in testing with
>several FM service monitors, seems to be within 1db to UHF. I had built it
>with T-hunting in mind. For more attenuation I use fixed BNC attenuators.
>
--
Ian

907. Re: All band Sterba Curtain

Newsgroup: rec.radio.amateur.antenna
Date: 2009-07-20 17:32:34 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <hga965peqrreo5689h76jbu8umkco7rggr@4ax.com>
Source record: 14169

On Mon, 20 Jul 2009 08:08:00 +0200, Claude Frantz <r31dmaeu@unibw.de>
wrote:

>What makes this antenna so good as an all band antenna for 160 to 10 m ?

Nothing in particluar.

73's
Richard Clark, KB7QHC

908. Re: All band Sterba Curtain

Newsgroup: rec.radio.amateur.antenna
Date: 2009-07-20 17:57:16 UTC
From: Registered User <n4jvp@ix.netcom.com>
Message-ID: <eja965hcj6cbh6bhf7955g8bd1mij4d8g4@4ax.com>
Source record: 14170

On Mon, 20 Jul 2009 08:08:00 +0200, Claude Frantz <r31dmaeu@unibw.de>
wrote:

>N0KHQ and some other have recommended to use a Sterba Curtain antenna
>designed for 10 m, as an all band antenna for 160 to 10 m.
>
>http://www.dxzone.com/cgi-bin/dir/jump2.cgi?ID=16537
>
>Is this really a good recommendation ?
>
If a yagi or quad is not practical (trees, power lines, expense, etc.)
a Sterba curtain is a viable alternative. I use a pair on 6M with
one's pattern being N/S and the other's being E/W. One antenna is
matched with a HB 6M balanced tuner while a commercial HF balanced
tuner does the matching for the other.

Depending upon the available room additional bays can be easily added
to a Sterba curtain. Like any antenna HAAT matters. Even so I have
worked EU with a 5 bay curtain mounted 30 feet up.

>What makes this antenna so good as an all band antenna for 160 to 10 m ?
>
A 10M Sterba curtain is a 'good' all-band HF antenna because it does
work better than no antenna at all. A 10M Sterba curtain will show
some directivity on 12M and possibly 15M and 17M as well. Beyond that
it becomes more of a random wire.

73 de n4jvp

>Thanks a lot !
>
>Best 73 de Claude

909. Re: dB relation TX/RX

Newsgroup: rec.radio.amateur.antenna
Date: 2009-07-20 20:27:37 UTC
From: Owen Duffy <none@no.where>
Message-ID: <Xns9C4F41B83F77Cnonenowhere@61.9.191.5>
Source record: 14171

Owen Duffy <none@no.where> wrote in
news:Xns9C4E849E0628Anonenowhere@61.9.191.5:

...
> In a typical receiver with a sensitivity of around -135dBm for 10dB
> S/N, the AGC will be delayed until the signal is about 20dB higher
> than that, or about -115dBm... so an AGC derived solution cannot
> indicate less than S2 on that scale. Nevertheless they do.
>

That should read:

In a typical receiver with a sensitivity of around -135dBm for 0dB S/N, the AGC will be delayed until the signal is about 20dB higher than that, or about -115dBm... so an AGC derived solution cannot indicate less than S2 on that scale. Nevertheless they do.

Owen

910. Re: dB relation TX/RX

Newsgroup: rec.radio.amateur.antenna
Date: 2009-07-20 20:35:37 UTC
From: AE5NE <AE5NE@AE5NE.com>
Message-ID: <pan.2009.07.20.20.35.34@AE5NE.com>
Source record: 14172

On Sun, 19 Jul 2009 07:31:01 -0700, Jitt wrote:

> In article <753fee20-bfec-4b9a-81b2-
> d132addf2276@d32g2000yqh.googlegroups.com>, ve2pid@videotron.ca says...
>> Hi to all,
>>
>> Hope that my question has some sense...: If we double the power
>> radiated by an antenna (+3 dB), how does it translate on the S-meter at
>> a receiver 'far' away.. i.e. is the difference in dB on that meter has
>> some mathematical relation to the 3 dB change at the transmitter?
>>
>> 73 de Pierre
>>
> Only in theory. It is possible to write an expression
> which relates an increase in Tx power to Rx antenna power at the remote
> site, but I doubt if it would agree with observed values in the field.

If they did not - any linear mode such as SSB would have a pretty hard
time working!

AE5NE

911. Re: dB relation TX/RX

Newsgroup: rec.radio.amateur.antenna
Date: 2009-07-20 20:45:34 UTC
From: Ian Jackson <ianREMOVETHISjackson@g3ohx.demon.co.uk>
Message-ID: <L+eicdBudNZKFwoW@g3ohx.demon.co.uk>
Source record: 14173

In message <pan.2009.07.20.20.35.34@AE5NE.com>, AE5NE <AE5NE@AE5NE.com>
writes
>On Sun, 19 Jul 2009 07:31:01 -0700, Jitt wrote:
>
>> In article <753fee20-bfec-4b9a-81b2-
>> d132addf2276@d32g2000yqh.googlegroups.com>, ve2pid@videotron.ca says...
>>> Hi to all,
>>>
>>> Hope that my question has some sense...: If we double the power
>>> radiated by an antenna (+3 dB), how does it translate on the S-meter at
>>> a receiver 'far' away.. i.e. is the difference in dB on that meter has
>>> some mathematical relation to the 3 dB change at the transmitter?
>>>
>>> 73 de Pierre
>>>
>> Only in theory. It is possible to write an expression
>> which relates an increase in Tx power to Rx antenna power at the remote
>> site, but I doubt if it would agree with observed values in the field.
>
>
>If they did not - any linear mode such as SSB would have a pretty hard
>time working!
>
Aye, Captain. Ye canna change the laws of physics.
--
Ian

912. Best 144/420 antenna for attic installation?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-07-21 00:28:43 UTC
From: HamRadio@dontask.com
Message-ID: <_dGdnSgGSMJUlvjXnZ2dnUVZ_u-dnZ2d@giganews.com>
Source record: 14174

I would appreciate some recommendations for a 144/420 MHz pole antenna to be mounted in my attic. I
would like it to have radials so I don't have to put a metal plate under it.

Thank you for your suggestions.

913. Re: All band Sterba Curtain

Newsgroup: rec.radio.amateur.antenna
Date: 2009-07-21 02:16:32 UTC
From: Rick <ricknj10@hotmail.com>
Message-ID: <4y99m.302$646.232@nwrddc01.gnilink.net>
Source record: 14175

> Even so I have worked EU with a 5 bay curtain mounted 30 feet up.
>
Do you know if you could also have worked EU at the same time if you had,
say a 2 element beam
on a 4 ft boom?
Or even a dipole?

Maybe if you had a converted CB vertical your signal into EU would have been
30 db stronger?

See my point?

Rick K2XT

914. Re:Best 144/440 Antenna for Attic Installation

Newsgroup: rec.radio.amateur.antenna
Date: 2009-07-21 03:33:07 UTC
From: Rollie <rollie@iowatelecom.net>
Message-ID: <h43ctn$al2$1@news.netins.net>
Source record: 14176

The Arrowantennas.com OSJ 146/440 J Pole antenna should work great for you.
They're small and very inexpensive. Mine works great. Rollie

915. Re: db relation TX/RX

Newsgroup: rec.radio.amateur.antenna
Date: 2009-07-21 04:05:33 UTC
From: orfus <orfus@orfus.net>
Message-ID: <k8b9m.12265$eS5.2024@newsfe25.iad>
Source record: 14177

Hello,

Roy, with all the respect i owe you, you are barking up the wrong tree.
1 S-point should be 6 dB. Manufacturers choose not to do this for
obvious cost reasons. Yet this is the definition, and they should work
on it, especially so now, with digital techniques.
Remains the definition of S9, supposedly different on HF & VHF. I am not
so sure about this, but strongly support HF S9 = 50 uV.

Thanks for your enlightening comments on this newsgroup.

Olivier, HB9CEM / AE7AL

Roy Lewallen wrote:
> Thanks for the references.
>
> Where does the fiction come from that an "S-unit", presumably the marks
> on our S-meters, is or for some reason should be, 6 dB -- that this is a
> "correct" or "ideal" value? To me it's the same as "defining" pi to be
> 3.2, as the Indiana House of Representatives once did. "Defining" an
> S-unit to be some value has no effect on our S-meters, any more than the
> proposed Indiana law changed the ratio of the circumference to diameter
> of a circle.
>
> Roy Lewallen, W7EL
>
> Jeff Liebermann wrote:
>> On Sun, 19 Jul 2009 03:00:51 -0500, "Rollie" <rollie@iowatelecom.net>
>> wrote:
>>
>>> www.qsl.net/k5lxp/projects/SMeter/SMeter.html
>>>
>>> Check the chart to see actual input readings. I've always used the
>>> (6db per S unit) as a general rule-of-thumb.
>>
>> More receiver S-meter testing:
>>
<http://www.seed-solutions.com/gregordy/Amateur%20Radio/Experimentation/SMeterBlues.htm#>
>>
>> <http://www.smeter.net/slc/signal/strengths.php>
>>
>>
>>
>>

916. Re: dB relation TX/RX

Newsgroup: rec.radio.amateur.antenna
Date: 2009-07-21 04:31:33 UTC
From: JB <nospam@goofball.net>
Message-ID: <Fwb9m.528$MA3.16@nwrddc02.gnilink.net>
Source record: 14178

> >http://www.arrl.org/notes/hbk-templates/stepatt.pdf
> >This is the one I based mine on. Fewer sections. The Slide switches are
> >superior because of lower inductance and the bulkheads help with
isolation.
> >I found there was another version in the TIS section:
> >http://www.arrl.org/tis/info/pdf/9506033.pdf
> >
> As the pictures show, there is screening between the switches (even
> though it's a bit skimpy on the second unit). Even in the first, for the
> ultimate in isolation, it would be even better if there was an RF gasket
> on the inside of the top cover which, when screwed down, makes contact
> with the tops of all the screens, and makes each switch compartment
> virtually watertight.
>
Tin plated solder wick

917. Re: Best 144/420 antenna for attic installation?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-07-21 04:50:07 UTC
From: orfus <orfus@orfus.net>
Message-ID: <6Ob9m.30633$FP2.7828@newsfe05.iad>
Source record: 14179

Discone !!

HamRadio@dontask.com wrote:
> I would appreciate some recommendations for a 144/420 MHz pole antenna to be mounted in my attic. I
> would like it to have radials so I don't have to put a metal plate under it.
>
> Thank you for your suggestions.

918. Re: dB relation TX/RX

Newsgroup: rec.radio.amateur.antenna
Date: 2009-07-21 05:07:43 UTC
From: JB <nospam@goofball.net>
Message-ID: <z2c9m.337$646.235@nwrddc01.gnilink.net>
Source record: 14180

You figure out these things when you have more time than money or sense. I might not make it to mars before someone with a budget though.

Actually it turns out the second version might have better isolation, because it turns out coupling between the resistors and the switch terminals is more unwanted than between the attenuator sections themselves. But it is wise to remember that probably 20db at each switch is the most to be expected because of the coupling within the switch. It is probably a good thing to compartmentalize also, to realize a maximum combined attenuation with all sections engaged. His worry seemed to be trying to keep 50 ohms between sections when all switches are bypassed, but I doubt that there is 50 ohms through the switches themselves. Of course if any section is engaged, the return loss would make it a moot point.

I guess in the end, the switch itself becomes the limiting factor in the performance of the thing, as with any RF switching project. Hard to find non-inductive resistors too but surface mount chips might be a good answer to that.

919. Re: All band Sterba Curtain

Newsgroup: rec.radio.amateur.antenna
Date: 2009-07-21 05:14:58 UTC
From: Registered User <n4jvp@ix.netcom.com>
Message-ID: <nnga65pp72s2qfk86a9bd200gc5o70slc1@4ax.com>
Source record: 14181

On Tue, 21 Jul 2009 02:16:32 GMT, "Rick" <ricknj10@hotmail.com> wrote:

>> Even so I have worked EU with a 5 bay curtain mounted 30 feet up.
>>
>Do you know if you could also have worked EU at the same time if you had,
>say a 2 element beam
>on a 4 ft boom?
>Or even a dipole?
>
>Maybe if you had a converted CB vertical your signal into EU would have been
>30 db stronger?
>
What kind of vertical provides 30 dBi?

Gain estimates for Sterba curtains are all over the map, 2 dBi per bay
is a commonly considered figure. A 5 bay curtain's gain is better than
any two element yagi or a single dipole. It may have been possible to
work EU with a either the yagi or a dipole but I have neither.

>See my point?
>
No. There is no place at this QTH where a yagi can be mounted within a
hundred feet of the shack. Even with a HB yagi the required coax,
mast, rotor, rotor cable, guy supplies etc. represent a substantial
expense. Window line, insulators, rope and #14 THHN is a lot less
costly. Of course if someone wanted to gift the funds ... hi,

My seven-bay curtain was built and hung at 50 feet in less than day
with no assistance. I don't believe that can be done from the ground
up with a plumber's delight. Wire antennas don't require antenna
parties to go up or down. This makes both experimentation and
maintenance very easy,

My primary HF antenna is a full-wave loop for 160M. This antenna is
also fed using a balanced tuner and window line. The loop works well
on 6M but lacks the directionality on rx that a curtain provides. With
my curtains another benefit is going from NS to EW only takes the flip
of a switch.

There are situations where a Sterba curtain is a more viable choice
than a yagi. In my case even if trees and power lines didn't preclude
mounting a rooftop yagi, the landlord might not consent to such an
installation.

73 de n4jvp

920. Re: dB relation TX/RX

Newsgroup: rec.radio.amateur.antenna
Date: 2009-07-21 07:13:49 UTC
From: Ian Jackson <ianREMOVETHISjackson@g3ohx.demon.co.uk>
Message-ID: <KVOSWFCtqWZKFw6+@g3ohx.demon.co.uk>
Source record: 14182

In message <Fwb9m.528$MA3.16@nwrddc02.gnilink.net>, JB
<nospam@goofball.net> writes
>> >http://www.arrl.org/notes/hbk-templates/stepatt.pdf
>> >This is the one I based mine on. Fewer sections. The Slide switches are
>> >superior because of lower inductance and the bulkheads help with
>isolation.
>> >I found there was another version in the TIS section:
>> >http://www.arrl.org/tis/info/pdf/9506033.pdf
>> >
>> As the pictures show, there is screening between the switches (even
>> though it's a bit skimpy on the second unit). Even in the first, for the
>> ultimate in isolation, it would be even better if there was an RF gasket
>> on the inside of the top cover which, when screwed down, makes contact
>> with the tops of all the screens, and makes each switch compartment
>> virtually watertight.
>>
>Tin plated solder wick
>
Many CATV modules use a gasket made from the equivalent of a sheet of
spongy foam rubber/plastic backed with BacoFoil.
--
Ian

921. Re: Best 144/420 antenna for attic installation?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-07-21 07:17:28 UTC
From: Ian Jackson <ianREMOVETHISjackson@g3ohx.demon.co.uk>
Message-ID: <BF3QC7CIuWZKFw7B@g3ohx.demon.co.uk>
Source record: 14183

In message <_dGdnSgGSMJUlvjXnZ2dnUVZ_u-dnZ2d@giganews.com>,
HamRadio@dontask.com writes
>I would appreciate some recommendations for a 144/420 MHz pole antenna
>to be mounted in my attic. I
>would like it to have radials so I don't have to put a metal plate under it.
>
>Thank you for your suggestions.

If you have the height, a dual-band J-pole?
--
Ian

922. Re: Best 144/440 Antenna for Attic Installation

Newsgroup: rec.radio.amateur.antenna
Date: 2009-07-21 13:56:02 UTC
From: Alan WA4SCA <ALANBIDDLE70@YAHOO.COM>
Message-ID: <uvhb65lr8a2r59h9082d3rjgithi2s7nv0@4ax.com>
Source record: 14184

I will second the OSJ 146/440. It is a "side by side" dual band
J-pole so it is only the height of a basic 2 meter J-pole, very
sturdy, and does not require a ground plane. Mine is on the roof, but
I have a good friend who has his installed in the attic of a condo. He
hears and transmits very well.

--
Alan
WA4SCA

923. Question on Antenna Voltage

Newsgroup: rec.radio.amateur.antenna
Date: 2009-07-21 22:19:27 UTC
From: AndyS <andysharpe@juno.com>
Message-ID: <6393ff9e-5924-4e79-bd65-25d7ff8322f8@k19g2000yqn.googlegroups.com>
Source record: 14185

Andy asks

When one uses the equations for a loop antenna to determine what
voltage will be developed at the antenna terminals due to a passing
signal,
is the calculated voltage with the antenna terminated in an open
circuit,
or a resistance equal to the characteristic impedance of the antenna,
or some other load ?

I haven't seen any of the texts state specifically whether the
voltage
is open circuit or otherwise....

Same question for any antenna ---- if I use Power Density times
Capture Area , it implies that the antenna is terminated in a
resistive
matched load....but I haven't seen it specifically stated. Perhaps
the
issue is too obvious to write down. But I would like to see it.

I would appreciate some small discussion on this. It is a very
simple
thing to clear up if anyone here has first hand knowledge of the
issue.

Thanks, W4OAH

924. Re: Question on Antenna Voltage

Newsgroup: rec.radio.amateur.antenna
Date: 2009-07-21 23:45:00 UTC
From: christofire <christofire@btinternet.com>
Message-ID: <Mp6dnWaf3IqdzvvXnZ2dnUVZ8qydnZ2d@bt.com>
Source record: 14186

"AndyS" <andysharpe@juno.com> wrote in message
news:6393ff9e-5924-4e79-bd65-25d7ff8322f8@k19g2000yqn.googlegroups.com...
> Andy asks
>
> When one uses the equations for a loop antenna to determine what
> voltage will be developed at the antenna terminals due to a passing
> signal,
> is the calculated voltage with the antenna terminated in an open
> circuit,
> or a resistance equal to the characteristic impedance of the antenna,
> or some other load ?
>
> I haven't seen any of the texts state specifically whether the
> voltage
> is open circuit or otherwise....
>
> Same question for any antenna ---- if I use Power Density times
> Capture Area , it implies that the antenna is terminated in a
> resistive
> matched load....but I haven't seen it specifically stated. Perhaps
> the
> issue is too obvious to write down. But I would like to see it.
>
> I would appreciate some small discussion on this. It is a very
> simple
> thing to clear up if anyone here has first hand knowledge of the
> issue.
>
> Thanks, W4OAH

The simplest case is to specify that the antenna is terminated in a resistance equal to its own radiation resistance (e.g. 73 ohms for a thin-wire dipole) then the sums are made straightforward and equal amounts of power are developed in the termination and the antenna. If the antenna is essentially lossless, the power 'dissipated' in the radiation resistance is re-radiated.

Open-circuit voltage wouldn't be a good guide to its coupling factor for a lot of common antennas (which are called on to produce current) but, of course, it works fine for active monopoles.

Chris

925. Re: Best 144/440 Antenna for Attic Installation

Newsgroup: rec.radio.amateur.antenna
Date: 2009-07-22 02:23:53 UTC
From: tom <news4792@taring.org>
Message-ID: <4a667859$0$85064$8046368a@newsreader.iphouse.net>
Source record: 14187

Rollie wrote:
> The Arrowantennas.com OSJ 146/440 J Pole antenna should work great for you.
> They're small and very inexpensive. Mine works great. Rollie
>
>

I built a replica, since he provides the dimensions, and it works very well.

Just make sure you decouple the feedline with a choke.

tom
K0TAR

926. Re: Question on Antenna Voltage

Newsgroup: rec.radio.amateur.antenna
Date: 2009-07-22 03:45:21 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <w-Cdnb0zFcr8FvvXnZ2dnUVZ_gOdnZ2d@giganews.com>
Source record: 14188

What sort of loop are you asking about? If it's a small loop (that is, small in terms of wavelength):

AndyS wrote:
> Andy asks
>
> When one uses the equations for a loop antenna to determine what
> voltage will be developed at the antenna terminals due to a passing
> signal,
> is the calculated voltage with the antenna terminated in an open
> circuit,
> or a resistance equal to the characteristic impedance of the antenna,
> or some other load ?

Most likely open circuit. If not, it would be terminated in the complex conjugate of its impedance as a source, which (for a small loop) will be a very large impedance consisting of a large amount of inductive reactance in series with a very small resistance.

> I haven't seen any of the texts state specifically whether the
> voltage
> is open circuit or otherwise....
>
> Same question for any antenna ---- if I use Power Density times
> Capture Area , it implies that the antenna is terminated in a
> resistive
> matched load....but I haven't seen it specifically stated. Perhaps
> the
> issue is too obvious to write down. But I would like to see it.

Here it would be terminated in the complex conjugate of its impedance, and the result of your calculation -- power -- would be the power dissipated in that very small resistance.

The phrase "resistive matched load" you used above is an oxymoron because of the very large reactance required for a matched load.

> I would appreciate some small discussion on this. It is a very
> simple
> thing to clear up if anyone here has first hand knowledge of the
> issue.
>
> Thanks, W4OAH

Roy Lewallen, W7EL

927. Re: Question on Antenna Voltage

Newsgroup: rec.radio.amateur.antenna
Date: 2009-07-22 04:22:53 UTC
From: Owen Duffy <none@no.where>
Message-ID: <Xns9C50924BC52Dnonenowhere@61.9.191.5>
Source record: 14189

AndyS <andysharpe@juno.com> wrote in news:6393ff9e-5924-4e79-bd65-25d7ff8322f8@k19g2000yqn.googlegroups.com:

> Andy asks
>
> When one uses the equations for a loop antenna to determine what
> voltage will be developed at the antenna terminals due to a passing
> signal,
> is the calculated voltage with the antenna terminated in an open
> circuit,
> or a resistance equal to the characteristic impedance of the antenna,
> or some other load ?
>
> I haven't seen any of the texts state specifically whether the
> voltage
> is open circuit or otherwise....

The article at http://www.vk1od.net/antenna/SmallUntunedSquareLoop/index.htm should answer your question.

Owen

928. Re: Tracking down power line noise

Newsgroup: rec.radio.amateur.antenna
Date: 2009-07-22 05:37:42 UTC
From: George Csahanin <george@dyb.com>
Message-ID: <h468vgvlp1@news.eternal-september.org>
Source record: 14190

I once had them track down noise when I lived in North Texas, and the source
was insulators with loose hardware about 2 miles away, destroying 40 and 80
for me. Yup, it is all hooked to a huge antenna...

-GeorgeC

W2DB

"Rick" <ricknj10@hotmail.com> wrote in message
news:Oso5m.222$N5.28@nwrddc01.gnilink.net...
>I have been wrestling with power line noise here for almost a year.
> Power company hasn't been very successful in locating it so I started a
> coordinated search
> on my own. Thinking if I can tell them for certain which poles have the
> problem they can confirm and maybe fix.
>
> The noise is a deafening 20 over 9 on 80 meters which makes DXing on 80
> and 160 impossible.
> The noise can be heard at my QTH as high as 10 and 6 meters but it isn't
> troublesome on those bands because it can only be heard at about an S7
> level when the yagi is pointed at 210 degrees.
> I thought maybe my means of analysis might be interesting to discuss and
> maybe others would have other suggestions.
>
> There are 7000 volt lines running on a highway past my house. Tracking
> the source on 80m seems impossible.
> I made a 2 ft square loop antenna, which has some directivity but the
> noise level using it seems to not change
> much as I travel the highway. On 10 meters, using a 4 ft whip on the car,
> the noise is also hard to localize but
> seems to increase in the vicinity of 1 mile from home. 6 meters using a
> whip is similar. I found that if I'm close
> enough that the 6 meter signal is around S7 I can switch to 2 meters and
> again peak the noise by driving slowly up and down the road.
>
> So using this technique and driving 2 miles in each direction I have
> managed to find 2 spots, one on the highway and one on a cross road, each
> about 1.2 miles from the QTH. I then built a 432 MHz 8 element quagi beam
> which enabled me to pinpoint the offending pole at these two locations.
> (I have put a LOT of effort into this project !)
>
> At this time I am waiting (hoping) for a return call from the power
> company to verify my dicovery.
>
> So my question for the group - Can either of these locations 1.2 miles

> distant cause such horrendous noise levels on 80 meters? Is it possible
> that a weaker noise source much closer to me is the culprit or are all of
> the power line malfunctions detectable on 440 MHz?
>
> Rick K2XT
>

929. Re: Best 144/420 antenna for attic installation?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-07-22 06:11:11 UTC
From: "Sal M. Onella" <salmonella@food.poisoning.org>
Message-ID: <64y9m.66331$Qg6.15373@newsfe14.iad>
Source record: 14191

<HamRadio@dontask.com> wrote in message
news:_dGdnSgGSMJUlvjXnZ2dnUVZ_u-dnZ2d@giganews.com...
> I would appreciate some recommendations for a 144/420 MHz pole antenna to be mounted in my attic. I
> would like it to have radials so I don't have to put a metal plate under it.
>
> Thank you for your suggestions.

2m J-pole antenna is my recommendation. It delivers a reasonable match on 70cm, too. One drawback is the elevation pattern at 70cm -- the major lobes are not at the horizon and much of the power is wasted if you're working terrestrial. The antenna is about 57 inches tall and, as an end-fed dipole, requires no ground plane. Google <j-pole ham build> and take your pick from the many articles.

Of course you could make two j-poles, one for 2m and one for 70cm. They can even be "stacked" all in one piece with separate feedlines. Tricky. Saw one article years ago but can't find now.

A single structure dual band antenna is here in the ARRL Members Only Section:
http://www2.arrl.org/members-only/tis/info/pdf/0010050.pdf

Sal

930. Re:Best 144/440 Antenna for Attic Installation

Newsgroup: rec.radio.amateur.antenna
Date: 2009-07-22 09:55:27 UTC
From: HamRadio@dontask.com
Message-ID: <cYednTkTyZyUf_vXnZ2dnUVZ_j-dnZ2d@giganews.com>
Source record: 14192

On 20-Jul-2009, "Rollie" <rollie@iowatelecom.net> wrote:

> The Arrowantennas.com OSJ 146/440 J Pole antenna should work great for you.
> They're small and very inexpensive. Mine works great. Rollie

I see that they have a 4.8/5 rating on eham.net. I will definitely look into them.

From the picture, it looks like one of the poles has a SO239 connector, but the others don't. Are
the two other poles passive?

What's the radiation pattern?

Another antenna I've been looking at is the Diamond X50A.

931. AV-601 AVAIR VSWR POWER Meter

Newsgroup: rec.radio.amateur.antenna
Date: 2009-07-22 10:06:23 UTC
From: barett <barett@blueyounder.co.uk>
Message-ID: <twB9m.51656$Ib5.3664@newsfe24.ams2>
Source record: 14193

Anyone here used or is using the Avair AV-601 VSWR power meter and are they any good?

Thanks

932. Re: Tracking down power line noise

Newsgroup: rec.radio.amateur.antenna
Date: 2009-07-22 10:50:22 UTC
From: wood@itd.nrl.navy.mil
Message-ID: <wood-2207090650220001@jbw-mac.itd.nrl.navy.mil>
Source record: 14194

In article <h468vgvlp1@news.eternal-september.org>, "George Csahanin"
<george@dyb.com> wrote:

> I once had them track down noise when I lived in North Texas, and the source
> was insulators with loose hardware about 2 miles away, destroying 40 and 80
> for me. Yup, it is all hooked to a huge antenna...
>
> -GeorgeC
>
> W2DB
>
>

Hello, and years ago I needed to do some electrically-small antenna tests at one of our NRL field sites. These tests involved the entire 2-30 MHz band so it was always a challenge to find a quiet spot (We were using rack-mounted R-390 receivers in the testbed). In addition to the usual atmospheric noise and radio station interference there was always what appeared to be some local electrical noise that came and went and was worse on some days than others. A.C power to the site was brought in via utility poles to pad-mounted step-down transformers.

One of my cowarkers suggested a technique for locating interference that he claimed to have success with in the past: A hand-held sledge hammer is used to whack the utility pole while listening for an associated change in noise on a cheap MW band transistor radio tuned off-station. My cowarker claimed that if a cracked insulator(s) was the perpetrator this technique would confirm it.

We tried this technique at the site but with no success. We also drove down the site access road about 1/4 mile with a car AM radio tuned off-station and also got the interference in the vicinity of the utility poles. As a result we never did locate the source. My conclusion was that while the interference was being coupled to the antenna-under-test it may have been generated at a considerable distance from the test site and conducted via the overhead power lines. Sincerely, and 73s from N4GGO,

John Wood (Code 5550) e-mail: wood@itd.nrl.navy.mil
Naval Research Laboratory
4555 Overlook Avenue, SW
Washington, DC 20375-5337

933. Re: Best 144/420 antenna for attic installation?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-07-22 16:10:13 UTC
From: JB <nospam@goofball.net>
Message-ID: <FRG9m.539$646.491@nwrddc01.gnilink.net>
Source record: 14195

<HamRadio@dontask.com> wrote in message
news:_dGdnSgGSMJUlvjXnZ2dnUVZ_u-dnZ2d@giganews.com...
> I would appreciate some recommendations for a 144/420 MHz pole antenna to
be mounted in my attic. I
> would like it to have radials so I don't have to put a metal plate under
it.
>
> Thank you for your suggestions.
Most any mobile antenna may be mounted using radials vs. metal plate. Metal
plate need only be 19" radius disk for maximum performance. My favorite is
the Larsen NMO270. Overall height is 35" maximum with better gain than a
J-pole. You can make your own base radial mount or get one of theirs.
Available through AEA or HRO. the NMO is the Motorola mobile mount so
mounting solutions abound by a great many antenna manufacturers.

934. Re: dB relation TX/RX

Newsgroup: rec.radio.amateur.antenna
Date: 2009-07-22 16:34:46 UTC
From: Antonio Vernucci <vernucci@tin.it>
Message-ID: <4a673fa6$0$14401$4fafbaef@reader5.news.tin.it>
Source record: 14196

> No one is disagreeing. S-meters are renowned liars. Mind you, I have a CB set
> (which has an AGC line) which is converted to 10m, and this has an S-meter
> which has remarkably consistent 6dB S-points between S2 and S9 +20dB.

Even considering an ideal S-meter having a perfect one-S point-per-6 dB
response, the answer to the original question is that only in theory doubling
the transmit power turns into a 3-dB increase in S-meter reading.

In practice what the S-meter "measures" is the sum of the "wanted" signal power,
plus the background noise power (which on e.g. 160 meters could be quite high),
plus possibly the power other signals falling in the receiver bandwidth. If the
wanted signal is not strong enough to overwhelm al other contributions, doubling
the transmit power will not turn into a 3-db S-meter reading increase.

73

Tony I0JX, Rome Italy

:

If we double the power
radiated by an antenna (+3 dB), how does it translate on the S-meter
at a receiver 'far' away..

935. Re: dB relation TX/RX

Newsgroup: rec.radio.amateur.antenna
Date: 2009-07-22 16:41:42 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <15ge65ljtiiuf3aea7mohq3hjvq9ch4u1j@4ax.com>
Source record: 14197

On Wed, 22 Jul 2009 18:34:46 +0200, "Antonio Vernucci"
<vernucci@tin.it> wrote:

>Even considering an ideal S-meter ... If the
>wanted signal is not strong enough to overwhelm al other contributions, doubling
>the transmit power will not turn into a 3-db S-meter reading increase.

It would have to. Any additional power to the general spectrum is
going to raise the power in the spectrum - even if you cannot
distinguish it. That is, afterall, how the spectrum gets to become so
noisy. If you are tuned to the radiator that has gone through a power
boost, then your S-Meter should indicate it.

73's
Richard Clark, KB7QHC

936. Re: dB relation TX/RX

Newsgroup: rec.radio.amateur.antenna
Date: 2009-07-22 17:35:40 UTC
From: Antonio Vernucci <vernucci@tin.it>
Message-ID: <4a674dec$0$37431$4fafbaef@reader2.news.tin.it>
Source record: 14198

>>Even considering an ideal S-meter ... If the
>>wanted signal is not strong enough to overwhelm al other contributions,
>>doubling
>>the transmit power will not turn into a 3-db S-meter reading increase.
>
> It would have to. Any additional power to the general spectrum is
> going to raise the power in the spectrum - even if you cannot
> distinguish it. That is, afterall, how the spectrum gets to become so
> noisy. If you are tuned to the radiator that has gone through a power
> boost, then your S-Meter should indicate it.
>
> 73's
> Richard Clark, KB7QHC

Yes, but not quite 3dB when transmit power is doubled. A 3-dB increase would only occur if the "wanted" signal would be alone in the receiver bandwidth (viz no background noise, no interfering signal).

73

Tony I0JX

937. Re: Question on Antenna Voltage

Newsgroup: rec.radio.amateur.antenna
Date: 2009-07-22 18:05:02 UTC
From: Wimpie <wimabctel@tetech.nl>
Message-ID: <ff465730-758a-48d3-a4b7-dfdafb08c3dc@k6g2000yqn.googlegroups.com>
Source record: 14199

On 22 jul, 00:19, AndyS <andysha...@juno.com> wrote:
> Andy asks
>
> When one uses the equations for a loop antenna to determine what
> voltage will be developed at the antenna terminals due to a passing
> signal,
> is the calculated voltage with the antenna terminated in an open
> circuit,
> or a resistance equal to the characteristic impedance of the antenna,
> or some other load ?
>
> I haven't seen any of the texts state specifically whether the
> voltage
> is open circuit or otherwise....
>
> Same question for any antenna ---- if I use Power Density times
> Capture Area , it implies that the antenna is terminated in a
> resistive
> matched load....but I haven't seen it specifically stated. Perhaps
> the
> issue is too obvious to write down. But I would like to see it.
>
> I would appreciate some small discussion on this. It is a very
> simple
> thing to clear up if anyone here has first hand knowledge of the
> issue.
>
> Thanks, W4OAH

Hello Andy,

In some cases you can check it yourself by calculating the no-load
voltage, compare this with the published data.

As for a single turn coil:

EMF = 2*pi*f*Aloop*B (all rms values), Pdens = E*H,
Zo=377 and B = u*H

EMF = 0.41*A*f*sqrt(Pdens), f in MHz, A in m^2, single turn.

Wire length of loop < 0.25 lambda. Pdens = plane wave Power Flux
Density (W/m^2).

Formula can also be applied on multi-turn loops, as long as the
operating frequency is far below the self-resonant frequency of the

multi-turn loop.

When: (reactance of coil) < Rload, output voltage is almost equal to the unloaded voltage (EMF). For narrow band operation, you can add a capacitor in series to cancel the inductance. You will get the EMF across an about 50 Ohms resistive load (as radiation resistance of small loops is far less then 50 Ohms). I used this approach on a single turn loop made out of strip material (the strip material is to lower the self inductance of the loop).

Of course when using good matching, you can get more output power with a given PFD.

Generally spoken, antennas for EMC measurement purposes (mostly not well- matched for the HF and lower range) are mostly specified with a given load (mostly 50 Ohms).

For antennas specified with capture area:
Pout = (capture area)*Pdens.
Capture area = gain*lamda^2/4pi. Gain NOT in dB.

The actual loaded voltage depends on the input impedance of the antenna. The no load voltage is twice the loaded voltage, only when the antenna is perfectly matched to a resistive load.

When the gain, antenna factor or capture area is specified under non-perfectly matched condition or is specified for a perfectly matched non-resistive load, the EMF is generally NOT twice the loaded output voltage. As an example you can consider a non-tuned loop.

I hope this helps you a bit.

Best regards,

Wim
PA3DJS
www.tetech.nl
Remove the obvious three-letter combination in case of PM.

938. Re: Best 144/420 antenna for attic installation?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-07-22 18:07:10 UTC
From: dplatt@radagast.org
Message-ID: <e31kj6-mhn.ln1@radagast.org>
Source record: 14200

In article <64y9m.66331$Qg6.15373@newsfe14.iad>,
Sal M. Onella <salmonella@food.poisoning.org> wrote:

>Of course you could make two j-poles, one for 2m and one for 70cm. They can
>even be "stacked" all in one piece with separate feedlines. Tricky. Saw
>one article years ago but can't find now.

Google "Copper Cactus" for that one.

I was never able to figure out the design details of the "single
feedline" Copper Cactus - it uses some internal matching stubs which
were not well-described.

The dual-feedline Copper Cactus worked out pretty well for me - I used
it for around 5 years (roof-mounted) until I replaced it with a
commercial tri-band antenna.

--
Dave Platt <dplatt@radagast.org> AE6EO
Friends of Jade Warrior home page: http://www.radagast.org/jade-warrior
I do _not_ wish to receive unsolicited commercial email, and I will
boycott any company which has the gall to send me such ads!

939. Re: Best 144/440 Antenna for Attic Installation

Newsgroup: rec.radio.amateur.antenna
Date: 2009-07-22 18:22:24 UTC
From: dplatt@radagast.org
Message-ID: <002kj6-mhn.ln1@radagast.org>
Source record: 14201

>I see that they have a 4.8/5 rating on eham.net. I will definitely look
>into them.
>
>From the picture, it looks like one of the poles has a SO239 connector,
>but the others don't. Are
>the two other poles passive?

The Arrow is an "open-sleeve" J-pole design. The other poles aren't actively fed, but make up a critical part of the antenna design.

A standard (traditional) J-pole is an extended zepp. It consists of a half-wave end-fed radiator, connected to a transmission-line matching section (nominally a quarter-wavelength). The matching section is usually made up of an extension to the radiator, and a second element located an inch or two away.

The matching section is usually shorted at the bottom, and fed at a tap point an inch or two above the short... a point at which the high impedance of the end-fed half-wave radiator has been transformed down by the transmission line to something close to 50 ohms.

An "open sleeve" J-pole (which Cebik calls a "nontraditional" J-pole on his web site) is a bit different. It's somewhat shorter (the long arm is less than 3/4 wavelength), the short arm is longer than 1/4 wavelength, and it's fed differently (at the bottom, with one arm being grounded and the other being insulated from ground and fed directly from the feedline). Cebik's website has a very nice discussion of it.

The Arrow OSJ is actually two open-sleeve dipoles, in parallel. The longest arm and the shortest arm are grounded, and the medium-length arm is connected to the hot side of the feedline.

On 2 meters, the long and medium arms form an OSJ and are active... the short arm is simply a grounded stub which carries very little current and doesn't radiate much.

On 70 cm, the medium and short arms form an OSJ and carry most of the current. The long arm probably carries a small amount of current, but since it's a couple of wavelengths long its radiation resistance is high and its current flow and radiation are only a small percentage of the total.

>What's the radiation pattern?

Very similar to any other half-wavelength radiator... 0 dBd, plus or minus a few fidgets.

The Arrow OSJ is not actively decoupled from the feedline (there's no balun) and thus there may be a small amount of RF current flowing on the outside of the feedline, and some amount of disturbance of the pattern. The amount of current on the feedline will depend on the details of the individual installation (e.g. the length of the feedline). I don't think the effect will be significant in most installations; reflections from the ground, building structures, etc. are likely to alter the pattern just as much or even more.

You may, if you choose, mount the Arrow on an insulated mast, and include some sort of choke in the feedline (e.g. a small loop of a few turns in the coax, or some ferrites) in order to reduce the effect of feedline radiation.

I think that the Arrow is a good performer and a good value. You can even make 'em yourself if you wish - Arrow sells the parts individually and (last time I looked) had complete construction dimensions and plans somewhere on their web site.

--
Dave Platt <dplatt@radagast.org> AE6EO
Friends of Jade Warrior home page: http://www.radagast.org/jade-warrior
I do _not_ wish to receive unsolicited commercial email, and I will boycott any company which has the gall to send me such ads!

940. Re: Question on Antenna Voltage

Newsgroup: rec.radio.amateur.antenna
Date: 2009-07-22 19:05:53 UTC
From: AndyS <andysharpe@juno.com>
Message-ID: <0718e0a5-a451-4a77-98c1-ccd643b8184d@c14g2000yqm.googlegroups.com>
Source record: 14202

On Jul 21, 11:22 pm, Owen Duffy <n...@no.where> wrote:
>

> The article athttp://www.vk1od.net/antenna/SmallUntunedSquareLoop/index.htmshould
> answer your question.
>
> Owen

Andy replies:

Exactly what I was looking for. Thanks, Owen.....

W4OAH

941. WTB QEX Magazines

Newsgroup: rec.radio.amateur.antenna
Date: 2009-07-22 19:09:09 UTC
From: amdx <amdx@knology.net>
Message-ID: <2b999$4a6763d5$d8baf330$794@KNOLOGY.NET>
Source record: 14203
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.antenna

Hi All,
I'd like to buy some back issues of QEX. Preferably from the last 4 yrs or so.
Please respond by email.
Thanks, Mike

942. Re: Tracking down power line noise

Newsgroup: rec.radio.amateur.antenna
Date: 2009-07-22 20:04:20 UTC
From: Ed <Huckleberry_REMOVE_@bigvalley.net>
Message-ID: <Xns9C5084FA57AC2Huckleberrybigvalley@198.186.192.196>
Source record: 14204

> Hello, and years ago I needed to do some electrically-small antenna
> tests at one of our NRL field sites. These tests involved the entire
> 2-30 MHz band so it was always a challenge to find a quiet spot (We
> were using rack-mounted R-390 receivers in the testbed). In addition
> to the usual atmospheric noise and radio station interference there
> was always what appeared to be some local electrical noise that came
> and went and was worse on some days than others. A.C power to the
> site was brought in via utility poles to pad-mounted step-down
> transformers.
>
> One of my cowarkers suggested a technique for locating interference
> that he claimed to have success with in the past: A hand-held sledge
> hammer is used to whack the utility pole while listening for an
> associated change in noise on a cheap MW band transistor radio tuned
> off-station. My cowarker claimed that if a cracked insulator(s) was
> the perpetrator this technique would confirm it.
>
> We tried this technique at the site but with no success. We also drove
> down the site access road about 1/4 mile with a car AM radio tuned
> off-station and also got the interference in the vicinity of the
> utility poles. As a result we never did locate the source. My
> conclusion was that while the interference was being coupled to the
> antenna-under-test it may have been generated at a considerable
> distance from the test site and conducted via the overhead power
> lines. Sincerely, and 73s from N4GGO,

Just in the past few months or more there was a nice article and
product written in either CQ or QST magazine. I have just gone through
the Index for every issue for the past 4 or 5 months of both magazines
and can not find that article.... very frustrating.

The article outlined a product (kit?) for an untrasound receiver and
illustrated how the author configured it in order to find power line
interference from just the sources you are looking for. It is a much
more elegant solution than trying to use radio and usually pinpoints the
problem right down to the proper cross-arm on a pole.

Wish I could provide more info but I've spent the last half hour
looking for this and am apparently over-looking it. ... sigh

good luck

Ed K7AAT

.

943. Re: Tracking down power line noise

Newsgroup: rec.radio.amateur.antenna
Date: 2009-07-22 20:10:39 UTC
From: Ed <Huckleberry_REMOVE_@bigvalley.net>
Message-ID: <Xns9C50860C7A478Huckleberrybigvalley@198.186.192.196>
Source record: 14205

While not the article I was just referring to in my just previously
posted comment, there is a good how-to build project in the April 2006 QST
on this.

Ed K7AAT

.

944. Re: WTB QEX Magazines

Newsgroup: rec.radio.amateur.antenna
Date: 2009-07-22 22:00:04 UTC
From: Keith <kilowattradio@use-reply-to.invalid>
Message-ID: <EZL9m.423917$jp1.239823@en-nntp-06.dc1.easynews.com>
Source record: 14206
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.antenna,rec.radio.swap

On 2009-07-22, amdx <amdx@knology.net> wrote:
> Hi All,
> I'd like to buy some back issues of QEX. Preferably from the last 4 yrs or
> so.
> Please respond by email.
> Thanks, Mike
>
>

You should put a wanted ad on qrz.com & eham.net since
a lot of hams check the want and sale ads every week.

http://www.arrl.org/qex/

--
Best Regards, Keith
http://home.comcast.net/~kilowattradio/

945. Re: Question on Antenna Voltage

Newsgroup: rec.radio.amateur.antenna
Date: 2009-07-22 22:11:00 UTC
From: Owen Duffy <none@no.where>
Message-ID: <Xns9C51533EF85CBnonenowhere@61.9.191.5>
Source record: 14207

AndyS <andysharpe@juno.com> wrote in
news:0718e0a5-a451-4a77-98c1-ccd643b8184d@c14g2000yqm.googlegroups.com:

> On Jul 21, 11:22 pm, Owen Duffy <n...@no.where> wrote:
>>
>
>> The article
>> athttp://www.vk1od.net/antenna/SmallUntunedSquareLoop/index.htmshould
>> answer your question.
>>
>> Owen
>
>
> Andy replies:
>
> Exactly what I was looking for. Thanks, Owen.....

Thanks Andy, pleased you found it helpful.

73
Owen

946. Re: dB relation TX/RX

Newsgroup: rec.radio.amateur.antenna
Date: 2009-07-22 22:32:24 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <hq4f65tgkkc3f8ovjbko5erbh3af9halig@4ax.com>
Source record: 14208

On Wed, 22 Jul 2009 19:35:40 +0200, "Antonio Vernucci"
<vernucci@tin.it> wrote:

>Yes, but not quite 3dB when transmit power is doubled.

It would be dependent upon S+N/N, yes.

73's
Richard Clark, KB7QHC

947. Re: rotator coax

Newsgroup: rec.radio.amateur.antenna
Date: 2009-07-23 10:13:34 UTC
From: ml <m@di.net>
Message-ID: <m-A246B3.06133423072009@news.optonline.net>
Source record: 14209

In article <h41m38$883m$1@tr22n12.aset.psu.edu>,
John Passaneau <jxp16@psu.edu> wrote:

> ml wrote:
> > hi
> >
> > Was going to put up some antennas turned via a rotator.
> >
> > Normally I guess people use some 'flexible' type coax like a
> > RG213
> >
> > Wondering if cost was no object is there some coax that is
> > better rated to withstand this type of repeated flexing ??
> >
> >
> > Thanks
> Hi Ml:
>
> There used to be a "type" of RG-8 coax called "superflex" that was much
> more flexable than standard RG-8 (this was back when RG-8 was still a
> mil standard)but I've not seen it for some time. But I've used RG-213
> for years with no problems just remember to leave a big enough loop so
> the coax is not stressed to much. The kind of coax with the foil under
> the braid is NOT good for this loop.
>
>
> John Passaneau W3JXP

Hi

Thank you very much for responding. was hoping more might respond
to what I thought was a fair question.

Interesting wonder why you don't recomend the foil type I guess the
extra flexing would damage it??

Perhaps i can just find some double braided shield then...

thanks

948. Evisu original jeans(www.online-saler.com)

Newsgroup: rec.radio.amateur.antenna
Date: 2009-07-23 10:23:19 UTC
From: "www.sneaker-shop08.com" <yijeans2@163.com>
Message-ID: <478fd8a6-9cf9-4a4d-87f9-fa201f5026ec@p10g2000prm.googlegroups.com>
Source record: 14210
Cross-posted to: rec.radio.amateur.antenna,rec.birds

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LRG T-shirt(www.online-saler.com)
Bape jeans(www.online-saler.com)
Bape hoody(www.online-saler.com)
Bape t-shirt(www.online-saler.com)
Evisu long t-shit(www.online-saler.com)
Evisu original jeans(www.online-saler.com)
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Evisu T-shirt(www.online-saler.com)
POLO T-shirt(www.online-saler.com)
Googi jeans(www.online-saler.com)
Googi hoody(www.online-saler.com)
Googi T-shirt(www.online-saler.com)
juicy(www.online-saler.com)
10Deep jeans(www.online-saler.com)
10 Deep hoody(www.online-saler.com)
10Deep T-shirt(www.online-saler.com)
Lacoste T-shirt(www.online-saler.com)
Lacoste sweater(www.online-saler.com)
Burberry jacket(www.online-saler.com)
Buberry T-shirt(www.online-saler.com)
Buberry shirt(www.online-saler.com)
ED hardy hoody(www.online-saler.com)
ED hardy jeans(www.online-saler.com)

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Air Force 1 shoes(www.online-saler.com)
kids shoes(www.online-saler.com)
nike air max TN shoes(www.online-saler.com)

nike MAX LTD shoes (www.online-saler.com)
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949. Nike Shox TL 3 Running Shoes.

Newsgroup: rec.radio.amateur.antenna
Date: 2009-07-23 10:24:27 UTC
From: "www.sneaker-shop08.com" <yijeans2@163.com>
Message-ID: <eb3168b4-ee6a-4398-a9a4-e5ed8b015cf1@y10g2000prf.googlegroups.com>
Source record: 14211
Cross-posted to: rec.radio.amateur.antenna,rec.birds

(paypal payment)(www.online-saler.com) Nike Air Max 90 Sneakers,
Nike Air Max 91
Sneakers.
(paypal payment)(www.online-saler.com) Sneakers Supplier Trainers
Wholesale Shop Catalogs Men's Women's Shoes Customize.
(paypal payment)(www.online-saler.com) Nike Air Max 95 Supplier,
Nike
Air Max 97 Shoes
Supplier.
(paypal payment)(www.online-saler.com) Supply Sale Store Distributor
Manufacturer Running Shoes Mens Womens Shoes Wholesaler.
(paypal payment)(www.online-saler.com) Nike Air Max 2003 Trainers,
Nike Air Max 2004
Trainers.
(paypal payment)(www.online-saler.com) Sneaker Seller Trainer
Suppliers Collection Chaussure Catalog Customized.
(paypal payment)(www.online-saler.com) Nike Air Max 2005 Wholesale,
Nike Air Max 2006
Shoes Wholesale.
(paypal payment)(www.online-saler.com) Wholesalers Factory Sell
Exporter Offer Manufacture Directory Importer.
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Max 360 Shoes Shop.
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(paypal payment)(www.online-saler.com) Classic Buy Authentic Shoes
Discount Stock Series Cheap Shoes Business
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huarache.
(paypal payment)(www.online-saler.com) Nike Air Max Tn 2 Men's
Women's Shoes, Nike Air
(paypal payment)(www.online-saler.com) Max Tn 4 Customize, Nike
(paypal payment)(www.online-saler.com) Air Max Tn 6 Shoes Customize.
Produce Burberry Talaria Shoes Training Shoes Trade Outlet
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We are a very serious and professional supplier of brand Shoes. We
always looking for long time business and Customer satisfaction is

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company's ever-lasting goal. Our company was founded in 1998, which
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We have own factory in do OEM for Nike shoes many years. So we can
offer series of brand Nike shoe all are high quality.
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(paypal payment)(www.online-saler.com) Nike Air Max 90 91 95 97 2003
2004 2005 2006 2007 360 Ltd Tn Tn2 Tn3
(paypal payment)(www.online-saler.com) Tn4 Tn6 180 Deluxe Misc Impax
Run 2 Tuned Sirocco Air Zoom Spiridon
(paypal payment)(www.online-saler.com) Solas Air Huarache Burst
Tailwind Classic BW.
(paypal payment)(www.online-saler.com) Nike Air Max 90 Sneakers,
Nike Air Max 91 Supplier, Nike Air Max 95 Shoes Supplier,
(paypal payment)(www.online-saler.com) Nike Air Max 97 Trainers.
Nike
Air Max 2003 Wholesale, Nike Air Max 2004 Shoes Wholesale,
(paypal payment)(www.online-saler.com) Nike Air Max 2005 Shop, Nike
Air Max 2006 Shoes Shop.
(paypal payment)(www.online-saler.com) Nike Air Max 360 Catalogs,
Nike Air Max Plus Tn Shoes Catalogs,
(paypal payment)(www.online-saler.com) Nike Air Max Plus Tn 2
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Men's Shoes.
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Customize, Nike Air Max Plus Tn 4 Shoes Customize, Nike Air Max Plus
Tn 6 Supply, Nike Air Max Ltd Shoes Supply.
(paypal payment)(www.online-saler.com) Nike Shox NZ R3 R4 R5 VC OZ
LV
TNTL Rival Bmw Ride
Turbo Classic Monster
Dendara Energia TL TL2 TL3 TL4 TL5 CL Explodine Junga Respond
Cognescenti, Shox Disobey Vivacity Warrior
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Manufacturer,
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Shoes, Nike Shox Bmw Wholesaler, Nike Shox Ride Shoes Wholesaler,
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Nike Shox Rival Shoes Seller,

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Nike Shox Monster Suppliers.
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Suppliers, Nike Shox Dendara Collection.
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15 16 17 18 19 20 21 Jumpman Series Melo 5.5 Apparels Zero Nu Retro
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1.5, Air Jordan I II III
IV V VI VII VIII IX X XI XII XIII
XIV XV XVI XVII XVIII XIX XX XXI.
(paypal payment)(www.online-saler.com) cheap wholesal T-shirt
1).POLO 2007 polo(women)
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5).Fendi Bag 6).Coach Bag 7).Burberrys Bag 8).Prada Bag 9).Man
Leisure Bag 11).D&G bag 12).nike bag 13).Wallet 14).Suitcase
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our website: www.online-saler.com

950. Re: Best 144/440 Antenna for Attic Installation

Newsgroup: rec.radio.amateur.antenna
Date: 2009-07-23 13:23:33 UTC
From: HamRadio@dontask.com
Message-ID: <dLGdndoUifvW-fXXnZ2dnUVZ_oOdnZ2d@giganews.com>
Source record: 14212

On 22-Jul-2009, dplatt@radagast.org (Dave Platt) wrote:

> The Arrow is an "open-sleeve" J-pole design. The other poles aren't
> actively fed, but make up a critical part of the antenna design.

What are the pros and cons of an Arrow J-pole versus a Diamond X50A pole?

951. Re: Best 144/440 Antenna for Attic Installation

Newsgroup: rec.radio.amateur.antenna
Date: 2009-07-23 18:34:28 UTC
From: dplatt@radagast.org
Message-ID: <k2nmj6-8jv.ln1@radagast.org>
Source record: 14213

>> The Arrow is an "open-sleeve" J-pole design. The other poles aren't
>> actively fed, but make up a critical part of the antenna design.
>
>What are the pros and cons of an Arrow J-pole versus a Diamond X50A pole?

The Diamond X50A has a somewhat higher gain than the Arrow on 2 meters (about 2 dB higher, if I'm reading the stats correctly) and a significantly higher gain than the Arrow on 70 cm (about 5 dB higher).

The Arrow is about 6" shorter than the Diamond (might fit into an attic space where the Diamond will not), has been tested at power levels of up to a kilowatt (the Diamond is rated for 200 watts), and costs only 40% as much as the Diamond.

The Diamond has decoupling radials, and I infer that it's less likely to have a feedline-RF situation than the Arrow - its actual pattern may be more consistently like its theoretically-calculated pattern.

The Diamond looks more like a traditional antenna... the Arrow is more likely to get "What the >bleep< is that thing?" questions, if mounted outdoors.

The Arrow may be easier to field-repair, since it's mostly just aluminum angle and rod stock.

--
Dave Platt <dplatt@radagast.org> AE6EO
Friends of Jade Warrior home page: http://www.radagast.org/jade-warrior
I do _not_ wish to receive unsolicited commercial email, and I will
boycott any company which has the gall to send me such ads!

952. Re: rotator coax

Newsgroup: rec.radio.amateur.antenna
Date: 2009-07-23 19:52:06 UTC
From: JB <nospam@goofball.net>
Message-ID: <Gb3am.950$MA3.207@nwrddc02.gnilink.net>
Source record: 14214

> > the coax is not stressed to much. The kind of coax with the foil under
> > the braid is NOT good for this loop.
> >
> >
> > John Passaneau W3JXP
>
> Hi
>
> Thank you very much for responding. was hoping more might respond
> to what I thought was a fair question.
>
> Interesting wonder why you don't recomend the foil type I guess the
> extra flexing would damage it??
>
Yes. Not only does the foil shield break up, but the abrasion between the dissimilar metals causes noise

> Perhaps i can just find some double braided shield then...
>
A good 95% + shield like Belden 8214 or eq. foam type with stranded center conductor is the best. Extra shields will complicate matters. If you have multiple runs, the crosstalk between cables will me much less than the antennas talking to each other anyway unless you have a lot of vertical separation. It is good to use double shielding on duplexers and hardline on fixed antennas. When going around a rotor, you will have maximum life if you provide strain relief and broad loops like the remote broadcast trucks do. The coax will go bad at the loop first. Another answer is to use hardline up the tower and 8214 or RG-214 and N connectors for the rotor jumper, and replace it occasionally. Of course the connectors must be strain relieved, wrapped and well sealed to avoid any mechanical disturbance or water intrusion.

953. Re: Best 144/440 Antenna for Attic Installation

Newsgroup: rec.radio.amateur.antenna
Date: 2009-07-24 00:19:29 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <IcKdnRVVpqOPY_XXnZ2dnUVZ_qadnZ2d@giganews.com>
Source record: 14215

Dave Platt wrote:
>>> The Arrow is an "open-sleeve" J-pole design. The other poles aren't
>>> actively fed, but make up a critical part of the antenna design.
>> What are the pros and cons of an Arrow J-pole versus a Diamond X50A pole?
>
> The Diamond X50A has a somewhat higher gain than the Arrow on 2 meters
> (about 2 dB higher, if I'm reading the stats correctly) and a
> significantly higher gain than the Arrow on 70 cm (about 5 dB higher).
>
> The Arrow is about 6" shorter than the Diamond (might fit into an
> attic space where the Diamond will not), has been tested at power
> levels of up to a kilowatt (the Diamond is rated for 200 watts), and
> costs only 40% as much as the Diamond. . .

Wow, 5 dB extra gain for an extra quarter wavelength, and 2 dB for an extra 7/100 wavelength of size. That's quite a trick!

Do you maybe mean to say that the Diamond has a somewhat higher *claimed* gain than the Arrow? If we're looking for high claimed gains (and claimed power handling capability for that matter), some of the CB whips should take the prize.

Roy Lewallen, W7EL

954. Re: Best 144/440 Antenna for Attic Installation

Newsgroup: rec.radio.amateur.antenna
Date: 2009-07-24 01:05:39 UTC
From: dplatt@radagast.org
Message-ID: <30enj6-idf.ln1@radagast.org>
Source record: 14216

In article <IcKdnRVVpqOPY_XXnZ2dnUVZ_qadnZ2d@giganews.com>,
Roy Lewallen <w7el@eznec.com> wrote:

>Wow, 5 dB extra gain for an extra quarter wavelength, and 2 dB for an
>extra 7/100 wavelength of size. That's quite a trick!
>
>Do you maybe mean to say that the Diamond has a somewhat higher
>*claimed* gain than the Arrow? If we're looking for high claimed gains
>(and claimed power handling capability for that matter), some of the CB
>whips should take the prize.

You're quite correct. I'm going by "claimed" gain figures, and those
that Diamond cites do sound a trifle high to be believable.

--
Dave Platt <dplatt@radagast.org> AE6EO
Friends of Jade Warrior home page: http://www.radagast.org/jade-warrior
I do _not_ wish to receive unsolicited commercial email, and I will
boycott any company which has the gall to send me such ads!

955. Re: Best 144/440 Antenna for Attic Installation

Newsgroup: rec.radio.amateur.antenna
Date: 2009-07-24 01:43:58 UTC
From: HamRadio@dontask.com
Message-ID: <ttudnU88lOIIjPTXnZ2dnUVZ_umdnZ2d@giganews.com>
Source record: 14217

On 23-Jul-2009, Roy Lewallen <w7el@eznec.com> wrote:

> > The Diamond X50A has a somewhat higher gain than the Arrow on 2 meters
> > (about 2 dB higher, if I'm reading the stats correctly) and a
> > significantly higher gain than the Arrow on 70 cm (about 5 dB higher).
> >
> > The Arrow is about 6" shorter than the Diamond (might fit into an
> > attic space where the Diamond will not), has been tested at power
> > levels of up to a kilowatt (the Diamond is rated for 200 watts), and
> > costs only 40% as much as the Diamond. . .
>
> Wow, 5 dB extra gain for an extra quarter wavelength, and 2 dB for an
> extra 7/100 wavelength of size. That's quite a trick!
>
> Do you maybe mean to say that the Diamond has a somewhat higher
> *claimed* gain than the Arrow? If we're looking for high claimed gains
> (and claimed power handling capability for that matter), some of the CB
> whips should take the prize.

I don't know what the actual gain is, but Diamond has been in business a long time, and I've never
seen any reports of them misreporting gains.

Does the Arrow have any gain? I thought it was close to 0.0. If it does, how do you know it's
correct?

The overall rating for the X50A on eHam.net is 4.7/5. The average rating for the Arrow J-pole is
4.8/5. It sounds like both products are highly regarded.

956. Re: Best 144/440 Antenna for Attic Installation

Newsgroup: rec.radio.amateur.antenna
Date: 2009-07-24 03:24:28 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <6KidndO_ePbwtPTXnZ2dnUVZ_rqdnZ2d@giganews.com>
Source record: 14218

HamRadio@dontask.com wrote:
> . . .
> The overall rating for the X50A on eHam.net is 4.7/5. The average rating for the Arrow J-pole is
> 4.8/5. It sounds like both products are highly regarded.

So the Arrow is rated 0.09 dB higher than the Diamond. That's probably realistic.

Roy Lewallen, W7EL

957. Re: Best 144/440 Antenna for Attic Installation

Newsgroup: rec.radio.amateur.antenna
Date: 2009-07-24 14:39:18 UTC
From: JB <nospam@goofball.net>
Message-ID: <qljam.1048$MA3.260@nwrddc02.gnilink.net>
Source record: 14219

"Roy Lewallen" <w7el@eznec.com> wrote in message
news:6KidndO_ePbwtPTXnZ2dnUVZ_rqdnZ2d@giganews.com...
> HamRadio@dontask.com wrote:
> > . . .
> > The overall rating for the X50A on eHam.net is 4.7/5. The average
rating for the Arrow J-pole is
> > 4.8/5. It sounds like both products are highly regarded.
>
> So the Arrow is rated 0.09 dB higher than the Diamond. That's probably
> realistic.
>
> Roy Lewallen, W7EL

Rather than punching a hole in the roof to accommodate your attic co-linear,
how about the ELK 2m/440 log periodic or Cushcraft A270-6s. A small Yagi is
not so directional that you can't use it for the local stuff while pointing
it yonder for a few weak ones.

958. Re: Best 144/440 Antenna for Attic Installation

Newsgroup: rec.radio.amateur.antenna
Date: 2009-07-25 01:46:12 UTC
From: HamRadio@dontask.com
Message-ID: <8NKdnXulmddD_vfXnZ2dnUVZ_qydnZ2d@giganews.com>
Source record: 14220

On 24-Jul-2009, "JB" <nospam@goofball.net> wrote:

> Rather than punching a hole in the roof to accommodate your attic co-linear,
> how about the ELK 2m/440 log periodic or Cushcraft A270-6s. A small Yagi is
> not so directional that you can't use it for the local stuff while pointing
> it yonder for a few weak ones.

I want to be able to hit a dozen or so repeaters in different directions, so I don't want a directional antenna.

I believe I have enough height in the attic for the X50A. If I measure and come up short, I will
get the X30A instead.

959. Antenna Wire / Downlead Connector

Newsgroup: rec.radio.amateur.antenna
Date: 2009-07-25 17:48:26 UTC
From: Slade Henson <derechim@earthlink.net>
Message-ID: <j--dnZcrzK3t2PbXnZ2dnUVZ_hudnZ2d@earthlink.com>
Source record: 14221

In Joe Carr's Receiving Antenna Handbook, page 51 and 53 show a "heavy dot" as the connection between the Antenna Wire and the Downlead. Is the "heavy dot" a "Center Insulator" as show on pages 29-31?

Thanks for your help.

slade

960. Re: Antenna Wire / Downlead Connector

Newsgroup: rec.radio.amateur.antenna
Date: 2009-07-25 20:54:54 UTC
From: Art Unwin <ArthurUnwin@gmail.com>
Message-ID: <dd0c517e-f06f-4ba6-b062-1ce59a679ea4@z34g2000vbl.googlegroups.com>
Source record: 14222

On Jul 25, 12:48 pm, "Slade Henson" <derec...@earthlink.net> wrote:
> In Joe Carr's Receiving Antenna Handbook, page 51 and 53 show a "heavy dot"
> as the connection between the Antenna Wire and the Downlead. Is the "heavy
> dot" a "Center Insulator" as show on pages 29-31?
>
> Thanks for your help.
>
> slade

Usually when a wiring diagram is drawn the wires cross each other as
they go to different placeds
To differentiate between wires crossing and a wire connection one
usually places a dot to signify an electrical connection.
Art

961. Re: Antenna Wire / Downlead Connector

Newsgroup: rec.radio.amateur.antenna
Date: 2009-07-25 21:10:24 UTC
From: Slade Henson <derechim@earthlink.net>
Message-ID: <z-GdnUw4pqpb6fbXnZ2dnUVZ_j2dnZ2d@earthlink.com>
Source record: 14223

Cool, Art; thanks. Therefore, I use an insulated wire for the the Downlead, solder it to the horizontal antenna wire, and slip it into the red SW ANT plug on the side of the radio. A 10 Ga wire, then, connects the black GND plug to the ground. Thanks. That answers my question.

slade

"Art Unwin" <ArthurUnwin@gmail.com> wrote in message news:dd0c517e-f06f-4ba6-b062-1ce59a679ea4@z34g2000vbl.googlegroups.com...
On Jul 25, 12:48 pm, "Slade Henson" <derec...@earthlink.net> wrote:
> In Joe Carr's Receiving Antenna Handbook, page 51 and 53 show a "heavy
> dot"
> as the connection between the Antenna Wire and the Downlead. Is the "heavy
> dot" a "Center Insulator" as show on pages 29-31?
>
> Thanks for your help.
>
> slade

Usually when a wiring diagram is drawn the wires cross each other as
they go to different placeds
To differentiate between wires crossing and a wire connection one
usually places a dot to signify an electrical connection.
Art

962. folded dipole balun voltage loss?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-07-26 09:31:11 UTC
From: Anonymous <cripto@ecn.org>
Message-ID: <20090726093111.284F81A7C71@www.ecn.org>
Source record: 14224
Cross-posted to: sci.engr.television.broadcast,rec.radio.amateur.antenna

most TV antennae used folded dipole as it gives a wider
bandwidth. Then there is a 300-75 ohm balun. This is a
2:1 stepdown transformer.
What if I want one channel? Would I be better off with
a simple dipole and a 1:1 balun?
This should give me twice the voltage?

963. Re: folded dipole balun voltage loss?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-07-26 10:04:27 UTC
From: charles <charles@charleshope.demon.co.uk>
Message-ID: <5080d9e151charles@charleshope.demon.co.uk>
Source record: 14225
Cross-posted to: sci.engr.television.broadcast,rec.radio.amateur.antenna

In article <20090726093111.284F81A7C71@www.ecn.org>,
Anonymous <cripto@ecn.org> wrote:
> most TV antennae used folded dipole as it gives a wider
> bandwidth. Then there is a 300-75 ohm balun.

err, no. Adding elements reduces the impedance and it becomes something
like 75 ohms.

> This is a 2:1 stepdown transformer.

no it isn't

> What if I want one channel? Would I be better off with a simple dipole
> and a 1:1 balun? This should give me twice the voltage?

why?

--
From KT24

Using a RISC OS computer running v5.11

964. Re: rotator coax

Newsgroup: rec.radio.amateur.antenna
Date: 2009-07-26 10:27:04 UTC
From: ml <m@di.net>
Message-ID: <m-48F4CB.06270426072009@news.optonline.net>
Source record: 14226

In article <Gb3am.950$MA3.207@nwrddc02.gnilink.net>,
"JB" <nospam@goofball.net> wrote:

> > > the coax is not stressed to much. The kind of coax with the foil under
> > > the braid is NOT good for this loop.
> > >
> > >
> > > John Passaneau W3JXP
> >
> > Hi
> >
> > Thank you very much for responding. was hoping more might respond
> > to what I thought was a fair question.
> >
> > Interesting wonder why you don't recomend the foil type I guess the
> > extra flexing would damage it??
> >
> Yes. Not only does the foil shield break up, but the abrasion between the
> dissimilar metals causes noise
>
> > Perhaps i can just find some double braided shield then...
> >
> A good 95% + shield like Belden 8214 or eq. foam type with stranded center
> conductor is the best. Extra shields will complicate matters. If you have
> multiple runs, the crosstalk between cables will me much less than the
> antennas talking to each other anyway unless you have a lot of vertical
> separation. It is good to use double shielding on duplexers and hardline on
> fixed antennas. When going around a rotor, you will have maximum life if
> you provide strain relief and broad loops like the remote broadcast trucks
> do. The coax will go bad at the loop first. Another answer is to use
> hardline up the tower and 8214 or RG-214 and N connectors for the rotor
> jumper, and replace it occasionally. Of course the connectors must be
> strain relieved, wrapped and well sealed to avoid any mechanical disturbance
> or water intrusion.

thanks much for a ll the tips

965. Re: folded dipole balun voltage loss?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-07-26 12:32:01 UTC
From: Wimpie <wimabctel@tetech.nl>
Message-ID: <dc781b91-94d7-4794-8792-9a506247e97b@e27g2000yqm.googlegroups.com>
Source record: 14227
Cross-posted to: sci.engr.television.broadcast,rec.radio.amateur.antenna

On 26 jul, 11:31, Anonymous <cri...@ecn.org> wrote:
> most TV antennae used folded dipole as it gives a wider
> bandwidth. Then there is a 300-75 ohm balun. This is a
> 2:1 stepdown transformer.
> What if I want one channel? Would I be better off with
> a simple dipole and a 1:1 balun?
> This should give me twice the voltage?

Hello,

When properly matched, there is no difference in performance (output POWER) between folded dipole and HW dipole.

Mechanical advantage of folded dipole is that you do not need to make an insulated support. For narrow band operation (no parasitic elements), you can use an electrically half wave piece of 75 Ohms coaxial cable to do the matching and bal. to unbal. conversion.

When making yagis, the purpose of the folded dipole is to get impedance close to 75 Ohms. Addition of the parasitic radiators reduces the impedance of the driven element. When using a HW center fed dipole in a long yagi, the impedance of the yagi will be far below 75 Ohms.

Best regards,

Wim
PA3DJS
www.tetech.nl
please remove the obvious character combination in case of PM.

966. A reasoning on antenna reciprocity

Newsgroup: rec.radio.amateur.antenna
Date: 2009-07-26 17:26:22 UTC
From: Antonio Vernucci <vernucci@tin.it>
Message-ID: <4a6c91be$0$43596$4fafbaef@reader1.news.tin.it>
Source record: 14228

While reasoning on antenna systems reciprocity (i.e. same gain / losses for transmit and receive), a case occurred to me which, at first glance, does not look to be reciprocal (whilst it obviously is in reality). I consider that case fairly instructive, and I then propose it to you for your comments.

Let us consider:
- an antenna having a resistance of 150 ohm (no reactance).
- a coaxial cable having 50-ohm characteristic impedance and a nominal attenuation of say 2dB. For calculations simplicity, let us assume that its length is a multiple of half wavelengths.
- a transceiver having 50-ohm impedance (both RX and TX).

During receive the SWR on the cable will be 1:1 (the RX impedance matches the cable impedance), and cable attenuation will then stay at nominal (i.e. 2 dB).

During transmit, the antenna impedance mismatch will cause an SWR that varies along the cable, ranging from 3:1 (at the antenna-end) to about 1.9:1 (at the TX-end), and the TX will so see an impedance of about 95 ohm (or 26.3 ohm if you will). Due to the SWR, the cable will then show an extra attenuation that does not occur during receive. The ARRL Handbook graphs quantify such extra attenuation as about 0.8 dB.

The different cable attenuation between receive and transmit may erroneously lead someone to considering the system to be non reciprocal.

My simple explanation of why the system is instead reciprocal is the following:

- during receive the 150-ohm source (i.e. the antenna) which sees a 50-ohm load will be subjected to a mismatch loss that can be easily calculated to be about 1.25 dB.

- during transmit the 50-ohm source (i.e. the TX) which sees a 95-ohm load will also be subjected to a mismatch loss but of lower value, that can be easily calculated to be about 0.45 dB.

The mismatch loss difference, i.e. (1.25 - 0.45), is perfectly compensated for by the extra cable attenuation of 0.8 dB. This witnesses why the system is reciprocal (even having based calculations on a quite simplified model of reality).

73

Tony I0JX, Rome Italy

967. Re: folded dipole balun voltage loss?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-07-26 17:26:40 UTC
From: christofire <christofire@btinternet.com>
Message-ID: <39ednUo2FeRKDPHXnZ2dnUVZ8r6dnZ2d@bt.com>
Source record: 14229
Cross-posted to: sci.engr.television.broadcast,rec.radio.amateur.antenna

"Wimpie" <wimabctel@tetech.nl> wrote in message
news:dc781b91-94d7-4794-8792-9a506247e97b@e27g2000yqm.googlegroups.com...
> On 26 jul, 11:31, Anonymous <cri...@ecn.org> wrote:
>> most TV antennae used folded dipole as it gives a wider
>> bandwidth. Then there is a 300-75 ohm balun. This is a
>> 2:1 stepdown transformer.
>> What if I want one channel? Would I be better off with
>> a simple dipole and a 1:1 balun?
>> This should give me twice the voltage?
>
> Hello,
>
> When properly matched, there is no difference in performance (output
> POWER) between folded dipole and HW dipole.
>
> Mechanical advantage of folded dipole is that you do not need to make
> an insulated support. For narrow band operation (no parasitic
> elements), you can use an electrically half wave piece of 75 Ohms
> coaxial cable to do the matching and bal. to unbal. conversion.
>
> When making yagis, the purpose of the folded dipole is to get
> impedance close to 75 Ohms. Addition of the parasitic radiators
> reduces the impedance of the driven element. When using a HW center
> fed dipole in a long yagi, the impedance of the yagi will be far below
> 75 Ohms.
>
> Best regards,
>
> Wim

Before accepting statements like this, and that of the previous poster, I would encourage those who can to take a look at the terminal impedance of a good-quality (i.e. professional) Yagi such as one of those manufactured by J-Beam - which use a folded dipole as the driven element and use a half-wave balun (insulated wire wound around a metal rod) to interface with the co-axial tail. Those I have looked at have had terminal impedances close to the specified cable impedance at their design frequency ... they have certainly not been much lower than 50 or 75 ohms.

My own understanding is that they use a folded dipole for its advantageous bandwidth, so they can manufacture, and their dealers stock, a smaller number of models to cover a specified wide bandwidth (i.e. the bandwidth of the antenna is determined by pattern and impedance considerations on account of the array more than the driven element). I have also noticed that the

physical length of the folded dipole they use is related to the cable impedance (i.e. between 50 and 75-ohm versions for the same frequency band) whilst a similar type of balun is used.

Some cheap television aerials are sold with co-axial connections directly to a folded-dipole 'driven' element but this is likely a cost-cutting measure, which impairs ruggedness of the installation against household RF noise.

Chris

968. Re: A reasoning on antenna reciprocity

Newsgroup: rec.radio.amateur.antenna
Date: 2009-07-26 20:43:42 UTC
From: Dave <noone@nowhere.com>
Message-ID: <2e3bm.1097$646.1056@nwrddc01.gnilink.net>
Source record: 14230

makes sense to me, but that is not talking about 'antenna' reciprocity, that is the whole system. the antenna ends where it attaches to the feed line.

"Antonio Vernucci" <vernucci@tin.it> wrote in message news:4a6c91be$0$43596$4fafbaef@reader1.news.tin.it...
> While reasoning on antenna systems reciprocity (i.e. same gain / losses
> for transmit and receive), a case occurred to me which, at first glance,
> does not look to be reciprocal (whilst it obviously is in reality). I
> consider that case fairly instructive, and I then propose it to you for
> your comments.
>
> Let us consider:
> - an antenna having a resistance of 150 ohm (no reactance).
> - a coaxial cable having 50-ohm characteristic impedance and a nominal
> attenuation of say 2dB. For calculations simplicity, let us assume that
> its length is a multiple of half wavelengths.
> - a transceiver having 50-ohm impedance (both RX and TX).
>
> During receive the SWR on the cable will be 1:1 (the RX impedance matches
> the cable impedance), and cable attenuation will then stay at nominal
> (i.e. 2 dB).
>
> During transmit, the antenna impedance mismatch will cause an SWR that
> varies along the cable, ranging from 3:1 (at the antenna-end) to about
> 1.9:1 (at the TX-end), and the TX will so see an impedance of about 95 ohm
> (or 26.3 ohm if you will). Due to the SWR, the cable will then show an
> extra attenuation that does not occur during receive. The ARRL Handbook
> graphs quantify such extra attenuation as about 0.8 dB.
>
> The different cable attenuation between receive and transmit may
> erroneously lead someone to considering the system to be non reciprocal.
>
> My simple explanation of why the system is instead reciprocal is the
> following:
>
> - during receive the 150-ohm source (i.e. the antenna) which sees a 50-ohm
> load will be subjected to a mismatch loss that can be easily calculated to
> be about 1.25 dB.
>
> - during transmit the 50-ohm source (i.e. the TX) which sees a 95-ohm load
> will also be subjected to a mismatch loss but of lower value, that can be
> easily calculated to be about 0.45 dB.
>
> The mismatch loss difference, i.e. (1.25 - 0.45), is perfectly compensated

> for by the extra cable attenuation of 0.8 dB. This witnesses why the
> system is reciprocal (even having based calculations on a quite simplified
> model of reality).
>
> 73
>
> Tony I0JX, Rome Italy
>

969. Re: an ontopic post about code

Newsgroup: rec.radio.amateur.antenna
Date: 2009-07-26 23:31:11 UTC
From: kb9rqz@yahoooo.com
Message-ID: <gppp655qk58s6hvunb41s8fcvi9bq0fip7@4ax.com>
Source record: 14231
Cross-posted to: alt.ham-radio.vhf-uhf,rec.radio.amateur.policy,rec.radio.amateur.antenna

On Fri, 01 Dec 2006 09:36:47 -0800, John Smith
<assemblywizard@gmail.com> wrote:

>K4YZ wrote:
>> Nope.
>>
>> The IP Address and servers are complete proof that I do NOT share
>> any annonymous character's "address".
>>
>> Sounds like Lennie, to me....
>>
>> Steve, K4YZ
>>
>
>To anyone with even an elementary understanding of anonymous proxies,
>anonymous remailers, zombie backdoors, etc., the ability to change ones
>IP address and header details is simplistic, indeed, with little time
>spent anyone can appear to be "coming" from anywhere in the world.
>
>You waste my time. Worse, you think us all idiots here. You remind me
>of the "street smart" prosecutors and defense attorneys who stack jurys
>with members of little or no technical knowledge and then call in
>"expert witnesses" and propose arguments of technical details to boggle
>their minds.
>
>You have only proven that you, yourself are either ignorant to such
>technical details, or else you are indeed street smart, I favor the
>latter in this case (however, if you in the dark about such things, 15
>minutes on google will enlighten you.)
>
>JS

certain folks do need the reminder

"one useless man is disgrace 2 become a law firm 3 or more become a congress"
adams

woger you are a Congress all in your own head
"http://www.3ix.org/sys/aff.php?aff=7439" target="_blank"

altopia is never used by KB9RQZ
http://kb9rqz.cc.cc
http://kd8ctl.com
nor is Konstans@hotmail.com ever
btw i can be found at

17366 N River Rd
Chassel Mi

but the cowards asking lack the gut to act

970. Re: How Can you Make a VHF TV Antenna for an Attic

Newsgroup: rec.radio.amateur.antenna
Date: 2009-07-27 03:09:06 UTC
From: richardharrison@webtv.net
Message-ID: <17948-4A6D1A52-2361@storefull-3172.bay.webtv.net>
Source record: 14232

The questioner asked: "Do you align the wire in the direction of the transamission antenna or should the wire be perpendicular?"

I saw no answer to his question. So reluctantly I respond. Most antennas are broadside to the direction of transmission but not all.

One simple and effective TV receiving antenna has its wires on a diagonal to the direction of the transamitter. The antenna has a diamond shape and is called a thombic. Its long axis is aligned in the direction of the station. Each of the four sides of the rhombic is 2 or more wavelengths. As size increases so does the antenna gain. Bandwisth is very wide covering several TV channels.

Channel 2 was the lowest frequency TV channel widely used so it had the longest wavelength (50 MHz & 6mtrs. or 68 ft.).

Nothing is critical about a rhombic. One was proposed as a "Super TV Antenna" in the March 1967 erition of "Electronics Illustrated" magazine.

It is 64x24 ft. Each of its 4 sides is about 34 feet. An 820 ohm, 2 watt carbon resistor is used to terminate the junction of the 2 sides of the rhombic at the end which is pointed at the station to be received. The rhombic is narrower than long. The opposite end of the rhombic is connected to 300 ohm twinlead which extends to the receiver, but higher impedance line would be marginally better as the rhombic is effectively a wide place in an 820 ohm transmission line.

I`ve built and used many rhombics. They all were satisfactory in spite of somewhat ragged patterns. They are capableof high gain and extreme bandwidth. They require much space and 4 supports but construction is simple for the minimalist model.

Best regards, Richard Harrison, KB5WZI

971. Re: How Can you Make a VHF TV Antenna for an Attic

Newsgroup: rec.radio.amateur.antenna
Date: 2009-07-27 04:14:05 UTC
From: richardharrison@webtv.net
Message-ID: <14889-4A6D298D-2066@storefull-3173.bay.webtv.net>
Source record: 14233

Richard Harrison wrote:
"Channel 2 was the lowest frequency TV channel widely used so it had the longest wavelength (50 MHz & 6 mtrs. or 68 ft."

The multiplier is 3.28 to convert meters to feet, so I should have written 19.68 ft..

I also intended to warn that an attic is usually unfriendly to antennas due to the proximity of metal pipes and wires which interfere.

Best regards, Richard Harrison, KB5WZI

972. Portable Operation

Newsgroup: rec.radio.amateur.antenna
Date: 2009-07-27 06:43:47 UTC
From: "Sal M. Onella" <salmonella@food.poisoning.org>
Message-ID: <E0cbm.56061$eS5.54850@newsfe25.iad>
Source record: 14234

I'm bringing an HF rig to the mountains of Colorado next week. I just finished assembling a travel kit of dipole elements for 10, 15 and 20. I have ropes, pulleys, wire elements, baluns, cable, connectors, a tuner, VSWR meter, etc. There's no electricity except for a very few generators, so typical urban noise should be absent. Joy!

What's the custom for transmitting my I-D? I think it's "KD6VKW, PORTABLE ZERO." It might be "KD6VKW, STROKE ZERO." I've heard both variations and I searched for about 20 minutes and only found that in the US I'm apparently not legally required to transmit anything after my callsign. It's optional.

I know the county and grid square. Since some hams hunt counties and grid squares, should I include either when I call CQ? Opinions, please.

TKS
"Sal"
KD6VKW

973. Re: Portable Operation

Newsgroup: rec.radio.amateur.antenna
Date: 2009-07-27 10:12:13 UTC
From: 'Doc <ltdoc@yahoo.com>
Message-ID: <00e624d0-9b03-4841-bbe8-f0be1bf2bf9a@r2g2000yqm.googlegroups.com>
Source record: 14235

A couple of things.
Don't forget to take a couple of stakes and a fairly large hammer, you might need them. To hold the ends of those antenna lines, or maybe for a piece of gear that is frustrating you?

As for encluding everyting someone might possibly want to know in that 'CQ', it'd probably take 15 minutes to send it. Why not just let'em ask when they answer your CQ?
- 'Doc

974. Re: Antenna Wire / Downlead Connector

Newsgroup: rec.radio.amateur.antenna
Date: 2009-07-27 10:19:15 UTC
From: 'Doc <ltdoc@yahoo.com>
Message-ID: <a2faa5b2-5584-4796-b60b-539c758d61c6@h21g2000yqa.googlegroups.com>
Source record: 14236

I don't have access to that book or the illustration so can't say what
that 'dot' represents. One way to figure it though, is that feed line
a singe conductor, or two conductors? If it's a single conductor it
probably just makes a direct connection to the antenna. If it's two
conductors, there's probably an insulator of some kind there, and each
conductor goes to one 'side' of the antenna. Make sense>
- 'Doc

975. Re: Portable Operation

Newsgroup: rec.radio.amateur.antenna
Date: 2009-07-27 11:33:39 UTC
From: Ralph Mowery <rmowery28146@earthlink.net>
Message-ID: <4u2dnbHQ1ayGH_DXnZ2dnUVZ_ridnZ2d@earthlink.com>
Source record: 14237

"Sal M. Onella" <salmonella@food.poisoning.org> wrote in message
news:E0cbm.56061$eS5.54850@newsfe25.iad...
> I'm bringing an HF rig to the mountains of Colorado next week. I just
> finished assembling a travel kit of dipole elements for 10, 15 and 20. I
> have ropes, pulleys, wire elements, baluns, cable, connectors, a tuner,
> VSWR
> meter, etc. There's no electricity except for a very few generators, so
> typical urban noise should be absent. Joy!
>
> What's the custom for transmitting my I-D? I think it's "KD6VKW,
> PORTABLE
> ZERO." It might be "KD6VKW, STROKE ZERO." I've heard both variations and
> I
> searched for about 20 minutes and only found that in the US I'm apparently
> not legally required to transmit anything after my callsign. It's
> optional.
>
> I know the county and grid square. Since some hams hunt counties and grid
> squares, should I include either when I call CQ? Opinions, please.
>
> TKS
> "Sal"
> KD6VKW
>
>
You are not required to send anything but your call as you mentioned. If
you want to , you can add almost anything after it. For voice , portable
is/was used. The Stroke was used in CW.
If using voice, you may want to say "portable Colorado" if you are not
getting any response to your CQs.

976. Re: folded dipole balun voltage loss?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-07-27 13:02:54 UTC
From: zekfrivo@zekfrivolous.com
Message-ID: <h4k8hvqaq2@usenet01.srv.cis.pitt.edu>
Source record: 14238
Cross-posted to: sci.engr.television.broadcast,rec.radio.amateur.antenna

In article <20090726093111.284F81A7C71@www.ecn.org>, Anonymous <cripto@ecn.org> wrote:
>most TV antennae used folded dipole as it gives a wider
>bandwidth. Then there is a 300-75 ohm balun. This is a
>2:1 stepdown transformer.
>What if I want one channel? Would I be better off with
>a simple dipole and a 1:1 balun?
>This should give me twice the voltage?

True, but its not going to help drive a preamp which
is matched to the input Z.

greg

977. Re: Portable Operation

Newsgroup: rec.radio.amateur.antenna
Date: 2009-07-27 13:50:23 UTC
From: JB <nospam@goofball.net>
Message-ID: <zgibm.1212$646.473@nwrddc01.gnilink.net>
Source record: 14239

"Ralph Mowery" <rmowery28146@earthlink.net> wrote in message
news:4u2dnbHQ1ayGH_DXnZ2dnUVZ_ridnZ2d@earthlink.com...
>
> "Sal M. Onella" <salmonella@food.poisoning.org> wrote in message
> news:E0cbm.56061$eS5.54850@newsfe25.iad...
> > I'm bringing an HF rig to the mountains of Colorado next week. I just
> > finished assembling a travel kit of dipole elements for 10, 15 and 20.
I
> > have ropes, pulleys, wire elements, baluns, cable, connectors, a tuner,
> > VSWR
> > meter, etc. There's no electricity except for a very few generators,
so
> > typical urban noise should be absent. Joy!
> >
> > What's the custom for transmitting my I-D? I think it's "KD6VKW,
> > PORTABLE
> > ZERO." It might be "KD6VKW, STROKE ZERO." I've heard both variations
and
> > I
> > searched for about 20 minutes and only found that in the US I'm
apparently
> > not legally required to transmit anything after my callsign. It's
> > optional.
> >
> > I know the county and grid square. Since some hams hunt counties and
grid
> > squares, should I include either when I call CQ? Opinions, please.
> >
> > TKS
> > "Sal"
> > KD6VKW
> >
> >
> You are not required to send anything but your call as you mentioned. If
> you want to , you can add almost anything after it. For voice , portable
> is/was used. The Stroke was used in CW.
> If using voice, you may want to say "portable Colorado" if you are not
> getting any response to your CQs.
>

"Portable" is usually interesting enough to get someone's attention.
Inevitably, if anyone happens to be tuning around and finds you and cares to
answer a CQ at all they will call you. If you give out all your exchange in
a CQ, why should they call you if they already have every thing they need

from you?

I have no problem with a continuous beacon as long as you are QSK but there are a lot of people out there that have their own ideas of how things should be done and want to police others, so good luck. I have better luck giving another station a call. This at least occupies the frequency with chatter that people can find, then QSY 10 kc and give a call. If you weren't too boring, you will have a pile up. If you don't hear anyone on the band at all, maybe the band is dead.

978. Re: A reasoning on antenna reciprocity

Newsgroup: rec.radio.amateur.antenna
Date: 2009-07-27 14:01:57 UTC
From: JB <nospam@goofball.net>
Message-ID: <pribm.1213$646.798@nwrddc01.gnilink.net>
Source record: 14240

"Antonio Vernucci" <vernucci@tin.it> wrote in message
news:4a6c91be$0$43596$4fafbaef@reader1.news.tin.it...
> While reasoning on antenna systems reciprocity (i.e. same gain / losses
for
> transmit and receive), a case occurred to me which, at first glance, does
not
> look to be reciprocal (whilst it obviously is in reality). I consider that
case
> fairly instructive, and I then propose it to you for your comments.
>
> Let us consider:
> - an antenna having a resistance of 150 ohm (no reactance).
> - a coaxial cable having 50-ohm characteristic impedance and a nominal
> attenuation of say 2dB. For calculations simplicity, let us assume that
its
> length is a multiple of half wavelengths.
> - a transceiver having 50-ohm impedance (both RX and TX).
>
> During receive the SWR on the cable will be 1:1 (the RX impedance matches
the
> cable impedance), and cable attenuation will then stay at nominal (i.e. 2
dB).
>
> During transmit, the antenna impedance mismatch will cause an SWR that
varies
> along the cable, ranging from 3:1 (at the antenna-end) to about 1.9:1 (at
the
> TX-end), and the TX will so see an impedance of about 95 ohm (or 26.3 ohm
if you
> will). Due to the SWR, the cable will then show an extra attenuation that
does
> not occur during receive. The ARRL Handbook graphs quantify such extra
> attenuation as about 0.8 dB.
>
> The different cable attenuation between receive and transmit may
erroneously
> lead someone to considering the system to be non reciprocal.
>
> My simple explanation of why the system is instead reciprocal is the
following:
>
> - during receive the 150-ohm source (i.e. the antenna) which sees a 50-ohm
load
> will be subjected to a mismatch loss that can be easily calculated to be

about
> 1.25 dB.
>
> - during transmit the 50-ohm source (i.e. the TX) which sees a 95-ohm load
will
> also be subjected to a mismatch loss but of lower value, that can be
easily
> calculated to be about 0.45 dB.
>
> The mismatch loss difference, i.e. (1.25 - 0.45), is perfectly compensated
for
> by the extra cable attenuation of 0.8 dB. This witnesses why the system is
> reciprocal (even having based calculations on a quite simplified model of
> reality).
>
> 73
>
> Tony I0JX, Rome Italy
>
Reciprocity means the pattern will be the same transmitting or recieving.
There are other things that may not be reciprocal though. The ionosphere
may change the polarization of the signal. Transmitter and reciever may
have different loading capabilities and the system may change due to heating
from resistive losses under power.

979. Re: folded dipole balun voltage loss?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-07-27 14:01:57 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <pribm.35520$YU5.8720@newsfe21.iad>
Source record: 14241
Cross-posted to: sci.engr.television.broadcast,rec.radio.amateur.antenna

christofire wrote:
> My own understanding is that they use a folded dipole for its advantageous
> bandwidth, ...

This may be true but there are other advantages/benefits.
Given that parasitic elements lower the resonant feedpoint
impedance and the target feedpoint is 50 or 75 ohms:

Which driven element makes more sense? One that starts
out with a feedpoint impedance of 75 ohms or one that
starts out with a feedpoint impedance of 300 ohms?
--
73, Cecil, IEEE, OOTC, http://www.w5dxp.com

980. FA: Master Mobile Vintage Mobile Antenna Centre Loaded Ass

Newsgroup: rec.radio.amateur.antenna
Date: 2009-07-27 14:33:08 UTC
From: Norm VE3CZI <ve3czi@arrl.net>
Message-ID: <LUibm.6409$cf6.4680@newsfe16.iad>
Source record: 14242
Cross-posted to: rec.radio.amateur.antenna,rec.radio.swap

For Auction:
1960 Vintage Mobile Antenna that consists of: HD Spring; 30" Mast; 7" coil
2.75" Diam; 60" whip. The Antenna operates on 6 Amateur Bands. 80 75
40 20 15 10 Meters. There is a jumper that you manually move to change
the bands.
This Antenna is in Good Condtion and is represenative of the Centre Loaded
Mobile Antennas used during the 60's & 70's years of Amateur Radio....A real
Collector Item

If you can supply the 60" whip (needs 3/8" X 24 thread) yourself, the
cost of shipping can be reduced.

Thank You for looking...Norm VE3CZI

http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=320402860009&ssPageName=STRK:MESELX:IT

981. FA: Master Mobile Vintage Mobile Antenna Assy

Newsgroup: rec.radio.amateur.antenna
Date: 2009-07-27 14:35:40 UTC
From: Norm VE3CZI <ve3czi@arrl.net>
Message-ID: <aXibm.6410$cf6.2213@newsfe16.iad>
Source record: 14243
Cross-posted to: rec.radio.amateur.antenna,rec.radio.swap

For Auction:

1960 Vintage Mobile Antenna that consists of: HD Spring; 30" Mast; 7" coil
2.75" Diam; 60" whip. The Antenna operates on 6 Amateur Bands. 80 75
40 20 15 10 Meters. There is a jumper that you manually move to change
the bands.
This Antenna is in Good Condtion and is represenative of the Centre Loaded
Mobile Antennas used during the 60's & 70's years of Amateur Radio....A real
Collector Item

If you can supply the 60" whip (needs 3/8" X 24) yourself, the cost of
shipping can be reduced...

http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=320402860009&ssPageName=STRK:MESELX:IT

Tnx for Looking...Norm VE3CZI

--
****
Have Surplus Service Manuals & Electronic
Parts/Equipment FOR SALE.
Visit: www.rodemi.com
****

982. MFJ 1782

Newsgroup: rec.radio.amateur.antenna
Date: 2009-07-27 14:52:52 UTC
From: Jeannot <g*****.****@orange.fr>
Message-ID: <4a6dbf46$0$23460$ba4acef3@news.orange.fr>
Source record: 14244

Hello

I have bought an antenna in secondhand an antenna MFJ-1782. I have some problems to obtain good results for the SWR .My antenna is in vertical polarization. I use this antenna with a battery..

I have only a good SWR in the ten meter band (1.1) but when the frequency degreases , the SWR increases very rapidly . On the 20 meter band , the SWR is near 3-3.5 - The coax is H100.

I tried with differents lenghs of coax . (5 , 10, 15 meters) and the result is the same.

I don't know what I must do.

I write you (in bad English and excuse me) to say if you have a solution to my problem.. I thank you in advance

73

983. Re: MFJ 1782

Newsgroup: rec.radio.amateur.antenna
Date: 2009-07-27 15:09:04 UTC
From: "Geoffrey S. Mendelson" <gsm@mendelson.com>
Message-ID: <slrnh6rgo6.3hc.gsm@cable.mendelson.com>
Source record: 14245

Jeannot wrote:
> Hello
>
> I have bought an antenna in secondhand an antenna MFJ-1782. I have some
> problems to obtain good results for the SWR .My antenna is in vertical
> polarization. I use this antenna with a battery..
>
> I have only a good SWR in the ten meter band (1.1) but when the
> frequency degreases , the SWR increases very rapidly . On the 20 meter band
> , the SWR is near 3-3.5 - The coax is H100.

Start with:

http://www.mfjenterprises.com/support.php?productid=MFJ-1782

You can download an English version of the manual. Hopefully that will help.
If you have trouble understanding the manual, you could ask here in your
native language and someone may be able to translate the parts you need, or
explain it in simple English that works for you.

If that does not help. MFJ has a technical support form you can fill in and
they will answer you by email. I had a question about a qrp rig I bought in
1995 and they are still selling a version of. I filled in the form and got
an email back the next day from the engineer who designed it.

You can also call them at 1-662-323-0549. Many people have Internet phones and
the call would be a few pennies a minute or free. If you don't a neighbor or
friend might.

Even if you don't feel comfortable speaking in English on the telephone,
they may be able to help you anyway, or find someone who speaks your
language. It's worth a try.

Geoff.

--
Geoffrey S. Mendelson, Jerusalem, Israel gsm@mendelson.com N3OWJ/4X1GM

984. Re: WTB QEX Magazines

Newsgroup: rec.radio.amateur.antenna
Date: 2009-07-27 16:16:14 UTC
From: rkmr15203@yahoo.com
Message-ID: <f3d36e80-6730-48c2-b43f-be9f3ab9f760@f18g2000prf.googlegroups.com>
Source record: 14246
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.antenna

On Jul 22, 3:09 pm, "amdx" <a...@knology.net> wrote:
> Hi All,
> I'd like to buy some back issues of QEX. Preferably from the last 4 yrs or
> so.
> Please respond by email.
>   Thanks, Mike

Go to ARRL.org and buy the CD's.

985. Re: folded dipole balun voltage loss?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-07-27 17:48:13 UTC
From: christofire <christofire@btinternet.com>
Message-ID: <uOadneSaP7H9dfDXnZ2dnUVZ8vKdnZ2d@bt.com>
Source record: 14247
Cross-posted to: sci.engr.television.broadcast,rec.radio.amateur.antenna

"Cecil Moore" <nospam@w5dxp.com> wrote in message
news:pribm.35520$YU5.8720@newsfe21.iad...
> christofire wrote:
>> My own understanding is that they use a folded dipole for its
>> advantageous bandwidth, ...
>
> This may be true but there are other advantages/benefits.
> Given that parasitic elements lower the resonant feedpoint
> impedance and the target feedpoint is 50 or 75 ohms:
>
> Which driven element makes more sense? One that starts
> out with a feedpoint impedance of 75 ohms or one that
> starts out with a feedpoint impedance of 300 ohms?
> --
> 73, Cecil, IEEE, OOTC, http://www.w5dxp.com

I think you've misunderstood what I wrote. A J-beam Yagi such as http://www.amphenol-jaybeam.com/datasheet_files/7043xxx.pdf has a folded-dipole driven element _and_ a half-wave line balun interfacing it to coaxial cable. This type of balun, as I expect you know, transforms the dipole's impedance down by a factor of four so a nominal 300 ohms is matched to 75 ohm cable. When 50 ohm cable is specified, the same type of balun is used but the length of the dipole appears to be slightly reduced ... but now I'm repeating myself. In such a case the parasitic elements can't be reducing the feed-point impedance of the dipole very much.

Incidentally, the cable 'tail' is conventional 50 or 75 ohm cable (i.e. it doesn't act as a transformer).

As I understand it, feed-point impedance is one of the several variables involved in Yagi design, along with aspects of the radiation pattern such as main-beam width, first and other sidelobe levels, and front-to-back ratio, the resulting directivity gain, and the frequency response of all these factors. Professional antennas may not be designed for maximum gain.

Chris

986. Re: WTB QEX Magazines

Newsgroup: rec.radio.amateur.antenna
Date: 2009-07-27 19:07:37 UTC
From: amdx <amdx@knology.net>
Message-ID: <693be$4a6dfafc$d8baf3ed$19734@KNOLOGY.NET>
Source record: 14248
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.antenna

<rkmr15203@yahoo.com> wrote in message
news:f3d36e80-6730-48c2-b43f-be9f3ab9f760@f18g2000prf.googlegroups.com...
On Jul 22, 3:09 pm, "amdx" <a...@knology.net> wrote:
> Hi All,
> I'd like to buy some back issues of QEX. Preferably from the last 4 yrs or
> so.
> Please respond by email.
> Thanks, Mike

Go to ARRL.org and buy the CD's.

Ya, I thought about it, but I like the physical magazine.
Thanks, Mike

987. Re: Portable Operation

Newsgroup: rec.radio.amateur.antenna
Date: 2009-07-27 20:53:35 UTC
From: Allodoxaphobia <bit-bucket@config.com>
Message-ID: <slrnh6s4ue.2b1r.bit-bucket@shell.config.com>
Source record: 14249

On Sun, 26 Jul 2009 23:43:47 -0700, Sal M. Onella wrote:
>
> What's the custom for transmitting my I-D? I think it's "KD6VKW, PORTABLE
> ZERO." It might be "KD6VKW, STROKE ZERO." I've heard both variations and I
> searched for about 20 minutes and only found that in the US I'm apparently
> not legally required to transmit anything after my callsign. It's optional.

Loosen up, Sal! :-)
And, mix it up!!
You're not going to call CQ one time, and one time only!

Sometimes "CQ FROM KD6VKW PORTABLE ZERO"
Sometimes "CQ FROM KD6VKW PORTABLE COLORADO"
Sometimes "CQ FROM KD6VKW DELTA MIKE SIXTY EIGHT"
Sometimes "CQ FROM KD6VKW"
Sometimes "CQ FROM KD6VKW HIGH ATOP FAIRVIEW PEAK"

Let'em know on the other end that you're not just an "electronic voice "keyer".

(Although I have *no* idea what this has to do with antennas...)

Enjoy Colorado!

73
"JONESY COLORADO" HI!HI!
--
Marvin L Jones | jonz | W3DHJ | linux
38.24N 104.55W | @ config.com | Jonesy | OS/2
* Killfiling google & XXXXbanter.com: jonz.net/ng.htm

988. Re: Obtaining electromagnetic radiation from accelerating electrons

Newsgroup: rec.radio.amateur.antenna
Date: 2009-07-27 21:43:10 UTC
From: "Peter O. Brackett" <none@no-such-domain.nul>
Message-ID: <q4-dnRlj8OrpgvPXnZ2dnUVZ_vGdnZ2d@earthlink.com>
Source record: 14250

Richard:

Actually [cfr: Feynman's Lectures on Physics] it is not the acceleration of charge that produces photons (radiation), rather it is the rate of change of the acceleration of charge that results in radiation.

As we all know, 'velocity' v is the rate of change of distance or space s, expressed in terms of the differential calculus this would be written in scaler form as (v = ds/dt) while 'acceleration' a is the rate of change of velocity v, (e.g. a = dv/dt = d(ds/dt)/dt). In Engineering and Physics, the next level of differential change or rate of change of acceleration is usually termed 'jerk'. Jerk j then is j = da/dt. Jerk is not often mentioned in elementary presentations of mechanics, but as far as I know even with more in depth presentations there are apparently no 'standard' terms for higher derivates of distance change than jerk. [distance, velocity, acceleration, jerk, and then...]

Since, like their relative, the exponential functions, the sinusoidal functions, sine, cosine, etc... "sort of" replicate each other every time they are differentiated the higher order differentials of each such function 'look' simply like a scaled version of the other derivatives. Thus, for sinusoidal waveforms, which are the usual functional form assumed for most Engineering work, it is relatively easy for one to come up with a mathematical expression which provides exact values for radiation levels in terms of charge acceleration instead of charge jerk. Since of course if the charge velocity is sinusoidal, so is the acceleration and so is the jerk.

Notwithstanding that there are well known formulas that relate radiation levels to charge acceleration for sinusoidal waveforms, it is not charge acceleration per se that causes radiation. Charge jerk causes radiation.

If one desires an exact formulation for radiation caused by charge motion then perforce to be exact for general non-sinusoidal waveshapes such formulae must be related to charge jerk not acceleration.

If you do not have access to Feynman' Lectures on Physics (I believe he discusses this in Vol. 3) there was a recent more accessible discussion of this topic by the editor of QEX in an article published in QEX several years ago.

-- Pete k1po
-- Indialantic, FL

"Richard" <nearlynews_email@ntlworld.com> wrote in message news:7bbkckF22jlreU1@mid.individual.net...
> Is it not true that if I were able to accelerate my cup of coffee at light
> speeds at a frequency of 14Mhz my cup of coffee would radiate a 14Mhz

> carrier?

989. Re: A reasoning on antenna reciprocity

Newsgroup: rec.radio.amateur.antenna
Date: 2009-07-27 22:11:41 UTC
From: Dave <noone@nowhere.com>
Message-ID: <xCpbm.1478$MA3.724@nwrddc02.gnilink.net>
Source record: 14101

"JB" <nospam@goofball.net> wrote in message
news:pribm.1213$646.798@nwrddc01.gnilink.net...
> "Antonio Vernucci" <vernucci@tin.it> wrote in message
> news:4a6c91be$0$43596$4fafbaef@reader1.news.tin.it...
>> While reasoning on antenna systems reciprocity (i.e. same gain / losses
> for
>> transmit and receive), a case occurred to me which, at first glance, does
> not
>> look to be reciprocal (whilst it obviously is in reality). I consider
>> that
> case
>> fairly instructive, and I then propose it to you for your comments.
>>
>> Let us consider:
>> - an antenna having a resistance of 150 ohm (no reactance).
>> - a coaxial cable having 50-ohm characteristic impedance and a nominal
>> attenuation of say 2dB. For calculations simplicity, let us assume that
> its
>> length is a multiple of half wavelengths.
>> - a transceiver having 50-ohm impedance (both RX and TX).
>>
>> During receive the SWR on the cable will be 1:1 (the RX impedance matches
> the
>> cable impedance), and cable attenuation will then stay at nominal (i.e. 2
> dB).
>>
>> During transmit, the antenna impedance mismatch will cause an SWR that
> varies
>> along the cable, ranging from 3:1 (at the antenna-end) to about 1.9:1 (at
> the
>> TX-end), and the TX will so see an impedance of about 95 ohm (or 26.3 ohm
> if you
>> will). Due to the SWR, the cable will then show an extra attenuation that
> does
>> not occur during receive. The ARRL Handbook graphs quantify such extra
>> attenuation as about 0.8 dB.
>>
>> The different cable attenuation between receive and transmit may
> erroneously
>> lead someone to considering the system to be non reciprocal.
>>
>> My simple explanation of why the system is instead reciprocal is the
> following:
>>

>> - during receive the 150-ohm source (i.e. the antenna) which sees a
>> 50-ohm
> load
>> will be subjected to a mismatch loss that can be easily calculated to be
> about
>> 1.25 dB.
>>
>> - during transmit the 50-ohm source (i.e. the TX) which sees a 95-ohm
>> load
> will
>> also be subjected to a mismatch loss but of lower value, that can be
> easily
>> calculated to be about 0.45 dB.
>>
>> The mismatch loss difference, i.e. (1.25 - 0.45), is perfectly
>> compensated
> for
>> by the extra cable attenuation of 0.8 dB. This witnesses why the system
>> is
>> reciprocal (even having based calculations on a quite simplified model of
>> reality).
>>
>> 73
>>
>> Tony I0JX, Rome Italy
>>
> Reciprocity means the pattern will be the same transmitting or recieving.
> There are other things that may not be reciprocal though. The ionosphere
> may change the polarization of the signal. Transmitter and reciever may
> have different loading capabilities and the system may change due to
> heating
> from resistive losses under power.
>

and let them change, they do not affect the symmetry in the antenna
performance itself.

990. Re: Portable Operation

Newsgroup: rec.radio.amateur.antenna
Date: 2009-07-27 22:38:14 UTC
From: Will <whax44@gmail.com>
Message-ID: <2a3b4d8a-b3ce-405e-859c-531270a46c85@g19g2000vbi.googlegroups.com>
Source record: 14102

On Jul 27, 2:43 am, "Sal M. Onella" <salmone...@food.poisoning.org>
wrote:
> I'm bringing an HF rig to the mountains of Colorado next week. I just
> finished assembling a travel kit of dipole elements for 10, 15 and 20. I
> have ropes, pulleys, wire elements, baluns, cable, connectors, a tuner, VSWR
> meter, etc.   There's no electricity except for a very few generators, so
> typical urban noise should be absent. Joy!
>
> What's the custom for transmitting my I-D?   I think it's "KD6VKW, PORTABLE
> ZERO." It might be "KD6VKW, STROKE ZERO." I've heard both variations and I
> searched for about 20 minutes and only found that in the US I'm apparently
> not legally required to transmit anything after my callsign. It's optional.
>
> I know the county and grid square. Since some hams hunt counties and grid
> squares, should I include either when I call CQ? Opinions, please.
>
> TKS
> "Sal"
> KD6VKW

Have fun Sal and let us know how you made out .Please include logs and
itinerary :)

991. Re: Portable Operation

Newsgroup: rec.radio.amateur.antenna
Date: 2009-07-28 03:45:40 UTC
From: "Sal M. Onella" <salmonella@food.poisoning.org>
Message-ID: <Gvubm.23348$501.8461@newsfe13.iad>
Source record: 14103

"'Doc" <ltdoc@yahoo.com> wrote in message
news:00e624d0-9b03-4841-bbe8-f0be1bf2bf9a@r2g2000yqm.googlegroups.com...
> A couple of things.
> Don't forget to take a couple of stakes and a fairly large hammer, you
> might need them. To hold the ends of those antenna lines, or maybe
> for a piece of gear that is frustrating you?
>
> As for encluding everyting someone might possibly want to know in that
> 'CQ', it'd probably take 15 minutes to send it. Why not just let'em
> ask when they answer your CQ?
> - 'Doc
>

Good advice all around. Thanks, Doc.

Sal

992. Re: Portable Operation

Newsgroup: rec.radio.amateur.antenna
Date: 2009-07-28 03:46:36 UTC
From: "Sal M. Onella" <salmonella@food.poisoning.org>
Message-ID: <ywubm.23349$501.4534@newsfe13.iad>
Source record: 14104

"Ralph Mowery" <rmowery28146@earthlink.net> wrote in message
news:4u2dnbHQ1ayGH_DXnZ2dnUVZ_ridnZ2d@earthlink.com...

< snip >

> >
> > I know the county and grid square. Since some hams hunt counties and
grid
> > squares, should I include either when I call CQ? Opinions, please.

< snip >
> >
> You are not required to send anything but your call as you mentioned. If
> you want to , you can add almost anything after it. For voice , portable
> is/was used. The Stroke was used in CW.
> If using voice, you may want to say "portable Colorado" if you are not
> getting any response to your CQs.
>
>

Thank you.

Sal

993. Re: Portable Operation

Newsgroup: rec.radio.amateur.antenna
Date: 2009-07-28 03:54:09 UTC
From: "Sal M. Onella" <salmonella@food.poisoning.org>
Message-ID: <DDubm.23350$501.1233@newsfe13.iad>
Source record: 14105

"JB" <nospam@goofball.net> wrote in message
news:zgibm.1212$646.473@nwrddc01.gnilink.net...
>

< snip >

>
> I have no problem with a continuous beacon as long as you are QSK but
there
> are a lot of people out there that have their own ideas of how things
should
> be done and want to police others, so good luck. I have better luck
giving
> another station a call. This at least occupies the frequency with chatter
> that people can find, then QSY 10 kc and give a call. If you weren't too
> boring, you will have a pile up. If you don't hear anyone on the band at
> all, maybe the band is dead.
>

I have plenty of experience with a dead band. Don't we all?

I have generally had good luck throwing out a CQ. I offer
as many CQs as I answer, just to maintain a balance.

San Diego isn't much of a foundation for a pileup but Gunnison County,
Colorado might be.

Sal

994. Re: Portable Operation

Newsgroup: rec.radio.amateur.antenna
Date: 2009-07-28 03:59:18 UTC
From: "Sal M. Onella" <salmonella@food.poisoning.org>
Message-ID: <slubm.23352$501.22399@newsfe13.iad>
Source record: 14106

"Will" <whax44@gmail.com> wrote in message
news:2a3b4d8a-b3ce-405e-859c-531270a46c85@g19g2000vbi.googlegroups.com...

Have fun Sal and let us know how you made out .Please include logs and
itinerary :)

Will do.

Sal

995. Re: MFJ 1782

Newsgroup: rec.radio.amateur.antenna
Date: 2009-07-28 04:37:40 UTC
From: "Sal M. Onella" <salmonella@food.poisoning.org>
Message-ID: <qgvbm.46498$FP2.12689@newsfe05.iad>
Source record: 14107

"Jeannot" <g*****.****@orange.fr> wrote in message
news:4a6dbf46$0$23460$ba4acef3@news.orange.fr...
> Hello
>
> I have bought an antenna in secondhand an antenna MFJ-1782. I have some
> problems to obtain good results for the SWR .My antenna is in vertical
> polarization. I use this antenna with a battery..
>
> I have only a good SWR in the ten meter band (1.1) but when
the
> frequency degreases , the SWR increases very rapidly . On the 20 meter
band
> , the SWR is near 3-3.5 - The coax is H100.
>
> I tried with differents lenghs of coax . (5 , 10, 15 meters)
> and the result is the same.
>
> I don't know what I must do.
>
> I write you (in bad English and excuse me) to say if you have
a
> solution to my problem.. I thank you in advance

Your English is fine.

You did not say if pressing the tuning buttons on the Loop Controller is making any change. The SWR should change and the UP or DOWN LEDs should turn on. Could the polarity of the battery connection be incorrect? Could the battery be too small or too weak to provide the needed current to move the tuning motor?

http://www.mfjenterprises.com/man/pdf/MFJ-1782.pdf in English. I could not find it in French.

I searched at google.com for

mfj 1782 francais

I found this:

Discussions - fr.rec.radio.amateur | Google Groupes
Langue : Fran&#65533;ais. Cat&#65533;gories du groupe : R&#65533;gion: Europe > France
... MFJ 1782. Bonjour &#65533; tous Je suis en train de mettre en service une
antenne MFJ 1782 ...
groups.google.fr/group/fr.rec.radio.amateur - Cached - Similar

Also for you, an MFJ dealer:
Generale Electronique Services Phone: (33)1-6441-7888
205 Rue de l'industrie BP46 Fax: (33)1-6063-2485
77542 Savigny-le-Temple Email: amateur@ges.fr
Cedex, , France Website: www.ges.fr

Bonne chance et 73,
Sal

996. Re: A reasoning on antenna reciprocity

Newsgroup: rec.radio.amateur.antenna
Date: 2009-07-29 19:26:31 UTC
From: JB <nospam@goofball.net>
Message-ID: <Hn1cm.1573$646.972@nwrddc01.gnilink.net>
Source record: 14108

> > Reciprocity means the pattern will be the same transmitting or
recieving.
> > There are other things that may not be reciprocal though. The
ionosphere
> > may change the polarization of the signal. Transmitter and reciever may
> > have different loading capabilities and the system may change due to
> > heating
> > from resistive losses under power.
> >
>
> and let them change, they do not affect the symmetry in the antenna
> performance itself.
>
even when things begin to melt and deform or desolder themselves,
reciprocity still exists even though it is of no use anymore.;-)

997. Has "antenna" died?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-07-31 02:51:24 UTC
From: "J. Mc Laughlin" <jcm@power-net.net>
Message-ID: <PsWdnZKtFdCwwe_XnZ2dnUVZ_vqdnZ2d@bright.net>
Source record: 14109

Dear Group: While I attend only now-and-then, it seems as it has been days since new communications have been posted.

Something might have changed with my ISP or I asserted some secret instruction.

73, Mac N8TT

--
J. McLaughlin; Michigan, USA
Home: JCM@power-net.net

998. Re: Has "antenna" died?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-07-31 03:35:32 UTC
From: tom <news4792@taring.org>
Message-ID: <4a7266b7$0$77057$8046368a@newsreader.iphouse.net>
Source record: 14110

J. Mc Laughlin wrote:
> Dear Group: While I attend only now-and-then, it seems as it has been days
> since new communications have been posted.
>
> Something might have changed with my ISP or I asserted some secret
> instruction.
>
> 73, Mac N8TT
>

You're fine. Sometimes it's just quiet.

Art is in an institution or fresh back with good meds. Others are
probably busy with it being summer. Those of us in the upper midwest
haven't had a "normal" summer yet this year which is just fine by me.
Bring on the drought, bring on more cold summers!

tom
K0TAR

999. Re: Has "antenna" died?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-07-31 04:35:02 UTC
From: Ed <Huckleberry_REMOVE_@bigvalley.net>
Message-ID: <Xns9C58DB90D33DBHuckleberrybigvalley@198.186.192.196>
Source record: 14111

> Art is in an institution or fresh back with good meds. Others are
> probably busy with it being summer. Those of us in the upper midwest
> haven't had a "normal" summer yet this year which is just fine by me.
> Bring on the drought, bring on more cold summers!
>

Tom, this wierd summer (or lack of it) has applied to the Pacific
Northwest, too.... except for the past week.

Ed K7AAT

1000. Re: Has "antenna" died?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-07-31 05:43:11 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <ij057595k8p3pfodrfirhp0scflss3vbkh@4ax.com>
Source record: 14112

On Thu, 30 Jul 2009 22:51:24 -0400, "J. Mc Laughlin"
<jcm@power-net.net> wrote:

>Dear Group: While I attend only now-and-then, it seems as it has been days
>since new communications have been posted.

Hi Mac,

'tis the nature of things. Participation has been falling from the
peak of 1999-2001, down by about 6dB on average, but 10dB for July (if
posting volume were power, mostly dissipated heat; double that if you
think of postings as lost potential).

The posting count follows the classic battleship curve of emerging
then declining fads, fashion, schools of thought, what-have-you social
trends. We are now as engaged as we were in 1995. Consult:
http://groups.google.com/group/rec.radio.amateur.antenna/about?hl=en

I would not speculate or offer that counts indicate quality, however.

73's
Richard Clark, KB7QHC

1001. Re: Has "antenna" died?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-07-31 12:46:15 UTC
From: Dave <noone@nowhere.com>
Message-ID: <rIBcm.1840$646.739@nwrddc01.gnilink.net>
Source record: 14113

"Ed" <Huckleberry_REMOVE_@bigvalley.net> wrote in message
news:Xns9C58DB90D33DBHuckleberrybigvalley@198.186.192.196...
>
>> Art is in an institution or fresh back with good meds. Others are
>> probably busy with it being summer. Those of us in the upper midwest
>> haven't had a "normal" summer yet this year which is just fine by me.
>> Bring on the drought, bring on more cold summers!
>>
>
>
> Tom, this wierd summer (or lack of it) has applied to the Pacific
> Northwest, too.... except for the past week.
>
> Ed K7AAT
>

but at least all the 'normal' kooks are taking a vacation or got their meds
caught up. sure reduces the noise level in here quite a bit.

1002. Re: Has "antenna" died?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-07-31 13:51:36 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <JFCcm.83487$rg4.33655@newsfe02.iad>
Source record: 14114

tom wrote:
> ... bring on more cold summers!

Caused, no doubt, by Global Warming. :-)
--
73, Cecil, IEEE, OOTC, http://www.w5dxp.com

1003. Re: Has "antenna" died?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-07-31 14:11:32 UTC
From: "J. Mc Laughlin" <jcm@power-net.net>
Message-ID: <x6idnVusq6QJZu_XnZ2dnUVZ_r-dnZ2d@bright.net>
Source record: 14115

Dear Richard and Group: Ah so!

Since I have taken to automating the purging of notes from authors-of-noise, it occurred to me that I might have turned up the squelch too high. I am relieved to know that is probably not the case.

In the matter of antennas: my esteemed colleague AB8T's EM class' antenna project was a great success. Students designed UHF TV antennas (Channels 14-51) using EZNEC5+, constructed the antennas, and then had their performance compared to expected. It was an opportunity for students to learn-by-doing in several areas. As readers on this group know well, antennas involve several areas of science and engineering. The one important area not covered because it was thought too far from EM, was the issue of survivability in the presence of wind/ice loads.

73, Mac N8TT

--
J. McLaughlin; Michigan, USA
Home: JCM@power-net.net
"Richard Clark" <kb7qhc@comcast.net> wrote in message
news:ij057595k8p3pfodrfirhp0scflss3vbkh@4ax.com...
> On Thu, 30 Jul 2009 22:51:24 -0400, "J. Mc Laughlin"
> <jcm@power-net.net> wrote:
>
>>Dear Group: While I attend only now-and-then, it seems as it has been
>>days
>>since new communications have been posted.
>
> Hi Mac,
>
> 'tis the nature of things. Participation has been falling from the
> peak of 1999-2001, down by about 6dB on average, but 10dB for July (if
> posting volume were power, mostly dissipated heat; double that if you
> think of postings as lost potential).
>
> The posting count follows the classic battleship curve of emerging
> then declining fads, fashion, schools of thought, what-have-you social
> trends. We are now as engaged as we were in 1995. Consult:
> http://groups.google.com/group/rec.radio.amateur.antenna/about?hl=en
>
> I would not speculate or offer that counts indicate quality, however.
>
> 73's
> Richard Clark, KB7QHC

1004. Re: Has "antenna" died?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-07-31 16:57:39 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <aa8675d7guvqffjjji7nrshkeafcthlq4n@4ax.com>
Source record: 14116

On Fri, 31 Jul 2009 10:11:32 -0400, "J. Mc Laughlin"
<jcm@power-net.net> wrote:

>Dear Richard and Group: Ah so!
>
>Since I have taken to automating the purging of notes from authors-of-noise,
>it occurred to me that I might have turned up the squelch too high. I am
>relieved to know that is probably not the case.
>
>In the matter of antennas: my esteemed colleague AB8T's EM class' antenna
>project was a great success. Students designed UHF TV antennas (Channels
>14-51) using EZNEC5+, constructed the antennas, and then had their
>performance compared to expected. It was an opportunity for students to
>learn-by-doing in several areas. As readers on this group know well,
>antennas involve several areas of science and engineering. The one
>important area not covered because it was thought too far from EM, was the
>issue of survivability in the presence of wind/ice loads.

Hi Mac,

It sounds like you will survive this fading battleship curve by having
secured your own life boat with these class projects - congratulations
to AB8T.

Myself, I find more interesting "antenna" applications being designed
at the nanoscale in a remarkable field called Surface Plasmon
Resonance.

73's
Richard Clark, KB7QHC

1005. Re: Has "antenna" died?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-07-31 22:32:06 UTC
From: "-.-. --.-" <A@A.COM>
Message-ID: <h4vrei$702$1@nnrp-beta.newsland.it>
Source record: 14117

"Richard Clark" <kb7qhc@comcast.net> ha scritto nel messaggio
news:aa8675d7guvqffjjji7nrshkeafcthlq4n@4ax.com...

> Myself, I find more interesting "antenna" applications being designed
> at the nanoscale in a remarkable field called Surface Plasmon
> Resonance.
>
> 73's
> Richard Clark, KB7QHC

Myself, still keep alive the interest on antenna and this group simply with
a rock-stable state of mind that concern in don't ever buy a commercial
antenna.

My 2 cents,

-.-. --.-

1006. Re: Has "antenna" died?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-07-31 22:32:53 UTC
From: "-.-. --.-" <A@A.COM>
Message-ID: <h4vrei$702$2@nnrp-beta.newsland.it>
Source record: 14118

"Richard Clark" <kb7qhc@comcast.net> ha scritto nel messaggio
news:aa8675d7guvqffjjji7nrshkeafcthlq4n@4ax.com...

> Myself, I find more interesting "antenna" applications being designed
> at the nanoscale in a remarkable field called Surface Plasmon
> Resonance.
>
> 73's
> Richard Clark, KB7QHC

Myself, still keep alive the interest on antenna and this group simply with
a rock-stable state of mind that concern in don't ever buy a commercial
antenna.

My 2 cents,

-.-. --.-

1007. Re: Motorcycle mobile

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-01 00:45:58 UTC
From: What me worry? <danXinpasco@gmail.com>
Message-ID: <sv3775t05fpenfoo5iq4606o1oaq2023oe@4ax.com>
Source record: 14119

On Fri, 02 Jan 2009 23:23:26 -0500, Mike Coslo <mjc5@psu.edu> backed
into a tree whilst ridin inna park then wrote:

>Philo wrote:
>
>>> Dual band 144/440 on a motorcycle...Any suggestions?
>>>
>>> - 73 de Mike N3LI -
>>
>> I hope the Shadow Spirit's battery is heavier than the unit in the CBF1000.
>>
>> Anyway start developing your "dead battery bike pushing" skills...
>
>It's pretty strong. I bought the best one I could find, after finding
>the previous owner had an underpowered one.
>
>Side note: I don't know if is is an indicator, but this new heavy duty
>battery was distinctly old school. It was shipped uncharged, and needed
>a full charging after putting the acid in it. I've been used to the fill
>'em and go pre-charged batteries.
>
> - 73 de Mike N3LI -

How did it work out for ya?

Dan N9JBF
97 HD FXDS

1008. UNUN Cores?How To Wind?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-01 00:57:04 UTC
From: Greg <bluehyhena@hotmail.com>
Message-ID: <22e47242-3660-4bb4-9406-fab7333e915f@32g2000yqj.googlegroups.com>
Source record: 14120

Hi

I am trying to build a broadband UNUN 9:1 from 1.8 mhz to 30mhz. I
have had no luck.

The first one the that I built, I used #67 material trifila wound 8
or nine turns. This one works
from 80 through 15 meters.

I also tried a Quadrifilar winding on a #67 and #61 core as multi
impedance transformer, still
narrow band with bad or high VSWR from 10mhz to 30mhz.

I tried another one with #61 material and did not have much success.

I then tried a auto transformer type primary 9 turns secondary 44
turns using a Amidon 61 core.
This produced a nice low frequency UNUN .5 mhz to 10 mhz.

The question is simply how do I build a broadband UNUN or
Autotransformer from 1.8mhz to 30mhz and what core do I use? I am
coming to the conclusion that these auto transformers or high
impedance UNUN's are narrow band devices?

I am playing around with a terminated T2FD type antenna trying
different impedances, 450,600,800 and 1000 ohms termination resistors.

Bob

1009. Re: UNUN Cores?How To Wind?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-01 01:21:43 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <o267755rf1rrnoc5mid36hbntltt3c019e@4ax.com>
Source record: 14121

On Fri, 31 Jul 2009 17:57:04 -0700 (PDT), Greg
<bluehyhena@hotmail.com> wrote:

>I am trying to build a broadband UNUN 9:1 from 1.8 mhz to 30mhz.
>,,, what core do I use?

Hi Greg (signing as Bob),

It might take a combination of two, or three.

73's
Richard Clark, KB7QHC

1010. Re: Has "antenna" died?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-01 03:23:04 UTC
From: tom <news4792@taring.org>
Message-ID: <4a73b545$0$77051$8046368a@newsreader.iphouse.net>
Source record: 14122

Cecil Moore wrote:
> tom wrote:
>> ... bring on more cold summers!
>
> Caused, no doubt, by Global Warming. :-)

Of course, but it's "Climate Change", that way no matter what happens it the fault of humanity.

On a similar note, has anyone noticed how the sun's output has a lot to do with the climate? And that it sort of tracks what's going on? Ok, tracks quite well.

tom
K0TAR

1011. Re: UNUN Cores?How To Wind?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-01 04:05:05 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <6OednUlSMdlrl-7XnZ2dnUVZ_qKdnZ2d@giganews.com>
Source record: 14123

Greg wrote:
> Hi
>
> I am trying to build a broadband UNUN 9:1 from 1.8 mhz to 30mhz. I
> have had no luck.
>
> The first one the that I built, I used #67 material trifila wound 8
> or nine turns. This one works
> from 80 through 15 meters.
>
> I also tried a Quadrifilar winding on a #67 and #61 core as multi
> impedance transformer, still
> narrow band with bad or high VSWR from 10mhz to 30mhz.
>
> I tried another one with #61 material and did not have much success.
>
> I then tried a auto transformer type primary 9 turns secondary 44
> turns using a Amidon 61 core.
> This produced a nice low frequency UNUN .5 mhz to 10 mhz.
>
> The question is simply how do I build a broadband UNUN or
> Autotransformer from 1.8mhz to 30mhz and what core do I use? I am
> coming to the conclusion that these auto transformers or high
> impedance UNUN's are narrow band devices?
>
> I am playing around with a terminated T2FD type antenna trying
> different impedances, 450,600,800 and 1000 ohms termination resistors.
>
> Bob

Type 43 or a 70-series ferrite is a better choice for that frequency range, and 70 series is probably better for the relatively high impedances you're dealing with. And as Richard said, you might have to do the transformation in more than one step.

Roy Lewallen, W7EL

1012. Crossposting Permitted to rec.radio.amateur.moderated

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-01 06:00:03 UTC
From: rram@panix.com
Message-ID: <radio/ham-radio/moderated/crossposting-1-1249106400@panix.com>
Source record: 14124
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.dx,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.policy,rec.radio.amateur.space,rec.radio.info

```
Posted-By: auto-faq 3.3.2 beta (PGPMoose V2.0, Perl 5.005)
Archive-name: radio/ham-radio/moderated/crossposting
Revision: 1.1 2009/04/12 19:42:04
Posting-Frequency: posted monthly
URL: http://www.panix.com/~rram/usenet/rram/index.html

Changes followed by "|".

After a 30-day public discussion and feedback period to gauge reader
opinions in March of 2009:

http://groups.google.com/group/rec.radio.amateur.moderated/browse_thread/thread/d7d337db35
f23326

the rec.radio.amateur.moderated Moderation Team has decided to consider
amending its charter, and permit limited simultaneous crossposting to
rec.radio.amateur.moderated and one other unmoderated
amateur-radio-related discussion newsgroup. We are currently trying
this on a temporary basis (90 days, through early July 2009), and adopt
it permanently if successful.

Approved rec.radio.amateur.* newsgroups are those that are currently
listed in the latest version of the "List of Big Eight Newsgroups" which
is crossposted monthly to news.announce.newgroups, news.groups, and
news.lists.misc.

Approved alt.radio.amateur.* and alt.ham-radio.* newsgroups are those
that have been created consistent with the suggestions in "So You Want
to Create an Alt Newsgroup" at:

http://www.faqs.org/faqs/alt-creation-guide/

Approved regional hierarchy newsgroups are those that contain either
"radio.amateur" or "ham-radio" in their names, including
uk.radio.amateur and aus.radio.amateur.misc.

We will make every reasonable effort to keep our list of approved
newsgroups up-to-date. In case we have overlooked any, and a submission
is rejected in error as a result, the rejected submitter can E-mail us
at our administrative contact address (in the signature at the bottom of
this article, and the default Reply-To for the rejection message)
requesting that it be added, and that the article be approved. We may
still choose to reject articles crossposted to any alt.* newsgroup with
an inappropriate name, including obscene language, embedded
name-calling, or encouragement of unlawful conduct.
```

Please direct any comments, questions, or criticisms to
rec-radio-amateur-moderated-request@panix.com.

1013. Re: Has "antenna" died?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-01 14:47:34 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <9AYcm.79587$zq1.52075@newsfe22.iad>
Source record: 14125

tom wrote:
> On a similar note, has anyone noticed how the sun's output has a lot to
> do with the climate? And that it sort of tracks what's going on? Ok,
> tracks quite well.

Something else that tracks quite well is the size
of the ice caps at the North Poles of both Earth
and Mars proving, beyond a doubt, that there must
be intelligent life on Mars generating emissions
that effect Climate Change, just like here. :-)
--
73, Cecil, IEEE, OOTC, http://www.w5dxp.com

1014. Re: UNUN Cores?How To Wind?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-01 15:10:31 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <GVYcm.77801$FP2.62458@newsfe05.iad>
Source record: 14126

Greg wrote:
> I am trying to build a broadband UNUN 9:1 from 1.8 mhz to 30mhz. I
> have had no luck.

Question is: Where are you going to find an antenna that
exhibits a feedpoint impedance of 450+j0 ohms from 1.8 MHz
to 30 MHz? Here is a Z0=450 ohm ladder-line-fed all-HF-band
antenna that exhibits a feedpoint impedance at my QTH
between 40+j0 and 87+j0 ohms on all HF bands and needs
a 1:1 balun with no conventional tuner.

http://www.w5dxp.com/notuner.htm

Would you mind describing the antenna system that requires
the specified balun?

> The question is simply how do I build a broadband UNUN or
> Autotransformer from 1.8mhz to 30mhz and what core do I use?

It's extremely difficult to build a balun that functions
properly over a 16:1 frequency range. It is relatively
easy to build one that functions properly over a 4:1
frequency range. I would suggest building two baluns and
switching between them, one for 160m-40m and the other
for 30m-10m.
--
73, Cecil, IEEE, OOTC, http://www.w5dxp.com

1015. Re: UNUN Cores?How To Wind?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-01 17:52:32 UTC
From: Dale Parfitt <parinc1@verizon.net>
Message-ID: <Ah%cm.128$nh2.28@nwrddc02.gnilink.net>
Source record: 14127

"Greg" <bluehyhena@hotmail.com> wrote in message
news:22e47242-3660-4bb4-9406-fab7333e915f@32g2000yqj.googlegroups.com...
> Hi
>
> I am trying to build a broadband UNUN 9:1 from 1.8 mhz to 30mhz. I
> have had no luck.
>
> The first one the that I built, I used #67 material trifila wound 8
> or nine turns. This one works
> from 80 through 15 meters.
>
> I also tried a Quadrifilar winding on a #67 and #61 core as multi
> impedance transformer, still
> narrow band with bad or high VSWR from 10mhz to 30mhz.
>
> I tried another one with #61 material and did not have much success.
>
> I then tried a auto transformer type primary 9 turns secondary 44
> turns using a Amidon 61 core.
> This produced a nice low frequency UNUN .5 mhz to 10 mhz.
>
> The question is simply how do I build a broadband UNUN or
> Autotransformer from 1.8mhz to 30mhz and what core do I use? I am
> coming to the conclusion that these auto transformers or high
> impedance UNUN's are narrow band devices?
>
> I am playing around with a terminated T2FD type antenna trying
> different impedances, 450,600,800 and 1000 ohms termination resistors.
>
> Bob

You don't state what shape the core is. Have you tired a binocular core? I
wound up a 9:1 on a 43 binocular core and see under 1.5:1 from 500KHz to
30MHz on an Agilent network analyzer.

Dale W4OP

1016. Re: How Can you Make a VHF TV Antenna for an Attic

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-01 18:25:43 UTC
From: rikoski@earthlink.net
Message-ID: <rikoski-479F3A.13254301082009@news.newsrazor.net>
Source record: 14128

In article <17948-4A6D1A52-2361@storefull-3172.bay.webtv.net>,
richardharrison@webtv.net (Richard Harrison) wrote:
>
> I`ve built and used many rhombics. They all were satisfactory in spite
> of somewhat ragged patterns. They are capableof high gain and extreme
> bandwidth. They require much space and 4 supports but construction is
> simple for the minimalist model.

How critical was the aiming of the antenna? I'm asking because if I
build one, many wavelengths long, it probably won't be easy to move the
poles.

1017. Re: rotator coax

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-02 00:07:27 UTC
From: n9zas <n9zas.4bac7c8@radiobanter.com>
Message-ID: <n9zas.4bac7c8@radiobanter.com>
Source record: 14131

ml;684120 Wrote:
> In article Gb3am.950$MA3.207@nwrddc02.gnilink.net,
> "JB" nospam@goofball.net wrote:
> ---
> the coax is not stressed to much. The kind of coax with the foil
> under
> the braid is NOT good for this loop.
>
>
> John Passaneau W3JXP-
>
> Hi
>
> Thank you very much for responding. was hoping more might
> respond
> to what I thought was a fair question.
>
> Interesting wonder why you don't recomend the foil type I guess
> the
> extra flexing would damage it??
> -
> Yes. Not only does the foil shield break up, but the abrasion between
> the
> dissimilar metals causes noise
> -
> Perhaps i can just find some double braided shield then...
> -
> A good 95% + shield like Belden 8214 or eq. foam type with stranded
> center
> conductor is the best. Extra shields will complicate matters. If you
> have
> multiple runs, the crosstalk between cables will me much less than
> the
> antennas talking to each other anyway unless you have a lot of
> vertical
> separation. It is good to use double shielding on duplexers and
> hardline on
> fixed antennas. When going around a rotor, you will have maximum life
> if
> you provide strain relief and broad loops like the remote broadcast
> trucks
> do. The coax will go bad at the loop first. Another answer is to
> use
> hardline up the tower and 8214 or RG-214 and N connectors for the

> rotor
> jumper, and replace it occasionally. Of course the connectors must
> be
> strain relieved, wrapped and well sealed to avoid any mechanical
> disturbance
> or water intrusion.-
>
> thanks much for a ll the tips

You might want to check out Belden 9913F (flex) which is a low loss
coaxial cable which very well at frequencies up to 1ghz.
N9ZAS.

--
n9zas

1018. Re: How Can you Make a VHF TV Antenna for an Attic

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-02 02:07:35 UTC
From: "Sal M. Onella" <salmonella@food.poisoning.org>
Message-ID: <lx6dm.81091$9P.53355@newsfe08.iad>
Source record: 14129

<rikoski@earthlink.net> wrote in message
news:rikoski-479F3A.13254301082009@news.newsrazor.net...
> In article <17948-4A6D1A52-2361@storefull-3172.bay.webtv.net>,
> richardharrison@webtv.net (Richard Harrison) wrote:
> >
> > I`ve built and used many rhombics. They all were satisfactory in spite
> > of somewhat ragged patterns. They are capableof high gain and extreme
> > bandwidth. They require much space and 4 supports but construction is
> > simple for the minimalist model.
>
> How critical was the aiming of the antenna? I'm asking because if I
> build one, many wavelengths long, it probably won't be easy to move the
> poles.

The bigger it is, the more critical. Longest rhombics have the highest gain
and, by necessity, the narrowest beamwidths.

Beamwidth is usually specified as the angle between the two 3 dB points on
the left and right sides of the beam. Most designs either specify the
beamwidth or show you a polar plot from which you can arrive at the
beamwidth by inspection.

It is not inconceivable to make a rhombic structure that pivoted about a
single point at the feed and was supported at the terminated end. An
insulating structure would be needed but if you were to confine it to UHF, a
five-wavelength rhombic would be about 15 feet long. Awkward but not
imposssible; we already do it (or close to it) with some of the larger quad
antennas

1019. Re: UNUN Cores?How To Wind?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-02 02:14:52 UTC
From: amdx <amdx@knology.net>
Message-ID: <16380$4a74f692$18d6b40c$13282@KNOLOGY.NET>
Source record: 14130

"Greg" <bluehyhena@hotmail.com> wrote in message
news:22e47242-3660-4bb4-9406-fab7333e915f@32g2000yqj.googlegroups.com...
> Hi
>
> I am trying to build a broadband UNUN 9:1 from 1.8 mhz to 30mhz. I
> have had no luck.
>
> The first one the that I built, I used #67 material
snip

> The question is simply how do I build a broadband UNUN or
> Autotransformer from 1.8mhz to 30mhz and what core do I use? I am
> coming to the conclusion that these auto transformers or high
> impedance UNUN's are narrow band devices?
>
> I am playing around with a terminated T2FD type antenna trying
> different impedances, 450,600,800 and 1000 ohms termination resistors.
>
> Bob

Here are some papers that may help.
http://www.hep.princeton.edu/~mcdonald/examples/EM/sevick_hfe_4_1_46_05.pdf
http://standards.ieee.org/reading/ieee/ept/trans.pdf

These came from here, there are others.
http://unjobs.org/authors/jerry-sevick

Mike

1020. Re: UNUN Cores?How To Wind?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-02 04:50:12 UTC
From: Greg <bluehyhena@hotmail.com>
Message-ID: <01ab164d-eda9-4542-a279-72e6a5458876@o15g2000yqm.googlegroups.com>
Source record: 14132

Thanks for all the information.

The 9:1 works with 8 turns trifilar, on the FT240-67 from 80 through
to 10 meters. Its poor on 160 meters.

All the cores are FT 240 size from Amidon or Bytemark. I can get the
transformers to work but only over a narrow frequency range for the
higher impedance ratios.

I notice that the Sevick UNUN thats sold by Bytemark, a 18:1 ratio
is narrow band and wont cover 1.8mhz to 30 mhz. Anyhow i dont have
the magic recipe yet but I will keep experimenting.

Bob

amdx wrote:
> "Greg" <bluehyhena@hotmail.com> wrote in message
> news:22e47242-3660-4bb4-9406-fab7333e915f@32g2000yqj.googlegroups.com...
> > Hi
> >
> > I am trying to build a broadband UNUN 9:1 from 1.8 mhz to 30mhz. I
> > have had no luck.
> >
> > The first one the that I built, I used #67 material
> snip
>
> > The question is simply how do I build a broadband UNUN or
> > Autotransformer from 1.8mhz to 30mhz and what core do I use? I am
> > coming to the conclusion that these auto transformers or high
> > impedance UNUN's are narrow band devices?
> >
> > I am playing around with a terminated T2FD type antenna trying
> > different impedances, 450,600,800 and 1000 ohms termination resistors.
> >
> > Bob
>
> Here are some papers that may help.
> http://www.hep.princeton.edu/~mcdonald/examples/EM/sevick_hfe_4_1_46_05.pdf
> http://standards.ieee.org/reading/ieee/ept/trans.pdf
>
> These came from here, there are others.
> http://unjobs.org/authors/jerry-sevick
>
> Mike

1021. Re: rotator coax

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-02 15:17:02 UTC
From: JB <nospam@goofball.net>
Message-ID: <O5idm.253$nh2.207@nwrddc02.gnilink.net>
Source record: 14133

>
> You might want to check out Belden 9913F (flex) which is a low loss
> coaxial cable which very well at frequencies up to 1ghz.
> N9ZAS.
>
It too has a foil shield. It is just like LMR400 but with a more flexible
jacket and stranded #10 center. Belden 8913 is just like 9913 without the
foil.

1022. How to route feed line for dipole

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-02 17:24:49 UTC
From: KJ4NTS <HamRadio@dontask.com>
Message-ID: <w6adnQwYeKtxVujXnZ2dnUVZ_o6dnZ2d@giganews.com>
Source record: 14134

I'm thinking about hanging a dipole from a roof gable to a tree. Of course the feed line connects
to the dipole in the center which presents a problem: If I drop the feed line straight down it will
end up in the middle of the yard where people walk and the grass is mowed.

Is it possible to run a coax feed line back to the house along one leg of the dipole, perhaps
suspended a foot or so below it?

1023. Counterpoise for an end-fed wire antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-02 17:30:31 UTC
From: KJ4NTS <KJ4NTS@dontask.com>
Message-ID: <NvWdnVlLypTfUOjXnZ2dnUVZ_gqdnZ2d@giganews.com>
Source record: 14135

I'm confused about the requirements for a counterpoise for an end-fed wire antenna. I understand
that it's needed, but I don't understand what the requirements are.

Can a ground stake at the base of the feed point serve as a counterpoise, or does it need to be
another wire running under the ground below the antenna?

If a wire is required, how long does the counterpoise have to be?

Would it be better to use insulated or uninsulated wire for a buried counterpoise?

1024. Re: Counterpoise for an end-fed wire antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-02 18:34:04 UTC
From: "Geoffrey S. Mendelson" <gsm@mendelson.com>
Message-ID: <slrnh7bmr8.duc.gsm@cable.mendelson.com>
Source record: 14136

KJ4NTS wrote:
> I'm confused about the requirements for a counterpoise for an end-fed wire antenna. I understand
> that it's needed, but I don't understand what the requirements are.

If you get 100 replies, you'll probably get 110 different answers to that.

> Can a ground stake at the base of the feed point serve as a counterpoise, or does it need to be
> another wire running under the ground below the antenna?

No, it makes a good DC ground for lightening protection. A counterpoise can be
run almost anywhere, and the more the better.

> If a wire is required, how long does the counterpoise have to be?

.28 wavelength is something I have read, while most people use 1/4 wavelength,
or an electrical equivalent (shorter due to velocity factor).

> Would it be better to use insulated or uninsulated wire for a buried counterpoise?

Uninsulated.

Not that some antennas don't need a counterpoise, for example a 5/8th wave
antenna or an end fed zepp which uses no or a very short counterpoise.

A friend of mine has a commercial antenna, which consists of a matching
network, a trap and around 40 feet of wire. It covers 10,20 and 40 meters
with no counterpoise. The matching network can only handle 25 watts,

My speculation is that it's sort of a 5/8th wave type antenna with
loading coils to eletrically lengthen it.

It could also be a 50 ohm 25 watt resistor with a long tail on the "hot" end,
but I really doubt it.

Geoff.

--
Geoffrey S. Mendelson, Jerusalem, Israel gsm@mendelson.com N3OWJ/4X1GM

1025. Re: How to route feed line for dipole

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-02 19:11:09 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <opob75h0ndmh6at2ufak7r01do557lt3lj@4ax.com>
Source record: 14137

On Sun, 2 Aug 2009 17:24:49 GMT, "KJ4NTS" <HamRadio@dontask.com>
wrote:

>I'm thinking about hanging a dipole from a roof gable to a tree. Of course the feed line connects
>to the dipole in the center which presents a problem: If I drop the feed line straight down it will
>end up in the middle of the yard where people walk and the grass is mowed.
>
>Is it possible to run a coax feed line back to the house along one leg of the dipole, perhaps
>suspended a foot or so below it?

Hi OM,

Sure, it is possible. Many do and live comfortably with the odd
characteristics that follow from it; and it probably doesn't alter
their expectations of performance.

This, of course, suggests that you have left off a list of unexpressed
presumptions like wanting directionality, low SWR, no RF hot chassis,
and so on that follow as problems from such an arrangement.

One solution (although it may be difficult to manage for multi-band),
is an horizontal sleeve dipole.

73's
Richard Clark, KB7QHC

1026. Re: Counterpoise for an end-fed wire antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-02 19:15:51 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <28pb7596m5jjhh2lht06olvp0dpshvi2qc@4ax.com>
Source record: 14138

On Sun, 2 Aug 2009 17:30:31 GMT, "KJ4NTS" <KJ4NTS@dontask.com> wrote:

>I'm confused about the requirements for a counterpoise for an end-fed wire antenna. I understand
>that it's needed, but I don't understand what the requirements are.

Hi OM,

What are YOUR requirements? (What bands, how long is it?)

>Can a ground stake at the base of the feed point serve as a counterpoise, or does it need to be
>another wire running under the ground below the antenna?

Both, and more wire(s).

>If a wire is required, how long does the counterpoise have to be?

For single band operation? (You aren't very clear about this.) The
deeper into the ground (and deeper than 6 inches doesn't count for
much), the less resonant it will become. Make it as long as your wire
overhead - maybe less.

>Would it be better to use insulated or uninsulated wire for a buried counterpoise?

Doesn't matter.

73's
Richard Clark, KB7QHC

1027. Re: Counterpoise for an end-fed wire antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-02 20:01:39 UTC
From: Art Unwin <ArthurUnwin@gmail.com>
Message-ID: <ed91673f-0c1f-431e-a95e-9cad06f98b41@o32g2000yqm.googlegroups.com>
Source record: 14139

On Aug 2, 12:30 pm, "KJ4NTS" <KJ4...@dontask.com> wrote:
> I'm confused about the requirements for a counterpoise for an end-fed wire antenna. I understand
> that it's needed, but I don't understand what the requirements are.
>
> Can a ground stake at the base of the feed point serve as a counterpoise, or does it need to be
> another wire running under the ground below the antenna?
>
> If a wire is required, how long does the counterpoise have to be?
>
> Would it be better to use insulated or uninsulated wire for a buried counterpoise?

With regard to whether you need a counterpoise or not. If your
antenna has two wires at the open end (feed point) then they both must
be connected to the transmitter where there is also an additional
provision for a ground connection (a must in all cases as the chassis
is floating).If the radiator has only one termination then only one
transmission wire can be connected to it leaving the other wire to be
connected to a ground system which in effect balances your radiator
with a load that does not radiate unless it is the form of a
counterpoise. The effectiveness of your ground system can be measured
by its effectiveness in supplying a resistive feed impedance somewhat
near 30 ohms (above 20 ohms) or so where your transmitter does not
encounter any problems, a counterpoise will present a higher
impedance. An end fed antenna cannot be of a fractional wavelength and
thus the ground field or counterpoise is required to be added to
provide an impedance that can be fed by the transmitter without a
problem so you can enjoy useage of your antenna

1028. Re: Counterpoise for an end-fed wire antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-02 21:45:16 UTC
From: Dave <noone@nowhere.com>
Message-ID: <MNndm.320$Jg.8@nwrddc01.gnilink.net>
Source record: 14140

"Art Unwin" <ArthurUnwin@gmail.com> wrote in message
news:ed91673f-0c1f-431e-a95e-9cad06f98b41@o32g2000yqm.googlegroups.com...
On Aug 2, 12:30 pm, "KJ4NTS" <KJ4...@dontask.com> wrote:

ART IS BACK!

don't believe a thing he says, even if you think it kind of makes sense,
which it doesn't.

1029. Re: Counterpoise for an end-fed wire antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-02 23:06:21 UTC
From: Gary <jgboyles@aol.com>
Message-ID: <4679d1b0-e0b1-446d-bbd5-e9c84fb89610@32g2000yqj.googlegroups.com>
Source record: 14141

On Aug 2, 12:30 pm, "KJ4NTS" <KJ4...@dontask.com> wrote:
> I'm confused about the requirements for a counterpoise for an end-fed wire antenna. I understand
> that it's needed, but I don't understand what the requirements are.
>
> Can a ground stake at the base of the feed point serve as a counterpoise, or does it need to be
> another wire running under the ground below the antenna?
>
> If a wire is required, how long does the counterpoise have to be?
>
> Would it be better to use insulated or uninsulated wire for a buried counterpoise?

An end fed wire antenna should be very close to a half wave in length
for the intended frequency. If coax fed, the objective is to make the
antenna look as balanced as possible by insuring that the current in
the counterpoise and the radiating element are very nearly equal. A
half wave end fed is a high voltage low current antenna, and
everything around the antenna will affect its impedance and balance,
obviously the counterpoise will have a large effect.

If the end fed antenna (half wave) is not in the clear, then the
counterpoise is cut-and-try. If in the clear, antenna modelling will
provide useful results, see W8JI web pages. A counterpoise is needed,
but without knowing your exact situation, cut-and-try is your best
bet.

Gary N4AST

1030. Re: Has "antenna" died?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-03 02:32:14 UTC
From: tom <news4792@taring.org>
Message-ID: <4a764c8e$0$77054$8046368a@newsreader.iphouse.net>
Source record: 14142

Cecil Moore wrote:
> Something else that tracks quite well is the size
> of the ice caps at the North Poles of both Earth
> and Mars proving, beyond a doubt, that there must
> be intelligent life on Mars generating emissions
> that effect Climate Change, just like here. :-)

So what we have proof of here is that alien life exists and is much further advanced than we are!

I think The President should spend billions of dollars on this! Actually billions is nothing in this blow money on crap budget, we should spend a trillion on it. THIS IS IMPORTANT!!!! And there is no one with more smarts than The President (TM).

tom
K0TAR

1031. Re: Has "antenna" died?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-03 02:50:28 UTC
From: Art Unwin <ArthurUnwin@gmail.com>
Message-ID: <f6ec5f58-02c5-4528-9be5-99a150ccf91c@c14g2000yqm.googlegroups.com>
Source record: 14143

On Jul 31, 8:51 am, Cecil Moore <nos...@w5dxp.com> wrote:
> tom wrote:
> > ... bring on more cold summers!
>
> Caused, no doubt, by Global Warming. :-)
> --
> 73, Cecil, IEEE, OOTC, http://www.w5dxp.com

Cecil, your observation regarding the breakage of the ice caps tells
us that we are moving back to a particular climate that in the past
was normal! We can learn about that and past environments by
examining the different layers of ice. The last ice cap to shear
revealed a
reed coracle occupied by people in animal fur holding stone tools.
None of these had green cards which emphasizes what goes around comes
around with additions supplied by man

1032. Minimum gauge wire for connection to ground rod

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-03 02:58:29 UTC
From: KJ4NTS <KJ4NTS@dontask.com>
Message-ID: <VIidnZ_5Za78z-vXnZ2dnUVZ_rydnZ2d@giganews.com>
Source record: 14144
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.misc

I have about a 50 foot run from my radio to the outside ground rod. What's the minimum gauge wire
that is acceptable for this connection?

1033. Re: Minimum gauge wire for connection to ground rod

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-03 04:24:53 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <jjpc759t05t31b8ia5tk1414agistci4kk@4ax.com>
Source record: 14145
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.misc

On Mon, 3 Aug 2009 02:58:29 GMT, "KJ4NTS" <KJ4NTS@dontask.com> wrote:
>What's the minimum gauge wire that is acceptable for this connection?

Code.

1034. Re: Minimum gauge wire for connection to ground rod

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-03 09:53:56 UTC
From: KJ4NTS <KJ4NTS@dontask.com>
Message-ID: <DcadnT1ULIdcLuvXnZ2dnUVZ_o6dnZ2d@giganews.com>
Source record: 14146
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.misc

On 2-Aug-2009, Richard Clark <kb7qhc@comcast.net> wrote:

> >What's the minimum gauge wire that is acceptable for this connection?
>
> Code.

I'm not aware of any electrical code that covers the wire gauge required to ground an amateur radio
and antenna.

1035. Re: Minimum gauge wire for connection to ground rod

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-03 10:16:53 UTC
From: Brad <google1@vk2qq.com>
Message-ID: <528b58b6-342c-4325-b334-92cd234fdc82@a37g2000prf.googlegroups.com>
Source record: 14147
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.misc

On Aug 3, 7:53 pm, "KJ4NTS" <KJ4...@dontask.com> wrote:
> On 2-Aug-2009, Richard Clark <kb7...@comcast.net> wrote:
>
> > >What's the minimum gauge wire that is acceptable for this connection?
>
> > Code.
>
> I'm not aware of any electrical code that covers the wire gauge required to ground an
amateur radio
> and antenna.

Is this intended as an RF ground or lightning protection?

1036. Re: Counterpoise for an end-fed wire antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-03 10:24:27 UTC
From: Richard Fry <rfry@adams.net>
Message-ID: <5ca34e0a-30a6-4f98-b220-a63c0970c64c@g31g2000yqc.googlegroups.com>
Source record: 14148

On Aug 2, 3:01 pm, Art Unwin <ArthurUn...@gmail.com> wrote:

>An end fed antenna cannot be of a fractional wavelength...

_____

? ?

Art, note that the vertical monopoles used by MW broadcast stations are ALL fractional-wavelength radiators, and probably 99% of them are end fed.

1037. Re: Minimum gauge wire for connection to ground rod

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-03 10:28:13 UTC
From: KJ4NTS <KJ4NTS@dontask.com>
Message-ID: <O9ydnTjsW8hXJuvXnZ2dnUVZ_h2dnZ2d@giganews.com>
Source record: 14149
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.misc

On 3-Aug-2009, Brad <google1@vk2qq.com> wrote:

> Is this intended as an RF ground or lightning protection?

Primarily an RF ground since the antennas will be in my attic. However, I would appreciate the
information for both cases.

1038. Re: Counterpoise for an end-fed wire antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-03 11:09:03 UTC
From: Wimpie <wimabctel@tetech.nl>
Message-ID: <98f902f8-6215-4829-9f5e-84a1dcbce929@c1g2000yqi.googlegroups.com>
Source record: 14150

On 2 ago, 19:30, "KJ4NTS" <KJ4...@dontask.com> wrote:
> I'm confused about the requirements for a counterpoise for an end-fed wire antenna. I understand
> that it's needed, but I don't understand what the requirements are.
>
> Can a ground stake at the base of the feed point serve as a counterpoise, or does it need to be
> another wire running under the ground below the antenna?
>
> If a wire is required, how long does the counterpoise have to be?
>
> Would it be better to use insulated or uninsulated wire for a buried counterpoise?

Hello,

As you might know, the current that goes into the end-fed antenna
equals the current that goes into the counterpoise.

The requirement for a good, efficient counterpoise is that it should
not dissipate the RF power and that (preference) the impedance is far
below the feed point impedance of the end-fed antenna.

The requirement last mentioned is for assuring that you can feed your
antenna with an unbalanced feeder (coaxial cable). It also helps to
avoid that when you touch a coaxial connector while transmitting, you
don't burn your fingers.

Half or full wave resonant antennas have high input impedance (kOhm
range), hence requirements for counterpoise are easy to meet. It is
easy to create a counterpoise impedance of several hundreds Ohms.

For a quarter wave (or shorter antenna), the resonant impedance is in
the 30 Ohms range or below (for short antennas). In that case it may
be very difficult to get counterpoise impedance far below 30 Ohms.

As Geoffrey mentioned, with 100 replies, you will have 100 different
answers. There are many ways to make a counterpoise; all have their
advantages (and disadvantages).

Generally spoken, the more metal the better. However at a certain
point, doubling the amount/length of metal will not give significant
increase. When you add more metal and the antenna impedance at
resonance doesn't change, adding more metal is not necessary.

In my opinion, many short wires are better then one long wire. When
you have good ground conductivity, driving rods deep into the ground
is not necessary (skin depth issue). In case of single frequency band

operation, you might consider 2 or 3 elevated quarter wave resonating counterpoise wires.

I know this is not a direct answer to your question, but I hope it will bring you closer to an answer.

Best regards,

Wim
PA3DJS
www.tetech.nl
please remove the obvious character combination in case of PM.

1039. Re: Minimum gauge wire for connection to ground rod

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-03 14:31:47 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <33td759hesju8gl4t3ajsdeq4rdvreonon@4ax.com>
Source record: 14051
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.misc

On Mon, 3 Aug 2009 09:53:56 GMT, "KJ4NTS" <KJ4NTS@dontask.com> wrote:
>> >What's the minimum gauge wire that is acceptable for this connection?

>> Code.

>I'm not aware of any electrical code that covers the wire gauge required to ground an amateur radio
>and antenna.

Get acquainted. It is a very simple matter of a non-trivial issue.

1040. Re: Minimum gauge wire for connection to ground rod

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-03 14:49:08 UTC
From: kb9rqz@yahoooo.com
Message-ID: <66ud75tbb0trab9bbtbh1b7378l80h488i@4ax.com>
Source record: 14052
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.misc

On Mon, 03 Aug 2009 07:31:47 -0700, Richard Clark <kb7qhc@comcast.net>
wrote:

>On Mon, 3 Aug 2009 09:53:56 GMT, "KJ4NTS" <KJ4NTS@dontask.com> wrote:
>>> >What's the minimum gauge wire that is acceptable for this connection?
>
>>> Code.
>
>>I'm not aware of any electrical code that covers the wire gauge required to ground an
amateur radio
>>and antenna.
>
>Get acquainted. It is a very simple matter of a non-trivial issue.

I know my local electircal say nothing about radio in any form or
fashion

"one useless man is disgrace 2 become a law firm 3 or more become a congress"
adams

woger you are a Congress all in your own head
"http://www.3ix.org/sys/aff.php?aff=7439" target="_blank"

altopia is never used by KB9RQZ
http://kb9rqz.cc.cc
http://kd8ctl.com
nor is Konstans@hotmail.com ever
btw i can be found at
17366 N River Rd
Chassel Mi

but the cowards asking lack the gut to act

1041. Re: Minimum gauge wire for connection to ground rod

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-03 15:01:05 UTC
From: JB <nospam@goofball.net>
Message-ID: <RYCdm.363$nh2.214@nwrddc02.gnilink.net>
Source record: 14053

"KJ4NTS" <KJ4NTS@dontask.com> wrote in message
news:O9ydnTjsW8hXJuvXnZ2dnUVZ_h2dnZ2d@giganews.com...
>
> On 3-Aug-2009, Brad <google1@vk2qq.com> wrote:
>
> > Is this intended as an RF ground or lightning protection?
>
> Primarily an RF ground since the antennas will be in my attic. However, I
would appreciate the
> information for both cases.

I think code calls for #6 solid Copper or Aluminum for lightning protection.
Consider the 50 ft as part of the antenna though. Rather than even trying
to have an RF "ground" try to make a counterpoise instead. Read up on the
difference between RF ground, lightning ground, and electrical ground. You
don't say what kind of antenna.

1042. Re: Counterpoise for an end-fed wire antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-03 15:23:44 UTC
From: Art Unwin <ArthurUnwin@gmail.com>
Message-ID: <75184bd4-610d-402e-afbe-bb7a215e34d1@r38g2000yqn.googlegroups.com>
Source record: 14054

On Aug 3, 5:24 am, Richard Fry <r...@adams.net> wrote:
> On Aug 2, 3:01 pm, Art Unwin <ArthurUn...@gmail.com> wrote:
>
> >An end fed antenna cannot be of a fractional wavelength...
>
> _____
>
> ? ?
>
> Art, note that the vertical monopoles used by MW broadcast stations
> are ALL fractional-wavelength radiators, and probably 99% of them are
> end fed.

I regard a radiator with a counterpoise as being center fed of a given impedance to connect to regardles whether the counterpoise is above ground or not. If a radiator is of a closed cuircuit form it may be fed at any point in physical terms. Other peoples definitions may vary. The poster I understood to be at the position of the end of a transmission line with two wires in hand and wanted advice from that point to procede. If his advisers are going to quibble then he needs to go elsewhere for advise or settle for a poll.

1043. Re: Counterpoise for an end-fed wire antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-03 15:44:05 UTC
From: JB <nospam@goofball.net>
Message-ID: <9BDdm.367$nh2.298@nwrddc02.gnilink.net>
Source record: 14055

"KJ4NTS" <KJ4NTS@dontask.com> wrote in message
news:NvWdnVlLypTfUOjXnZ2dnUVZ_gqdnZ2d@giganews.com...
> I'm confused about the requirements for a counterpoise for an end-fed wire
antenna. I understand
> that it's needed, but I don't understand what the requirements are.
>
> Can a ground stake at the base of the feed point serve as a counterpoise,
or does it need to be
> another wire running under the ground below the antenna?
>
> If a wire is required, how long does the counterpoise have to be?
>
> Would it be better to use insulated or uninsulated wire for a buried
counterpoise?

All these questions depend on your particular situation. In a typical antenna installation you would first seek to follow the instructions for that antenna. Especially if you don't understand the physics involved. You will probably already have some sort of ground through the power supply. Any better ground than that must actually be better to whatever energy you are trying to "ground".

Someone mentioned RF in the shack and being bit from the chassis or connector shell. The best way to avoid that is for the energy at the coax connector to see 50 ohms, and for the radiating portion of the antenna to be well out of the shack. In that case, you don't need an RF ground on the radio.

A ground stake at the feed point along with a remote tuner should be sufficient if you have really low resistance soil. You will probably benefit by adding a counterpoise and you will probably never have a perfect ground. It is better to have uninsulated wire because it will conduct into the ground. Some think insulated is better because it will last longer for a little expense in performance.

A remote tuner (or matched antenna) at the feed point, will keep the RF to the transmission line and prevent high voltages on the line and keep losses to the minimum.

1044. Re: Counterpoise for an end-fed wire antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-03 15:52:31 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <jr1e759ftu9fkvh3se9mavvdhcu7u4obdt@4ax.com>
Source record: 14056

>>I'm confused about the requirements for a counterpoise for an end-fed wire antenna.

>What are YOUR requirements? (What bands, how long is it?)

Apparently this is not as important as you first imagined.

1045. Re: Minimum gauge wire for connection to ground rod

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-03 15:54:31 UTC
From: Art Unwin <ArthurUnwin@gmail.com>
Message-ID: <81369f32-1970-4747-88c2-22d2f25b1599@t13g2000yqt.googlegroups.com>
Source record: 14057

On Aug 3, 10:01 am, "JB" <nos...@goofball.net> wrote:
> "KJ4NTS" <KJ4...@dontask.com> wrote in message
>
> news:O9ydnTjsW8hXJuvXnZ2dnUVZ_h2dnZ2d@giganews.com...
>
> > On 3-Aug-2009, Brad <goog...@vk2qq.com> wrote:
>
> > > Is this intended as an RF ground or lightning protection?
>
> > Primarily an RF ground since the antennas will be in my attic. However, I
>
> would appreciate the
>
> > information for both cases.
>
> I think code calls for #6 solid Copper or Aluminum for lightning protection.
> Consider the 50 ft as part of the antenna though. Rather than even trying
> to have an RF "ground" try to make a counterpoise instead. Read up on the
> difference between RF ground, lightning ground, and electrical ground. You
> don't say what kind of antenna.

Interesting question.
The poster is in an attic which suggests he will need a very long wire
to get to a "ground." Presumably the chassis of his radio is
connected to a "ground" at a service pole via the power plug.
The antenna I assume is floating above "ground" via a inter connecting
capacitor of a low breakdown voltage to the chassis. So one has to ask
what an added "ground" wire is going to do for you and what
disadvantages with respect to protections it is it putting in place?

1046. Re: Counterpoise for an end-fed wire antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-03 16:17:06 UTC
From: JB <nospam@goofball.net>
Message-ID: <64Edm.437$Jg.127@nwrddc01.gnilink.net>
Source record: 14058

"Art Unwin" <ArthurUnwin@gmail.com> wrote in message
news:75184bd4-610d-402e-afbe-bb7a215e34d1@r38g2000yqn.googlegroups.com...
On Aug 3, 5:24 am, Richard Fry <r...@adams.net> wrote:
> On Aug 2, 3:01 pm, Art Unwin <ArthurUn...@gmail.com> wrote:
>
> >An end fed antenna cannot be of a fractional wavelength...
>
> _________________
>
> ? ?
>
> Art, note that the vertical monopoles used by MW broadcast stations
> are ALL fractional-wavelength radiators, and probably 99% of them are
> end fed.

>I regard a radiator with a counterpoise as being center fed of a
given impedance to connect to regardles whether the counterpoise is
above ground or not. If a radiator is of a closed cuircuit form it may
be fed at any point in physical terms. Other peoples definitions may
vary. >

This is a simplified way of looking at things. It only works if he is to use a horizontal loop, but doesn't address matching the antenna to the line and in the case of "two pieces of wire", you won't have a clue where the electrical "center" is. One of the original posts was about a dipole where the coax would have to follow one of the legs because it would hang down where it shouldn't be. That makes the feed point NOT in the center and prone to common mode currents on the line.

It took me a couple of posts to realize the Poster has made multiple posts questioning different aspects of his problem and we get the whole scenario from chasing down all his threads.

It looks to me that his real estate won't allow a balanced antenna anyway, so he will have to deal with the issues of an unbalanced radiator anyway. I first thought of an Inverted L as an optimal antenna for his situation, with remote matching for multi-band operation to keep RF out of the shack. An elevated horizontal loop or off center fed dipole with ladder line to a tuner at the entrance of the shack would also be an answer to the problem. A multi-band vertical would be a good choice for 30-10 meters. Although they work for 40 and 80, the pattern is not as good as a horizontal antenna for exploiting the shorter skip.

1047. Re: Has "antenna" died?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-03 16:52:32 UTC
From: Michael Coslo <mjc5@psu.edu>
Message-ID: <h574l6$po40$1@tr22n12.aset.psu.edu>
Source record: 14059

Art Unwin wrote:
> On Jul 31, 8:51 am, Cecil Moore <nos...@w5dxp.com> wrote:
>> tom wrote:
>>> ... bring on more cold summers!
>> Caused, no doubt, by Global Warming. :-)
>> --
>> 73, Cecil, IEEE, OOTC, http://www.w5dxp.com
>
> Cecil, your observation regarding the breakage of the ice caps tells
> us that we are moving back to a particular climate that in the past
> was normal!

There is no such thing as a normal climate. It changes over time, and short term is very variable.

> We can learn about that and past environments by
> examining the different layers of ice. The last ice cap to shear
> revealed a
> reed coracle occupied by people in animal fur holding stone tools.
> None of these had green cards which emphasizes what goes around comes
> around with additions supplied by man

Man has no effect upon the weather? Fine, show me the mechanism by which the retention of heat in the atmosphere is not affect by the percentage of greenhouse gases and water vapor. We would not exist without the effect, so discarding the effect is impossible.

So now, WHY is the increased percentage being negated. To show a heat retention effect is not difficult, middle school students do it all the time.

But what we get is political statements. A political statement declaring that the greenhouse effect doesn't exist is just as valid as noting that since the present administration has been in office, there haven't been any hurricanes. So therefore, there are less hurricanes when Democrats are in office. Of course that's a stupid statement. But both statements are. non-sequitar maximus.

BTW, mining the available data to produce one anomalous result is just as bogus. The creationists and lunar landing hoaxers have been doing that for years. You have to produce the theory first, then find supporting or refuting facts. The deniers don't produce an alternate theory - they only try to disprove.

- 73 de Mike N3LI -

1048. Re: Minimum gauge wire for connection to ground rod

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-03 17:07:28 UTC
From: KJ4NTS <KJ4NTS@dontask.com>
Message-ID: <28GdnVER3ZXAhOrXnZ2dnUVZ_ridnZ2d@giganews.com>
Source record: 14060

On 3-Aug-2009, "JB" <nospam@goofball.net> wrote:

> > Primarily an RF ground since the antennas will be in my attic. However, I
> would appreciate the
> > information for both cases.
>
> I think code calls for #6 solid Copper or Aluminum for lightning protection.
> Consider the 50 ft as part of the antenna though. Rather than even trying
> to have an RF "ground" try to make a counterpoise instead. Read up on the
> difference between RF ground, lightning ground, and electrical ground. You
> don't say what kind of antenna.

I could put a surface wire counterpoise in the crawl space under my office where the radio is
located. If I did that, there would be only about a 5 or 6 foot run to the center point of the
counterpoise.

Assuming the counterpoise wires are laying on the dirt floor of the crawl space, how many wires
would I need, and how long do they need to be. I want to be able to work 6 through 40 meters.

If I install a wire counterpoise like this, is there any problem also connecting the earth ground
connection to the central ground bar in my office?

The attic antenna is an Alpha Delta DX-EE.

1049. Re: Motorcycle mobile

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-03 17:08:16 UTC
From: Michael Coslo <mjc5@psu.edu>
Message-ID: <h575i3$po44$1@tr22n12.aset.psu.edu>
Source record: 14061

What me worry? wrote:
> On Fri, 02 Jan 2009 23:23:26 -0500, Mike Coslo <mjc5@psu.edu> backed
> into a tree whilst ridin inna park then wrote:
>
>> Philo wrote:
>>
>>>> Dual band 144/440 on a motorcycle...Any suggestions?
>>>>
>>>> - 73 de Mike N3LI -
>>> I hope the Shadow Spirit's battery is heavier than the unit in the CBF1000.
>>>
>>> Anyway start developing your "dead battery bike pushing" skills...
>> It's pretty strong. I bought the best one I could find, after finding
>> the previous owner had an underpowered one.
>>
>> Side note: I don't know if is is an indicator, but this new heavy duty
>> battery was distinctly old school. It was shipped uncharged, and needed
>> a full charging after putting the acid in it. I've been used to the fill
>> 'em and go pre-charged batteries.
>>
>> - 73 de Mike N3LI -
>
> How did it work out for ya?

The installation was behind the backrest of the bike, I made an aluminum plate that held the antenna and the radio body. the wires to the head routed up under the seat and tank. The head was installed off the handlebar, right in the middle.

Cosmetically, it's about a 9, performance is pretty good also. I can hear well with a pair of "skull candy" headphones, which are a little like earbuds, but rest on the ear instead of being pushed into them.

I do have to work on one problem. The head is waterproof, but the body is only water resistant. A couple of rainstorms have allowed a bit of water to get into the head/body connection. I have to add a little cover over that. I might try to find some of that goo they put around tail lamps to seal out water. Overall, I've been pleased. No dead battery yet, although I try to avoid the full 50 watt output of the unit.

- 73 de Mike N3LI -

1050. Re: Minimum gauge wire for connection to ground rod

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-03 17:19:42 UTC
From: Michael Coslo <mjc5@psu.edu>
Message-ID: <h5767i$po46$1@tr22n12.aset.psu.edu>
Source record: 14062
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.misc

Richard Clark wrote:
> On Mon, 3 Aug 2009 09:53:56 GMT, "KJ4NTS" <KJ4NTS@dontask.com> wrote:
>>>> What's the minimum gauge wire that is acceptable for this connection?
>
>>> Code.
>
>> I'm not aware of any electrical code that covers the wire gauge required to ground an amateur radio
>> and antenna.
>
> Get acquainted. It is a very simple matter of a non-trivial issue.

http://tinyurl.com/ns7jjd

Is a nice station grounding pdf from Polyphasor. Sorry for the tinyurl,
the original url is a mile long.

Everyone should have a copy, and the writer should get an award for his
or her clarity.

Richard is correct. It is simple, and it is not trivial.

- 73 de Mike N3LI -

1051. Re: Counterpoise for an end-fed wire antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-03 17:22:27 UTC
From: Art Unwin <ArthurUnwin@gmail.com>
Message-ID: <6806757d-c087-468f-a660-2fca61d0c827@b15g2000yqd.googlegroups.com>
Source record: 14063

On Aug 3, 11:17 am, "JB" <nos...@goofball.net> wrote:
> "Art Unwin" <ArthurUn...@gmail.com> wrote in message
>
> news:75184bd4-610d-402e-afbe-bb7a215e34d1@r38g2000yqn.googlegroups.com...
> On Aug 3, 5:24 am, Richard Fry <r...@adams.net> wrote:
>
> > On Aug 2, 3:01 pm, Art Unwin <ArthurUn...@gmail.com> wrote:
>
> > >An end fed antenna cannot be of a fractional wavelength...
>
> > _____
>
> > ? ?
>
> > Art, note that the vertical monopoles used by MW broadcast stations
> > are ALL fractional-wavelength radiators, and probably 99% of them are
> > end fed.
> >I regard a radiator with a counterpoise as being center fed of a
>
> given impedance to connect to regardles whether the counterpoise is
> above ground or not. If a radiator is of a closed cuircuit form it may
> be fed at any point in physical terms. Other peoples definitions may
> vary. >
>
> This is a simplified way of looking at things. It only works if he is to
> use a horizontal loop, but doesn't address matching the antenna to the line
> and in the case of "two pieces of wire", you won't have a clue where the
> electrical "center" is. One of the original posts was about a dipole where
> the coax would have to follow one of the legs because it would hang down
> where it shouldn't be. That makes the feed point NOT in the center and
> prone to common mode currents on the line.
>
> It took me a couple of posts to realize the Poster has made multiple posts
> questioning different aspects of his problem and we get the whole scenario
> from chasing down all his threads.
>
> It looks to me that his real estate won't allow a balanced antenna anyway,
> so he will have to deal with the issues of an unbalanced radiator anyway. I
> first thought of an Inverted L as an optimal antenna for his situation, with
> remote matching for multi-band operation to keep RF out of the shack. An
> elevated horizontal loop or off center fed dipole with ladder line to a
> tuner at the entrance of the shack would also be an answer to the problem.
> A multi-band vertical would be a good choice for 30-10 meters. Although
> they work for 40 and 80, the pattern is not as good as a horizontal antenna

> for exploiting the shorter skip.

You are correct. I should NOT have given a simplified response to a simple question.
Your technical answer is a much better response tho I suppose I could have made mine as technical so that he would not ask questions any more! Good point about common mode. That should screw him up as well as other things that you inserted with respect to how does one connect to an antenna. We could ask him I suppose how many wires he intends to connect to his intended antenna feed point, and if it is not two then question how he intends to measure the impedance for matching purposes. Yup, I could have done a better job.

1052. Re: Minimum gauge wire for connection to ground rod

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-03 17:24:37 UTC
From: John Ferrell <jferrell13@triad.rr.com>
Message-ID: <3v6e75lng1btu5t5mfr87ubcjorudb9qce@4ax.com>
Source record: 14064

On Mon, 3 Aug 2009 02:58:29 GMT, "KJ4NTS" <KJ4NTS@dontask.com> wrote:

>I have about a 50 foot run from my radio to the outside ground rod. What's the minimum gauge wire
>that is acceptable for this connection?
The last time I checked the minimum wire size for a ground intended to protect from lightning is #6.

50 feet of any wire will not work as an RF ground for anything other than a quarter wave at 50 feet!

Your next question is about driving another ground rod: If you do, the second ground must be tied to the first with a minimum of #6 wire or you set up a dangerous ground loop.

1053. Re: Minimum gauge wire for connection to ground rod

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-03 17:52:13 UTC
From: KJ4NTS <KJ4NTS@dontask.com>
Message-ID: <UZOdnZWJsoFGvurXnZ2dnUVZ_jKdnZ2d@giganews.com>
Source record: 14065
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.misc

On 3-Aug-2009, Michael Coslo <mjc5@psu.edu> wrote:

> http://tinyurl.com/ns7jjd
>
> Is a nice station grounding pdf from Polyphasor. Sorry for the tinyurl,
> the original url is a mile long.
>
> Everyone should have a copy, and the writer should get an award for his
> or her clarity.

That's a good article, but it is focused on grounding for lightning protection. I am interested in
that, but I am also interested in having an effective RF ground.

I've been able to get a total of 16 feet of ground rod down in the form of 4 four-foot rods, but I
have a 50 foot run from my office to the ground rods, and I'm concerned about RF impedance in that
connection.

1054. Re: Minimum gauge wire for connection to ground rod

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-03 18:12:28 UTC
From: KJ4NTS <KJ4NTS@dontask.com>
Message-ID: <9t6dnZY_5pMEterXnZ2dnUVZ_oGdnZ2d@giganews.com>
Source record: 14066

On 3-Aug-2009, John Ferrell <jferrell13@triad.rr.com> wrote:

> >I have about a 50 foot run from my radio to the outside ground rod. What's the minimum gauge
> >wire
> >that is acceptable for this connection?
> The last time I checked the minimum wire size for a ground intended to
> protect from lightning is #6.
>
> 50 feet of any wire will not work as an RF ground for anything other
> than a quarter wave at 50 feet!

OK. Would it work to construct a radial counterpoise in the crawl space under my office? It would
only be about a 5 foot run to the center of the counterpoise.

If I lay wires on the dirt floor of the crawl space, how many radials would be required and what
would the length be to handle 6-40 meters?

1055. Re: Minimum gauge wire for connection to ground rod

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-03 19:01:43 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <20de751pl8hj4avsf7hkc2ould3oqk1h1t@4ax.com>
Source record: 14067
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.misc

On Mon, 3 Aug 2009 17:52:13 GMT, "KJ4NTS" <KJ4NTS@dontask.com> wrote:

> I'm concerned about RF impedance in that connection.

Add a capacitor.

1056. Re: Counterpoise for an end-fed wire antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-03 20:01:34 UTC
From: Bruce in alaska <fast@btpost.net>
Message-ID: <fast-A3C659.12011103082009@unknown.usenetserver.com>
Source record: 14068

In article
<75184bd4-610d-402e-afbe-bb7a215e34d1@r38g2000yqn.googlegroups.com>,
Art Unwin <ArthurUnwin@gmail.com> wrote:

> On Aug 3, 5:24 am, Richard Fry <r...@adams.net> wrote:
> > On Aug 2, 3:01 pm, Art Unwin <ArthurUn...@gmail.com> wrote:
> >
> > >An end fed antenna cannot be of a fractional wavelength...
> >
> > _____
> >
> > ? ?
> >
> > Art, note that the vertical monopoles used by MW broadcast stations
> > are ALL fractional-wavelength radiators, and probably 99% of them are
> > end fed.
>
> I regard a radiator with a counterpoise as being center fed of a
> given impedance to connect to regardles whether the counterpoise is
> above ground or not. If a radiator is of a closed cuircuit form it may
> be fed at any point in physical terms. Other peoples definitions may
> vary. The poster I understood to be at the position of the end of a
> transmission line with two wires in hand and wanted advice from that
> point to procede. If his advisers are going to quibble then he needs
> to go elsewhere for advise or settle for a poll.

All this discussion of "counterpoise" should be centered around Single
Frequency Antenna Systems Design, and is NOT relative to multi-Band, or
Wider than 10% of Frequency, Bandwidth, End Feed Antenna Designs. These
latter Antenna Systems are not using a Counterpoise, as such, but REQUIRE
a LOW Impedance BroadBand RF Ground, which in most cases needs to be
built, on site, and engineered to provide that Low Impedance, Wide Band
RF Characteristics for the specific Radio System. Having spent a career
designing, installing, and operating LF/MF/HF Communications Stations,
all over the world, it isn't a trivial undertaking, should one actually
want the best Antenna System, possible, for any one location. There are
MANY factors to consider, with Ground Conductivity, Water Depth, changes
of these during the passing seasons, and Frequencies and Bands chosen
for communication links. In many cases an End Feed Vertical, just isn't
the best Antenna System for the location. In other cases, they can be
designed for really good efficiency and great propagation. On of the
best Systems I ever installed was a 70' insolated Tower, with a SEA-330
AutoTuner tied to the center of a 100 Sq Ft Galvinized Screen built in
the center of a One Sq. Mile Salt Marsh, that flooded every 12 hours on

High Tide. Rf Impedance was below 5 Ohms from 200 Khz, clear up thru 22 Mhz.

--
Bruce in alaska
add <path> after <fast> to reply

1057. Re: Minimum gauge wire for connection to ground rod

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-03 20:09:33 UTC
From: Bruce in alaska <fast@btpost.net>
Message-ID: <fast-8B9CA2.12093303082009@unknown.usenetserver.com>
Source record: 14069
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.misc

In article <UZOdnZWJsoFGvurXnZ2dnUVZ_jKdnZ2d@giganews.com>,
"KJ4NTS" <KJ4NTS@dontask.com> wrote:

> On 3-Aug-2009, Michael Coslo <mjc5@psu.edu> wrote:
>
> > http://tinyurl.com/ns7jjd
> >
> > Is a nice station grounding pdf from Polyphasor. Sorry for the tinyurl,
> > the original url is a mile long.
> >
> > Everyone should have a copy, and the writer should get an award for his
> > or her clarity.
>
> That's a good article, but it is focused on grounding for lightning
> protection. I am interested in
> that, but I am also interested in having an effective RF ground.
>
> I've been able to get a total of 16 feet of ground rod down in the form of 4
> four-foot rods, but I
> have a 50 foot run from my office to the ground rods, and I'm concerned about
> RF impedance in that
> connection.

The two are pretty much Mutually Exclusive. What makes for Good
Lightning Protection, really doesn't have ANYTHING to do with RF
Grounding, especially if your using an End Feed Vertical, for an
Antenna. Lightning Protection is a Ground Rod that meets NEC.
Low Impedance RF Grounding System design is a Science and Art all in
itself.

--
Bruce in alaska
add <path> after <fast> to reply

1058. Re: Counterpoise for an end-fed wire antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-03 20:14:22 UTC
From: JB <nospam@goofball.net>
Message-ID: <yyHdm.461$Jg.15@nwrddc01.gnilink.net>
Source record: 14070

>You are correct. I should NOT have given a simplified response to a simple question.
Your technical answer is a much better response tho I suppose I could have made mine as technical so that he would not ask questions any more! Good point about common mode. That should screw him up as well as other things that you inserted with respect to how does one connect to an antenna. We could ask him I suppose how many wires he intends to connect to his intended antenna feed point, and if it is not two then question how he intends to measure the impedance for matching purposes. Yup, I could have done a better job.>

Art,

See the original post asking: "How to route feedline from dipole".
If he were to let his coax hang straight down from the feed point, there would be no discussion. In asking about dressing the coax along one of the dipole legs, Common Mode currents are induced on the outside of the shield and there is no longer a simple discussion. His further questions arise out of trying to deal with that problem of not being able to let his coax hang where it wants to.

Also, one leg of his dipole will be over the roof and the other in the clear, so one leg will be detuned to throw more trouble into the mix.

To get him on the air quickly, a tuner is desirable. If he has that, he might as well make a multi-band antenna where his feed point location is elsewhere. I think he got that because then he asked about counterpoise and ground, which is the next step in the evolution of that type of system.

This is a specific technical problem.

1059. Expansion issues with PVC

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-03 21:00:42 UTC
From: Dave D <xray66@earthlink.net>
Message-ID: <4b829fc8-b2ca-4152-b667-099eb8c554df@v23g2000pro.googlegroups.com>
Source record: 14071

I've used PVC for enclosures in the past and didn't seem to have any trouble. But I noticed that on a couple projects we had a couple things that started to bend from thermal expansion. The sunny side of the free standing vertical piece heats more than the shadow side, and the differing expansion rate creates a bend. Even for a 5' piece, it seemed fairly extreme. But then other times this hasn't happened. We were using the special furniture grade PVC in 1" size. Anybody had any experience with this or come up with any solutions? Notice any difference between PVC types or anything?

Thanks for any help,

1060. Re: Minimum gauge wire for connection to ground rod

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-03 21:22:18 UTC
From: Art Unwin <ArthurUnwin@gmail.com>
Message-ID: <7bf6b00d-74d4-41ed-9374-0f8f20b3ea75@a13g2000yqc.googlegroups.com>
Source record: 14072
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.misc

On Aug 3, 3:09 pm, Bruce in alaska <f...@btpost.net> wrote:
> In article <UZOdnZWJsoFGvurXnZ2dnUVZ_jKdn...@giganews.com>,
>
>
>
> "KJ4NTS" <KJ4...@dontask.com> wrote:
> > On 3-Aug-2009, Michael Coslo <m...@psu.edu> wrote:
>
> > > >http://tinyurl.com/ns7jjd
>
> > > > Is a nice station grounding pdf from Polyphasor. Sorry for the tinyurl,
> > > > the original url is a mile long.
>
> > > > Everyone should have a copy, and the writer should get an award for his
> > > > or her clarity.
>
> > That's a good article, but it is focused on grounding for lightning
> > protection. I am interested in
> > that, but I am also interested in having an effective RF ground.
>
> > I've been able to get a total of 16 feet of ground rod down in the form of 4
> > four-foot rods, but I
> > have a 50 foot run from my office to the ground rods, and I'm concerned about
> > RF impedance in that
> > connection.
>
> The two are pretty much Mutually Exclusive. What makes for Good
> Lightning Protection, really doesn't have ANYTHING to do with RF
> Grounding, especially if your using an End Feed Vertical, for an
> Antenna. Lightning Protection is a Ground Rod that meets NEC.
> Low Impedance RF Grounding System design is a Science and Art all in
> itself.
>
> --
> Bruce in alaska
> add <path> after <fast> to reply

Atta boy Bruce!
A ground plane or counterpoise is part and parcel of a antenna all of
which does not necessarily radiate and it is not of the same potential
of the true ground that should be at the lowest potential of them all.
It is for this reason the transmitter chassis is grounded and
separated from the radiator system which has it's own closed circuit

and where the potential is above that of true ground. In this way your transmitting circuit does not have a ground loop which is the last thing that you want.
Lightning tries to get to the true ground by the shortest route and the requirement is for you to not be part of it's route, even if your radio has to be the sacrificial lamb if you haven't pulled the plug.

1061. Re: Minimum gauge wire for connection to ground rod

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-03 21:51:19 UTC
From: Dave <noone@nowhere.com>
Message-ID: <rZIdm.427$nh2.396@nwrddc02.gnilink.net>
Source record: 14073
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.misc

"Art Unwin" <ArthurUnwin@gmail.com> wrote in message
news:7bf6b00d-74d4-41ed-9374-0f8f20b3ea75@a13g2000yqc.googlegroups.com...
On Aug 3, 3:09 pm, Bruce in alaska <f...@btpost.net> wrote:
> In article <UZOdnZWJsoFGvurXnZ2dnUVZ_jKdn...@giganews.com>,
>It is for this reason the transmitter chassis is grounded and
>separated from the radiator system which has it's own closed circuit
>and where the potential is above that of true ground. In this way your
>transmitting circuit does not have a ground loop which is the last
>thing that you want.

i don't know where you get your radios, but in all of them here the coax
connector is connected to the transmitter chassis which also has a lug for
going to the safety ground.

>Lightning tries to get to the true ground by the shortest route and
>the requirement is for you to not be part of it's route, even if your
>radio has to be the sacrificial lamb if you haven't pulled the plug.

there ain't no such thing as 'true ground', tis all relative.

1062. Re: Counterpoise for an end-fed wire antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-03 21:56:10 UTC
From: Dave <noone@nowhere.com>
Message-ID: <_1Jdm.428$nh2.46@nwrddc02.gnilink.net>
Source record: 14074

"Wimpie" <wimabctel@tetech.nl> wrote in message
news:98f902f8-6215-4829-9f5e-84a1dcbce929@c1g2000yqi.googlegroups.com...
On 2 ago, 19:30, "KJ4NTS" <KJ4...@dontask.com> wrote:
>As you might know, the current that goes into the end-fed antenna
>equals the current that goes into the counterpoise.

ONLY if the counterpoise is connected to the same location where the
'radiating' wire leaves the coax. if you run a piece of coax out the window
and connect just the center conductor to your end-fed antenna then connect
the 'counterpoise' to the radio ground lug as is commonly done, the current
in the counterpoise may be MUCH different than that going into the wire.

1063. Re: Expansion issues with PVC

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-03 22:01:30 UTC
From: kb9rqz@yahoooo.com
Message-ID: <pfne75lbromu4s6tq18b7plta7a28iunoh@4ax.com>
Source record: 14075

On Mon, 3 Aug 2009 14:00:42 -0700 (PDT), Dave D <xray66@earthlink.net>
wrote:

>I've used PVC for enclosures in the past and didn't seem to have any
>trouble. But I noticed that on a couple projects we had a couple
>things that started to bend from thermal expansion. The sunny side of
>the free standing vertical piece heats more than the shadow side, and
>the differing expansion rate creates a bend. Even for a 5' piece, it
>seemed fairly extreme. But then other times this hasn't happened. We
>were using the special furniture grade PVC in 1" size. Anybody had any
>experience with this or come up with any solutions? Notice any
>difference between PVC types or anything?
>
>Thanks for any help,

one ame sure you pvc is white

the other you might try is foil where possible to avoid heat retention
in the first place that rest I can't help with

"one useless man is disgrace 2 become a law firm 3 or more become a congress"
adams

woger you are a Congress all in your own head
"http://www.3ix.org/sys/aff.php?aff=7439" target="_blank"

altopia is never used by KB9RQZ
http://kb9rqz.cc.cc
http://kd8ctl.com
nor is Konstans@hotmail.com ever
btw i can be found at
17366 N River Rd
Chassel Mi

but the cowards asking lack the gut to act

1064. Re: Expansion issues with PVC

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-03 22:16:23 UTC
From: Art Unwin <ArthurUnwin@gmail.com>
Message-ID: <03aef635-1aa1-4390-b3e4-57c7ff255ab9@a13g2000yqc.googlegroups.com>
Source record: 14076

On Aug 3, 5:01 pm, kb9...@yahoooo.com wrote:
> On Mon, 3 Aug 2009 14:00:42 -0700 (PDT), Dave D <xra...@earthlink.net>
> wrote:
>
> >I've used PVC for enclosures in the past and didn't seem to have any
> >trouble. But I noticed that on a couple projects we had a couple
> >things that started to bend from thermal expansion. The sunny side of
> >the free standing vertical piece heats more than the shadow side, and
> >the differing expansion rate creates a bend. Even for a 5' piece, it
> >seemed fairly extreme. But then other times this hasn't happened. We
> >were using the special furniture grade PVC in 1" size. Anybody had any
> >experience with this or come up with any solutions? Notice any
> >difference between PVC types or anything?
>
> >Thanks for any help,
>
> one ame sure you pvc is white
>
> the other you might try is foil where possible to avoid heat retention
> in the first place that rest I can't help with
>
> "one useless man is disgrace 2 become a law firm 3 or more become a congress"
> adams
>
> woger you are a Congress all in your own head
> "http://www.3ix.org/sys/aff.php?aff=7439" target="_blank"
>
> altopia is never used by KB9RQZhttp://kb9rqz.cc.cchttp://kd8ctl.com
> nor is Konst...@hotmail.com ever
> btw i can be found at
> 17366 N River Rd
> Chassel Mi
>
> but the cowards asking lack the gut to act

First you have to determine if all samples are equal and whether your
dealing with open or closed pore or different manufacturers Then
compare with respect to environment. There is no magic solution

1065. Re: Has "antenna" died?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-03 22:25:23 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <ltJdm.211512$Ta5.191532@newsfe15.iad>
Source record: 14077

Art Unwin wrote:
> We can learn about that and past environments by
> examining the different layers of ice.

You're right, Art. The last Global Warming cycle
peaked about 8000 years ago and ever since, the
average temperature has been drifting down toward
the next ice age. That is obvious to anyone who can
read a graph.

http://upload.wikimedia.org/wikipedia/commons/c/c2/Vostok-ice-core-petit.png

Global Warming is the second biggest hoax ever
perpetuated upon mankind.
--
73, Cecil, IEEE, OOTC, http://www.w5dxp.com

1066. Re: Has "antenna" died?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-03 22:34:02 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <tBJdm.211513$Ta5.50763@newsfe15.iad>
Source record: 14078

Michael Coslo wrote:
> Man has no effect upon the weather? Fine, show me the mechanism by which
> the retention of heat in the atmosphere is not affect by the percentage
> of greenhouse gases and water vapor. We would not exist without the
> effect, so discarding the effect is impossible.

Therefore, get rid of all the water and CO2? It
appears from the following graph that C02 density
is a lagging indicator introducing the next ice age.
25000 years from now, those greenhouse gases will
come in really handy.

http://upload.wikimedia.org/wikipedia/commons/c/c2/Vostok-ice-core-petit.png
--
73, Cecil, IEEE, OOTC, http://www.w5dxp.com

1067. RE:Minimum gauge wire for connection to ground rod

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-03 23:05:08 UTC
From: Rollie <rollie@iowatelecom.net>
Message-ID: <h57qf6$2e6$1@news.netins.net>
Source record: 14079

The bigger the better, but number 6 solid is kind of a stantard with antenna suppliers that furnish it. I use whatever I have that is high current carrying. #4 or #6 or bigger. Grounding is an art of it's own so you should study it as any other aspect of electronics. The experts run all the ground absorbers to a common buss bar and and the ground collectors to that bar. Make a study of this as there is no easy answer.......Rollie

1068. Re: Has "antenna" died?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-03 23:38:04 UTC
From: Wayne <mygarbagecan@verizon.net>
Message-ID: <h57sr0$i2l$1@news.eternal-september.org>
Source record: 14080

"Cecil Moore" <nospam@w5dxp.com> wrote in message
news:tBJdm.211513$Ta5.50763@newsfe15.iad...
> Michael Coslo wrote:
>> Man has no effect upon the weather? Fine, show me the mechanism by which
>> the retention of heat in the atmosphere is not affect by the percentage
>> of greenhouse gases and water vapor. We would not exist without the
>> effect, so discarding the effect is impossible.
>
> Therefore, get rid of all the water and CO2? It
> appears from the following graph that C02 density
> is a lagging indicator introducing the next ice age.
> 25000 years from now, those greenhouse gases will
> come in really handy.
>
> http://upload.wikimedia.org/wikipedia/commons/c/c2/Vostok-ice-core-petit.png
> --
> 73, Cecil, IEEE, OOTC, http://www.w5dxp.com
-
Besides that.....earth has bigger catastrophic threats than CO2.

1069. Re: Minimum gauge wire for connection to ground rod

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-03 23:50:55 UTC
From: Art Unwin <ArthurUnwin@gmail.com>
Message-ID: <853e8826-36d6-4586-a925-b0afa797b8ba@t13g2000yqt.googlegroups.com>
Source record: 14081
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.misc

On Aug 3, 4:51 pm, "Dave" <no...@nowhere.com> wrote:
> "Art Unwin" <ArthurUn...@gmail.com> wrote in message
>
> news:7bf6b00d-74d4-41ed-9374-0f8f20b3ea75@a13g2000yqc.googlegroups.com...
> On Aug 3, 3:09 pm, Bruce in alaska <f...@btpost.net> wrote:
>
> > In article <UZOdnZWJsoFGvurXnZ2dnUVZ_jKdn...@giganews.com>,
> >It is for this reason the transmitter chassis is grounded and
> >separated from the radiator system which has it's own closed circuit
> >and where the potential is above that of true ground. In this way your
> >transmitting circuit does not have a ground loop which is the last
> >thing that you want.

> i don't know where you get your radios, but in all of them here the coax
> connector is connected to the transmitter chassis which also has a lug for
> going to the safety ground.

By golly, I believe you are correct! I thought that was a bad
practice! Are all electronics at the same potential in the U.S. as
its container? So with a ground connection at the electrical supply
point and a provided connection for another generated "ground", is
that not an invitation for ground loops?

>
> >Lightning tries to get to the true ground by the shortest route and
> >the requirement is for you to not be part of it's route, even if your
> >radio has to be the sacrificial lamb if you haven't pulled the plug.
>

> there ain't no such thing as 'true ground', tis all relative.

H'mm, the ground point with the lowest potential relative to other
ground potentials in the same system is the "true" ground of the
system. Now can you tell me which "ground" is protected and from
what? And RF ground; is that protected from lightning? Lightning is
multi frequency oriented so it would appear to me it would gyrate
towards a radiator.
What about just one wire to the antenna and let the earth be the
return line to close the circuit! Seems like the definitions have gone
awry without involvement of a chassis ground
but then it is you that is electrically educated and the better judge.

1070. Re: UNUN Cores?How To Wind?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-04 09:04:04 UTC
From: UKMonitor <ukmonitor@hotmail.com>
Message-ID: <1b30f479-ebb0-4088-8063-c46711742323@k1g2000yqf.googlegroups.com>
Source record: 14082

On Aug 2, 5:50 am, Greg <bluehyh...@hotmail.com> wrote:
> Thanks for all the information.
>
> The 9:1 works with 8 turns trifilar, on the FT240-67 from 80 through
> to 10 meters. Its poor on 160 meters.
>
> All the cores are FT 240 size from Amidon or Bytemark. I can get the
> transformers to work but only over a narrow frequency range for the
> higher impedance ratios.
>
> I notice that the Sevick UNUN thats sold by Bytemark, a 18:1 ratio
> is narrow band and wont cover 1.8mhz to 30 mhz. Anyhow i dont have
> the magic recipe yet but I will keep experimenting.
>
> Bob
>
>
>
> amdx wrote:
> > "Greg" <bluehyh...@hotmail.com> wrote in message
> >news:22e47242-3660-4bb4-9406-fab7333e915f@32g2000yqj.googlegroups.com...
> > > Hi
>
> > > I am trying to build a broadband UNUN 9:1 from 1.8 mhz to 30mhz. I
> > > have had no luck.
>
> > > The first one the that I built, I used #67 material
> > snip
>
> > > The question is simply how do I build a broadband UNUN or
> > > Autotransformer from 1.8mhz to 30mhz and what core do I use? I am
> > > coming to the conclusion that these auto transformers or high
> > > impedance UNUN's are narrow band devices?
>
> > > I am playing around with a terminated T2FD type antenna trying
> > > different impedances, 450,600,800 and 1000 ohms termination resistors.
>
> > > Bob
>
> > Here are some papers that may help.
> >http://www.hep.princeton.edu/~mcdonald/examples/EM/sevick_hfe_4_1_46_...
> >http://standards.ieee.org/reading/ieee/ept/trans.pdf
>
> > These came from here, there are others.

> >http://unjobs.org/authors/jerry-sevick
>
> >   Mike- Hide quoted text -
>
> - Show quoted text -

This guy seems to have made one work. See the middle of this page

http://g8jnj.webs.com/currentprojects.htm

UKM

1071. Re: Counterpoise for an end-fed wire antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-04 09:44:26 UTC
From: Wimpie <wimabctel@tetech.nl>
Message-ID: <6dc96442-fc34-409a-bf8f-c4ed89f498dc@r2g2000yqm.googlegroups.com>
Source record: 14083

On 3 ago, 23:56, "Dave" <no...@nowhere.com> wrote:
> "Wimpie" <wimabc...@tetech.nl> wrote in message
>
> news:98f902f8-6215-4829-9f5e-84a1dcbce929@c1g2000yqi.googlegroups.com...
> On 2 ago, 19:30, "KJ4NTS" <KJ4...@dontask.com> wrote:
>
> >As you might know, the current that goes into the end-fed antenna
> >equals the current that goes into the counterpoise.
>
> ONLY if the counterpoise is connected to the same location where the
> 'radiating' wire leaves the coax. if you run a piece of coax out the window
> and connect just the center conductor to your end-fed antenna then connect
> the 'counterpoise' to the radio ground lug as is commonly done, the current
> in the counterpoise may be MUCH different than that going into the wire.

Hello Dave,

I supposed the counterpoise to be connected at same location as where
the antenna connects to the coaxial cable (so the cable is used as
feeder only). When you connect the counterpoise at the tuner, the
cable will be part of the radiating structure and, as you mentioned,
everything changes.

Best regards,

Wim

1072. Quad multiband

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-04 09:57:38 UTC
From: Daniel Ferrato - IK2SGL <dferrato@infinito.it>
Message-ID: <4a780612$0$693$5fc30a8@news.tiscali.it>
Source record: 14084

Dear OM, I would like to build a Cubical Quad multiband and I've found the site of EI7BA
http://www.iol.ie/~bravo/Cubical%20Quad.htm, I'd be interested in building up something like that but with 3el. I was thinking about having the director and reflector opened at pyramid-shape like the EI7BA project but the radiator at normal crossing like the fixed spacing in the common multiband version.
Do you have any projects or tips? I'm a newbe in building antennas.

73s
Daniel
IK2SGL
Como - JN45MT

volevo chiedere se esisteva
qualcosa di simile perï¿½ a 3 elementi. Pensavo a qualcosa del genere riflettore e diretttore posti ad apertura conica e direttore a croce normale.
Sapete illuminarmi su eventualli progetti?
Salutoni

Daniel
IK2SGL

1073. Re: Minimum gauge wire for connection to ground rod

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-04 10:32:57 UTC
From: Brad <google1@vk2qq.com>
Message-ID: <c2e7ff18-b1c1-4b20-9f2e-6055893f6e99@13g2000prl.googlegroups.com>
Source record: 14085
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.misc

On Aug 4, 3:52 am, "KJ4NTS" <KJ4...@dontask.com> wrote:
. I am interested in
> that, but I am also interested in having an effective RF ground.
>
> I've been able to get a total of 16 feet of ground rod down in the form of 4 four-foot rods, but I
> have a 50 foot run from my office to the ground rods, and I'm concerned about RF impedance in that
> connection.

That's about a quarter wave at 5MHz. It sure isn't an effective
ground.You'd need a tuner on the ground wire as well.

1074. Re: Has "antenna" died?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-04 14:26:46 UTC
From: Michael Coslo <mjc5@psu.edu>
Message-ID: <h59gfd$co7u$1@tr22n12.aset.psu.edu>
Source record: 14086

Cecil Moore wrote:
> Michael Coslo wrote:
>> Man has no effect upon the weather? Fine, show me the mechanism by
>> which the retention of heat in the atmosphere is not affect by the
>> percentage of greenhouse gases and water vapor. We would not exist
>> without the effect, so discarding the effect is impossible.
>
> Therefore, get rid of all the water and CO2?

Hmmm, did you get that I was inferring that from saying we would not exist without the Greenhouse effect? I'm not trying to eliminate everyone.

> It
> appears from the following graph that C02 density
> is a lagging indicator introducing the next ice age.
> 25000 years from now, those greenhouse gases will
> come in really handy.

Aren't you arguing both sides of the issue now, Cecil? If Greenhouse induced warming is bogus, then those gases won't come in handy, will they?

Given that climate change is going to happen regardless of human input, I'd make a guess that at the turning point of a heating cycle, the oceanic currents will shift, due to loss of ice blockage at the poles. Then, the change is agumented/mitigated by solar output. Also augumenting/repressing is effects such as atmospheric dust and sulfur dioxide content, and yes, the amount of greenhouse gases in the atmosphere.

All this gives rise to varying average temperatures, and depending on the timing, can make a greater or lesser cooling or heating effect.

Now given that there is a lot of natural variability, does it follow that humans should pay no mind to their own additions to the load?

I believe that we need to find out the effect, and the extent of the effect.

Taking the idea of the greenhouse gases coming in handy, I can envision being at one of those sharp drops in Temperature, and using gases to moderate the temperature. There is a lot of Methane in the form of clathrate hydrates, that might just spell the survival of humanity. Or maybe not. Maybe we should know what it will do.

> http://upload.wikimedia.org/wikipedia/commons/c/c2/Vostok-ice-core-petit.png

Looks to me like a pretty fair correlation, Cecil. Now what I am interested in is the event that occurred at those peaks, and also the valleys. It's fairly sharp. I don't doubt that as things rapidly cooled,

that there was a reduction in CO2 in the atmosphere. What was the cause?
It's a great graph for speculation. Interestingly regular.

- 73 de Mike N3LI -

1075. Re: Has "antenna" died?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-04 15:19:40 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <gkYdm.51879$nL7.31083@newsfe18.iad>
Source record: 14087

Michael Coslo wrote:
> What was the cause?

Certainly not homo sapiens. I strongly suspect
the primary source of energy in our solar system
is the cause. Now what could that be?
--
73, Cecil, IEEE, OOTC, http://www.w5dxp.com

1076. Re: Minimum gauge wire for connection to ground rod

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-04 15:26:37 UTC
From: Michael Coslo <mjc5@psu.edu>
Message-ID: <h59jvg$co06$1@tr22n12.aset.psu.edu>
Source record: 14088
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.misc

KJ4NTS wrote:
> On 3-Aug-2009, Michael Coslo <mjc5@psu.edu> wrote:
>
>> http://tinyurl.com/ns7jjd
>>
>> Is a nice station grounding pdf from Polyphasor. Sorry for the tinyurl,
>> the original url is a mile long.
>>
>> Everyone should have a copy, and the writer should get an award for his
>> or her clarity.
>
> That's a good article, but it is focused on grounding for lightning protection. I am interested in
> that, but I am also interested in having an effective RF ground.
>
> I've been able to get a total of 16 feet of ground rod down in the form of 4 four-foot rods, but I
> have a 50 foot run from my office to the ground rods, and I'm concerned about RF impedance in that
> connection.

Gathering from your other posts, you are in a difficult situation. RF grounding from a non ground floor or basement location is an issue. The problem is proportional to the frequency and wavelength, which is to say that at 10 meters, your RF ground won't.

Is there any possibility of putting in a balanced antenna? Or one of the so called no-ground verticals? All antenna setups are a compromise of one sort or another. Your setup will be a little bit more of a compromise.

This isn't to say there is no solution. There is always a solution of some sort.

- 73 de Mike N3LI -

1077. Re: Has "antenna" died?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-04 15:27:48 UTC
From: Michael Coslo <mjc5@psu.edu>
Message-ID: <h59k1k$co06$2@tr22n12.aset.psu.edu>
Source record: 14089

Cecil Moore wrote:
> Michael Coslo wrote:
>> What was the cause?
>
> Certainly not homo sapiens. I strongly suspect
> the primary source of energy in our solar system
> is the cause. Now what could that be?

Some would say God....... ;^)

- 73 de Mike N3LI -

1078. Re: Has "antenna" died?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-04 15:49:17 UTC
From: Michael Coslo <mjc5@psu.edu>
Message-ID: <h59la1$co0c$1@tr22n12.aset.psu.edu>
Source record: 14090

Cecil Moore wrote:
> Michael Coslo wrote:
>> What was the cause?
>
> Certainly not homo sapiens.

Okay, then what is the mitigating mechanism for mankind to not have an effect? We are increasing the percentage of greenhous gases. Why does it not have an effect?

> I strongly suspect
> the primary source of energy in our solar system
> is the cause. Now what could that be?

It would take an absolute idiot to not think that the sun was the major influence on the temperature of the earth. But I don't think that it follows that man has no effect on the system.

A prime example is the planet Mercury. It catches quite a bit more solar radiation than we do on earth. But the parts not catching the solar radiation aren't warm at all. And Venus, which catches more than we do, has temperatures that are much higher than would otherwise be expected, and these temps are not in areas directly exposed by the sun.

> Now what could that be?

That was a little condescending wasn't it?

- 73 de Mike N3LI -

1079. Re: Expansion issues with PVC

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-04 15:51:20 UTC
From: Michael Coslo <mjc5@psu.edu>
Message-ID: <h59ldo$co0c$2@tr22n12.aset.psu.edu>
Source record: 14091

Dave D wrote:
> I've used PVC for enclosures in the past and didn't seem to have any
> trouble. But I noticed that on a couple projects we had a couple
> things that started to bend from thermal expansion. The sunny side of
> the free standing vertical piece heats more than the shadow side, and
> the differing expansion rate creates a bend. Even for a 5' piece, it
> seemed fairly extreme. But then other times this hasn't happened. We
> were using the special furniture grade PVC in 1" size. Anybody had any
> experience with this or come up with any solutions? Notice any
> difference between PVC types or anything?

Do you have anything attached to the PVC? if you have a wire running vertically, and especially if it is attached tightly, that might account for a bend.

- 73 de Mike N3LI -

1080. Re: Has "antenna" died?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-04 15:55:50 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <qmlg7515d9chlsgpdek4odch6t5v2ljd0b@4ax.com>
Source record: 14092

On Tue, 04 Aug 2009 11:27:48 -0400, Michael Coslo <mjc5@psu.edu>
wrote:

>Some would say God..... ;^)

They might also say it was retribution for those satan worshiping
Neanderthals except for the fact the world has been around only as
long as the first quarter inch of the graph.

Maybe the 394 thousand years before creation was an annealing process.
The latest news of McCain voting down the Clunker's Bill (What? not
going to give us back our own money? Still some bankers without their
last year bonus?) suggests the latest spike is to anneal out the
remaining Neanderthal DNA.

73's
Richard Clark, KB7QHC

1081. INMARSAT Reception Question Re Antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-04 16:57:30 UTC
From: Robert11 <rgsros@xnotme.invalid>
Message-ID: <h59poa$go5$1@news.eternal-september.org>
Source record: 14093

Hello,

Just a typical non-technical sw listener, and frankly now next to nothing re antennas.
But do like picking up maritime and mil stuff.

Was thinking of trying out a new software Inmarsat program for receiving and decoding Inmarsat msg's.

Apparently the freq. used is around 2 GHz
My NRD 545 wiuth the converter gets up there, I think.

They mention that you need a parabolic dish antenna, and I think it was an L type downfeed feed.

Think a Discone antenna and reg. coax would pick up "anything", or not worth the time to even try ?

Thanks,
Bob

1082. Re: Has "antenna" died?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-04 18:10:03 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <_P_dm.63362$O23.30617@newsfe11.iad>
Source record: 14094

Michael Coslo wrote:
> Okay, then what is the mitigating mechanism for mankind to not have an
> effect? We are increasing the percentage of greenhous gases. Why does it
> not have an effect?

The Global-Warming/Ice-Age cycle has been primary and we
are 8000 years into the next ice age. If man has any effect
at all, it will be to delay the onslaught of the next ice age.
Indeed, this ice age cycle seems to be somewhat delayed
compared to the previous ones.

Seems that you are asking for proof that man doesn't have
any effect. That's a lot like asking for proof that God
doesn't exist. The onus of proof is upon those who assert
the positive. Nobody has proven that man is or can be the
anywhere near the primary cause of global warming. The
ice-core temperatures prove that the most severe global
warming(s) occurred before man ever existed.

> But I don't think that it
> follows that man has no effect on the system.

I think you would agree that plants have much more of an
effect than man? Plants love CO2 and produce O2. There
was a time in the past when the oxygen level was double
what it is today and dragonflies had a wingspan equal to
my armspan. Believing that man has a drastic effect on the
present global temperatures is akin to believing that the
earth is the center of the universe, i.e. delusions of
grandeur, e.g. Al Gore.

>> Now what could that be?
>
> That was a little condescending wasn't it?

It's called a rhetorical question. :-)
I ask a lot of rhetorical questions.
--
73, Cecil, IEEE, OOTC, http://www.w5dxp.com

1083. Re: INMARSAT Reception Question Re Antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-04 18:57:19 UTC
From: You <you@shadow.orgs>
Message-ID: <you-CCD520.10571304082009@unknown.usenetserver.com>
Source record: 14095

In article <h59poa$go5$1@news.eternal-september.org>,
"Robert11" <rgsros@xnotme.invalid> wrote:

> Hello,
>
> Just a typical non-technical sw listener, and frankly now next to nothing re
> antennas.
> But do like picking up maritime and mil stuff.
>
> Was thinking of trying out a new software Inmarsat program for receiving and
> decoding Inmarsat msg's.
>
> Apparently the freq. used is around 2 GHz
> My NRD 545 wiuth the converter gets up there, I think.
>
> They mention that you need a parabolic dish antenna, and I think it was an L
> type downfeed feed.
>
> Think a Discone antenna and reg. coax would pick up "anything", or not worth
> the time to even try ?
>
> Thanks,
> Bob

Basically, there are two sets of MIL SAT setups... there is the UHF
Military stuff between 200 - 400 Mhz, and then there is the true Marine
stuff in the Shf bands. YOu can hear some of the Tactical UHF stuff with
your discone, but most of that is now encrypted. The Shf stuff would
require a knowledge of which SATS, and their locations in the sky
relative to your house, and at least a one meter dish for solid
reception, as well as an understanding of Modulation schemes used,
decoder hardware, Frequency, and Polarity. This would not be for the
fainthearted.....

1084. Re: INMARSAT Reception Question Re Antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-04 20:52:29 UTC
From: Jim Lux <james.p.lux@jpl.nasa.gov>
Message-ID: <h5a72d$te3$1@news.jpl.nasa.gov>
Source record: 14097

Robert11 wrote:
> Hello,
>
> Just a typical non-technical sw listener, and frankly now next to nothing re
> antennas.
> But do like picking up maritime and mil stuff.
>
> Was thinking of trying out a new software Inmarsat program for receiving and
> decoding Inmarsat msg's.
>
> Apparently the freq. used is around 2 GHz
> My NRD 545 wiuth the converter gets up there, I think.
>
> They mention that you need a parabolic dish antenna, and I think it was an L
> type downfeed feed.
>
> Think a Discone antenna and reg. coax would pick up "anything", or not worth
> the time to even try ?
>
> Thanks,
> Bob
>
>

You probably won't have enough SNR without a gain antenna. Doesn't need to be huge, but you do need more gain than you get from an omni.

Inmarsat operates in C (3.6 GHz down, 6.4GHz up) and L (1.525-1.559 GHz down, 1.626-1.661 GHz up) band, not S band. What you heard about was using a small parabola and an L-band feed for the downlink (at 1.5GHz)

Inmarsat Mini-M uses a very small antenna, and in fact, has the ability to talk to a satphone with a small antenna (briefcase sized)

1085. Propnet

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-04 20:56:41 UTC
From: Ahso#1 <whax44@gmail.com>
Message-ID: <ac8e784c-0dd3-4fd2-8bf1-ae5e46e31b68@r25g2000vbn.googlegroups.com>
Source record: 14096

Anyone know why Propnet is down? I tried to get on their real time
plot site and got nothing.Just wondering.
Thanks in advance,
Will _._ ._ ..__ __ ..._ .. _..

1086. Re: Minimum gauge wire for connection to ground rod

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-04 21:01:58 UTC
From: 295 <vadx295@aol.com>
Message-ID: <c71a28af-4a3e-420e-ac48-2d22ba2e87c3@t13g2000yqt.googlegroups.com>
Source record: 14098
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.misc

On Aug 3, 1:52 pm, "KJ4NTS" <KJ4...@dontask.com> wrote:
> On 3-Aug-2009, Michael Coslo <m...@psu.edu> wrote:
>
> >http://tinyurl.com/ns7jjd
>
> > Is a nice station grounding pdf from Polyphasor. Sorry for the tinyurl,
> > the original url is a mile long.
>
> > Everyone should have a copy, and the writer should get an award for his
> > or her clarity.
>
> That's a good article, but it is focused on grounding for lightning protection. I am
interested in
> that, but I am also interested in having an effective RF ground.
>
> I've been able to get a total of 16 feet of ground rod down in the form of 4 four-foot
rods, but I
> have a 50 foot run from my office to the ground rods, and I'm concerned about RF
impedance in that
> connection.

I ran attic mounted antennas for a period time and here is my
experience. First, don't bother running any ground to the antenna,
especially at 50 feet long. It will act more like a radiating element
than a ground, then you will get to meet Mr. RFI as you will discover
all types items your RF can affect. Since your antennas are in the
attic, static and lightning should not be an issue, unless you or a
close neighbor takes a direct hit.

I keep everything disconnected unless I am operating, it is the only
way I know of to keep lightning from destroying your station. If you
or your neighbor takes a direct hit, there is not much you can do to
prevent damage, unless you have everything disconnected, AC/Ground/
Antennas/Control lines/etc.

Second, your four foot ground rods are about useless for both RF and
DC ground. Minimal is eight feet. My current station has 7 eight foot
ground rods, spaced no more than eight feet apart, and all grounds are
tied together, including the panel box ground. This is done to make
sure all grounds are at the same potential.

You did not describe your station so the information someone can
provide is limited. In my case, my station was on the second floor,
so instead of having a ground, I used a tunable counterpoise system as

my RF ground. MFJ makes the tune boxes, and Ten-Tec may still sell them in kit from too. I used the one from Ten-Tec, it worked well at my location, but it still was a compromise, when compared to having a true ground system and outside antennas.

73

1087. Re: Minimum gauge wire for connection to ground rod

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-04 22:51:32 UTC
From: Dave <noone@nowhere.com>
Message-ID: <UX2em.642$Jg.159@nwrddc01.gnilink.net>
Source record: 14099
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.misc

"Art Unwin" <ArthurUnwin@gmail.com> wrote in message
news:853e8826-36d6-4586-a925-b0afa797b8ba@t13g2000yqt.googlegroups.com...
On Aug 3, 4:51 pm, "Dave" <no...@nowhere.com> wrote:
> "Art Unwin" <ArthurUn...@gmail.com> wrote in message
>> i don't know where you get your radios, but in all of them here the coax
>> connector is connected to the transmitter chassis which also has a lug
>> for
>> going to the safety ground.
>
>
>By golly, I believe you are correct! I thought that was a bad
>practice! Are all electronics at the same potential in the U.S. as
>its container? So with a ground connection at the electrical supply
>point and a provided connection for another generated "ground", is
>that not an invitation for ground loops?

yes, it is. that is why your 'shack' ground has to be connected to the
service entrance ground.

>
>> >Lightning tries to get to the true ground by the shortest route and
>> >the requirement is for you to not be part of it's route, even if your
>> >radio has to be the sacrificial lamb if you haven't pulled the plug.
>>
>> there ain't no such thing as 'true ground', tis all relative.
>
>H'mm, the ground point with the lowest potential relative to other
>ground potentials in the same system is the "true" ground of the
>system.

you have to define the 'system'. but there is always the possibility that
someone outside the 'system' can reach in and measure your 'ground '
connection relative to something else and measure a potential. potential is
what is relative, hook a 12v battery to a meter and set it on a table,
connect another 12v battery between a ground rod and one terminal of the
first battery... does the meter reading change? what is the potential of
the positive terminal of the battery? if you were sitting on the table and
couldn't reach the ground rod or 2nd battery terminals could you tell what
the voltage of the 2nd battery was?

>Now can you tell me which "ground" is protected and from
>what?

'ground' is not protected from anything. 'ground' is a convenient point to
connect everything and to make measurements from.

> And RF ground; is that protected from lightning?

there is no such thing as an 'rf ground'. there is at best a low impedance path for return currents to get back to the feedpoint... if that happens to be through the earth (note for you, earth means dirt, not earth as in electrical ground that we call it in the states) then we may want to call it 'ground' but it really isn't.

now, why do i say there is no such thing as an rf ground? consider what happens around a 10m 1/4 wave vertical mounted on the ground connected to the center conductor of the coax, with a single ground rod as the connection for the shield of the coax. The current going into the 1/4 wave vertical and the current coming out of the ground rod have to be equal at the coax connection... so, current flows up the vertical, back through the ground, up the ground rod and back to the coax... very simple... until you take your rf voltmeter and connect it to the ground rod and stick the other probe in the ground some distance from the rod, lets say about 1/4 wave away (more or less, propagation velocity through the ground is slower so it would be physically less than 1/4 wave in free space, etc, etc). what voltage do you read on your meter?? it is difficult to calculate because of all the interfaces and bulk conductivities, the sizes of the ground rod and probe, etc... but suffice it to say, it ain't zero. why not, aren't both probes connected to 'ground'?? well, yes, and no. because there is current flowing through the earth trying to get back to that coax connection there has to be a voltage difference. current in earth * resistivity of earth = voltage between points on the earth, give or take a few units. now lets say we add a radial wire to connect the ground rod at the feed point of the vertical to the probe where you measure the voltage of the earth... does the voltage go away? after all you just shorted out your voltmeter didn't you?? but no! there is still voltage! why you ask?? well, even though you have made a lower impedance path there is still current on the wire, and since the wire has inductance and capacitance the propagation time is not zero, so there is still a voltage difference causing that current to flow along the radial wire... why is it necessary to insulate the ends of raised radials if they are a 'ground' plane under a vertical antenna?

lightning 'ground' is even worse because the currents are bigger... consider a 100ka bolt with a rise time of 1usec hitting the ground and spreading out at about .3c (approximately what i measured in one experiment for a buried radial wire)... the potential difference between points just a few feet apart can be huge, that is a common cause of lightning deaths, current hits tree, goes through ground, up one leg, down the other, or up one leg and out an arm that is closer to something conductive away from the tree... like a golf club. the key with designing lightning 'ground' systems is to realize that this potential exists and make sure you can handle it. the 'single point ground' is the classic way because it makes the distance zero which takes the rise time and propagation speed out of the equation. unfortunately that is not always possible, so that is where other methods are needed to keep voltages across protected equipment equalized.

>Lightning is multi frequency oriented so it would appear to me it would
>gyrate

>towards a radiator.

i have never known lightning to gyrate. it takes all sorts of convoluted paths, but none that i would call gyrating.

>What about just one wire to the antenna and let the earth be the
>return line to close the circuit!

certainly, and many have done that, and some have gotten burned. consider this case... sit on your table with the 12v battery again, but instead of the meter hook up a transmitter to it. assume there is one so-239 output jack mounted on the radio's metal case and no other connections, just 12v in, rf out. run a wire straight out from the so-239 center conductor then touch the radio's metal case... what happens? if the power is high enough you get burned... why? you are touching the radio case, isn't that 'ground'? you aren't touching the earth? so what is happening??? well, you are now part of the return path for current that has to find a way back to the chassis side of the so-239, and since you are likely much larger than the case of the radio you make a more efficient collector.

change the setup, now run a wire from the case of the radio to the ground rod where the 2nd battery used to be connected... now you have another path for current to get back to the chassis side of the connector, from the 'earth' through the ground rod up the wire and to the radio... now touch the case and what happens? well, if the earth to radio circuit is lower impedance than your body to radio, more current flows on that side and you don't get burned... not good enough? still getting burned??? get one of those counterpoise resonator thingies... they are really just a small match box for a long wire... run the wire around the floor and tune it up. why does it work better? it provides a lower impedance path for collecting up that return current and getting it back to the radio. no magic, it is just providing the return current instead of letting your body collect it.

> Seems like the definitions have gone awry without involvement of a chassis
> ground

ah, chassis ground, yet another type of ground.

>but then it is you that is electrically educated and the better judge.

one of the few things you have said that i agree with

1088. Re: Motorcycle mobile

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-04 23:45:11 UTC
From: What me worry? <danXinpasco@gmail.com>
Message-ID: <nnhh75dpnoqgm330fthcui3e10v7kailpf@4ax.com>
Source record: 14100

On Mon, 03 Aug 2009 13:08:16 -0400, Michael Coslo <mjc5@psu.edu>
backed into a tree whilst ridin inna park then wrote:

>What me worry? wrote:
>> On Fri, 02 Jan 2009 23:23:26 -0500, Mike Coslo <mjc5@psu.edu> backed
>> into a tree whilst ridin inna park then wrote:
>>
>>> Philo wrote:
>>>
>>>>> Dual band 144/440 on a motorcycle...Any suggestions?
>>>>>
>>>>> - 73 de Mike N3LI -
>>>> I hope the Shadow Spirit's battery is heavier than the unit in the CBF1000.
>>>>
>>>> Anyway start developing your "dead battery bike pushing" skills...
>>> It's pretty strong. I bought the best one I could find, after finding
>>> the previous owner had an underpowered one.
>>>
>>> Side note: I don't know if is is an indicator, but this new heavy duty
>>> battery was distinctly old school. It was shipped uncharged, and needed
>>> a full charging after putting the acid in it. I've been used to the fill
>>> 'em and go pre-charged batteries.
>>>
>>> - 73 de Mike N3LI -
>>
>> How did it work out for ya?
>
>
>The installation was behind the backrest of the bike, I made an aluminum
>plate that held the antenna and the radio body. the wires to the head
>routed up under the seat and tank. The head was installed off the
>handlebar, right in the middle.
>
>Cosmetically, it's about a 9, performance is pretty good also. I can
>hear well with a pair of "skull candy" headphones, which are a little
>like earbuds, but rest on the ear instead of being pushed into them.
>
>I do have to work on one problem. The head is waterproof, but the body
>is only water resistant. A couple of rainstorms have allowed a bit of
>water to get into the head/body connection. I have to add a little cover
>over that. I might try to find some of that goo they put around tail
>lamps to seal out water. Overall, I've been pleased. No dead battery
>yet, although I try to avoid the full 50 watt output of the unit.
>

> - 73 de Mike N3LI -

OK. Thanks
Thinkin of settin up a 706 on my HD FXDS. Runnin 20 watts or so. Not
sure about an antenna, but a small homemade screwdriver would be fun.

Dan TOASTY in Florida for now

Remove the X for e-mail reply
www.outdoorfrontiers.com www.SecretWeaponLures.com
A proud charter member of "PETAF", People for Eating Tasty Animals and Fish!!!
N9JBF

1089. Hydakia V-33 tribander

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-05 06:01:14 UTC
From: jae <jaellio@gmail.com>
Message-ID: <2ab28035-5913-402e-b3e2-e59fea1b1901@12g2000pri.googlegroups.com>
Source record: 14001

purchased a unit second hand. Working ok except for 14mhz . Anybody
with experience in fault finding on these units ?. How do I know the
guy I bought it off put the correct traps on the correct poles ?.
Are there only two sizes of traps (6 in all) ?. Large one on the
inside and the small one on the outside ??.
Trouble reading the directions in Japanese ...

Thanks
John VK3CVF

1090. Re: Motorcycle mobile

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-05 13:54:34 UTC
From: Michael Coslo <mjc5@psu.edu>
Message-ID: <h5c2us$m45a$1@tr22n12.aset.psu.edu>
Source record: 14002

What me worry? wrote:
- 73 de Mike N3LI -
>
> OK. Thanks
> Thinkin of settin up a 706 on my HD FXDS. Runnin 20 watts or so. Not
> sure about an antenna, but a small homemade screwdriver would be fun.

Document it. HF Motorcycle is rare enough that any effort would be of great interest. You'll be wanting to maximize your "ground" area. The HD has a lot of iron as bikes go, so you'll be starting out wit a best case there. Of course on a bike, there isn't a huge amount of that. Ignition noise will be an issue also, but with some effort, all this can be overcome.

Your screwdriver would be a good way to go.

I hope you do it, because it would be way cool.

- 73 de Mike N3LI -

1091. Re: Minimum gauge wire for connection to ground rod

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-05 16:44:12 UTC
From: JB <nospam@goofball.net>
Message-ID: <wFiem.744$Jg.296@nwrddc01.gnilink.net>
Source record: 14003

"KJ4NTS" <KJ4NTS@dontask.com> wrote in message
news:28GdnVER3ZXAhOrXnZ2dnUVZ_ridnZ2d@giganews.com...
>
> On 3-Aug-2009, "JB" <nospam@goofball.net> wrote:
>
> > > Primarily an RF ground since the antennas will be in my attic.
However, I
> > would appreciate the
> > > information for both cases.
> >
> > I think code calls for #6 solid Copper or Aluminum for lightning
protection.
> > Consider the 50 ft as part of the antenna though. Rather than even
trying
> > to have an RF "ground" try to make a counterpoise instead. Read up on
the
> > difference between RF ground, lightning ground, and electrical ground.
You
> > don't say what kind of antenna.
>
> I could put a surface wire counterpoise in the crawl space under my office
where the radio is
> located. If I did that, there would be only about a 5 or 6 foot run to
the center point of the
> counterpoise.
>
> Assuming the counterpoise wires are laying on the dirt floor of the crawl
space, how many wires
> would I need, and how long do they need to be. I want to be able to work
6 through 40 meters.
>
> If I install a wire counterpoise like this, is there any problem also
connecting the earth ground
> connection to the central ground bar in my office?
>
> The attic antenna is an Alpha Delta DX-EE.

This is a balanced antenna and if the antenna is stretched out in an area
where there is no metal it should do it's best. You probably won't benefit
from a counterpoise at all. In fact, any RFI you might encounter will have
to be specifically addressed because of the antenna is within the living
quarters. Your antenna will be too close to the ground and partly shielded
by roofing materials as it is for optimal performance, but we do what we can
just to get on the air when there is no good solution. Having said that, You

should be able to load up with an outboard tuner and make some contacts.

1092. Re: Minimum gauge wire for connection to ground rod

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-05 17:08:15 UTC
From: JB <nospam@goofball.net>
Message-ID: <30jem.717$nh2.481@nwrddc02.gnilink.net>
Source record: 14004

"Dave" <noone@nowhere.com> wrote in message
news:UX2em.642$Jg.159@nwrddc01.gnilink.net...
>
> "Art Unwin" <ArthurUnwin@gmail.com> wrote in message
> news:853e8826-36d6-4586-a925-b0afa797b8ba@t13g2000yqt.googlegroups.com...
> On Aug 3, 4:51 pm, "Dave" <no...@nowhere.com> wrote:
> > "Art Unwin" <ArthurUn...@gmail.com> wrote in message
> >> i don't know where you get your radios, but in all of them here the
coax
> >> connector is connected to the transmitter chassis which also has a lug
> >> for
> >> going to the safety ground.
> >
> >
> >By golly, I believe you are correct! I thought that was a bad
> >practice! Are all electronics at the same potential in the U.S. as
> >its container? So with a ground connection at the electrical supply
> >point and a provided connection for another generated "ground", is
> >that not an invitation for ground loops?
>
> yes, it is. that is why your 'shack' ground has to be connected to the
> service entrance ground.
>
>
> >
> >> >Lightning tries to get to the true ground by the shortest route and
> >> >the requirement is for you to not be part of it's route, even if your
> >> >radio has to be the sacrificial lamb if you haven't pulled the plug.
> >>
> >> there ain't no such thing as 'true ground', tis all relative.
> >
> >H'mm, the ground point with the lowest potential relative to other
> >ground potentials in the same system is the "true" ground of the
> >system.
>
> you have to define the 'system'. but there is always the possibility that
> someone outside the 'system' can reach in and measure your 'ground '
> connection relative to something else and measure a potential. potential
is
> what is relative, hook a 12v battery to a meter and set it on a table,
> connect another 12v battery between a ground rod and one terminal of the
> first battery... does the meter reading change? what is the potential of
> the positive terminal of the battery? if you were sitting on the table
and

> couldn't reach the ground rod or 2nd battery terminals could you tell what
> the voltage of the 2nd battery was?
>
> >Now can you tell me which "ground" is protected and from
> >what?
>
> 'ground' is not protected from anything. 'ground' is a convenient point
to
> connect everything and to make measurements from.
>
> > And RF ground; is that protected from lightning?
>
> there is no such thing as an 'rf ground'. there is at best a low
impedance
> path for return currents to get back to the feedpoint... if that happens
to
> be through the earth (note for you, earth means dirt, not earth as in
> electrical ground that we call it in the states) then we may want to call
it
> 'ground' but it really isn't.
>
> now, why do i say there is no such thing as an rf ground? consider what
> happens around a 10m 1/4 wave vertical mounted on the ground connected to
> the center conductor of the coax, with a single ground rod as the
> connection for the shield of the coax. The current going into the 1/4
wave
> vertical and the current coming out of the ground rod have to be equal at
> the coax connection... so, current flows up the vertical, back through the
> ground, up the ground rod and back to the coax... very simple... until you
> take your rf voltmeter and connect it to the ground rod and stick the
other
> probe in the ground some distance from the rod, lets say about 1/4 wave
away
> (more or less, propagation velocity through the ground is slower so it
would
> be physically less than 1/4 wave in free space, etc, etc). what voltage
do
> you read on your meter?? it is difficult to calculate because of all the
> interfaces and bulk conductivities, the sizes of the ground rod and probe,
> etc... but suffice it to say, it ain't zero. why not, aren't both probes
> connected to 'ground'?? well, yes, and no. because there is current
> flowing through the earth trying to get back to that coax connection there
> has to be a voltage difference. current in earth * resistivity of earth =
> voltage between points on the earth, give or take a few units. now lets
say
> we add a radial wire to connect the ground rod at the feed point of the
> vertical to the probe where you measure the voltage of the earth... does
the
> voltage go away? after all you just shorted out your voltmeter didn't
you??

> but no! there is still voltage! why you ask?? well, even though you
have
> made a lower impedance path there is still current on the wire, and since
> the wire has inductance and capacitance the propagation time is not zero,
so
> there is still a voltage difference causing that current to flow along the
> radial wire... why is it necessary to insulate the ends of raised radials
if
> they are a 'ground' plane under a vertical antenna?
>
> lightning 'ground' is even worse because the currents are bigger...
consider
> a 100ka bolt with a rise time of 1usec hitting the ground and spreading
out
> at about .3c (approximately what i measured in one experiment for a buried
> radial wire)... the potential difference between points just a few feet
> apart can be huge, that is a common cause of lightning deaths, current
hits
> tree, goes through ground, up one leg, down the other, or up one leg and
out
> an arm that is closer to something conductive away from the tree... like a
> golf club. the key with designing lightning 'ground' systems is to
realize
> that this potential exists and make sure you can handle it. the 'single
> point ground' is the classic way because it makes the distance zero which
> takes the rise time and propagation speed out of the equation.
> unfortunately that is not always possible, so that is where other methods
> are needed to keep voltages across protected equipment equalized.
>
> >Lightning is multi frequency oriented so it would appear to me it would
> >gyrate
> >towards a radiator.
>
> i have never known lightning to gyrate. it takes all sorts of convoluted
> paths, but none that i would call gyrating.
>
>
> >What about just one wire to the antenna and let the earth be the
> >return line to close the circuit!
>
> certainly, and many have done that, and some have gotten burned. consider
> this case... sit on your table with the 12v battery again, but instead of
> the meter hook up a transmitter to it. assume there is one so-239 output
> jack mounted on the radio's metal case and no other connections, just 12v
> in, rf out. run a wire straight out from the so-239 center conductor then
> touch the radio's metal case... what happens? if the power is high enough
> you get burned... why? you are touching the radio case, isn't that
> 'ground'? you aren't touching the earth? so what is happening??? well,
> you are now part of the return path for current that has to find a way
back

> to the chassis side of the so-239, and since you are likely much larger
than
> the case of the radio you make a more efficient collector.
>
> change the setup, now run a wire from the case of the radio to the ground
> rod where the 2nd battery used to be connected... now you have another
path
> for current to get back to the chassis side of the connector, from the
> 'earth' through the ground rod up the wire and to the radio... now touch
the
> case and what happens? well, if the earth to radio circuit is lower
> impedance than your body to radio, more current flows on that side and you
> don't get burned... not good enough? still getting burned??? get one of
> those counterpoise resonator thingies... they are really just a small
match
> box for a long wire... run the wire around the floor and tune it up. why
> does it work better? it provides a lower impedance path for collecting up
> that return current and getting it back to the radio. no magic, it is
just
> providing the return current instead of letting your body collect it.
>
> > Seems like the definitions have gone awry without involvement of a
chassis
> > ground
>
> ah, chassis ground, yet another type of ground.
>
> >but then it is you that is electrically educated and the better judge.
>
> one of the few things you have said that i agree with
>
>

The electrical ground is Neutral at the entrance so that any wires shorting to the boxes or metal cabinets will pull the breaker and so that none of the cabinets can have AC potential on them. The lightning ground should be there at the entrance because that is the common tie point of all grounds, and any lightning currents flowing on the ground wires throughout the house will induce massive voltages into the house wiring. If you have multiple ground rods, they should tie together with heavy cable to the panel before all else. There is a problem with a good RF ground at the antenna, because lightning strikes to the power pole or house will want to flow through your station to the good ground in addition to the panel ground. So it is a good Idea to at least bring the coax and all wires to the electrical entrance for protection before entering the house and preferable to site the tower outside the electrical box and bond all grounds with heavy gauge conductors.

The man is putting a dipole in the attic, so this talk about ground is a moot point.

1093. Re: Minimum gauge wire for connection to ground rod

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-05 18:21:13 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <rhij751glb7k8hor923pvpt26al8n7jmc4@4ax.com>
Source record: 14005

On Wed, 05 Aug 2009 17:08:15 GMT, "JB" <nospam@goofball.net> wrote:

>The man is putting a dipole in the attic, so this talk about ground is a
>moot point.

The "balanced" antenna is connected to an "unbalanced" system if the rig has AC power through any device or has a powered mike connection, or has a computer control line, or has a powered speaker, or has a ... and so on. It takes supreme effort to maintain "balance" but most are happy to ignore analysis and put a rubber stamp to it.

That an antenna is in a attic space is, no doubt, a cry that it is insulated from the sky. If that were all that was needed, every plastic covered wire in the air would be lightning proof. That is a superstition. If it were as effective as supposed, no one could use the antenna for its purpose.

The only bright point of there being so few reports of lightning strikes to attic antennas is that they present so little individual risk that low within a neighborhood of equally available targets - you could as easily use a closeline. Every home in a community over 30 years old has a vertical radiator penetrating the roof line, the plumbing system vent that dives solidly straight into ground. How often is a house struck there?

73's
Richard Clark, KB7QHC

1094. Re: Hydakia V-33 tribander

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-05 22:18:15 UTC
From: VK2KC <vk2kcjohn@gmail.com>
Message-ID: <Hynem.9652$ze1.713@news-server.bigpond.net.au>
Source record: 14006

John,
Do a Google search (Hidaka+V-33+yagi+manual) on the correct spelling Hidaka.

Here is an excerpt from VK6IA web page:

The Triband Yagi - Hidaka VS-33 is the Japanese version of the Hy-Gain TH3.
It has proved to be a great performing antenna with good gain and a nice
front to rear/side ratio.

Hope for your sake the VS-33 and the V-33 are the same animal!
Maybe an email to him may prove fruitful.

Also found this.

Article: 223546 of rec.radio.amateur.antenna
From: "Jae" <vk3cvf@iprimus.com.au>
Subject: Hidaka VS33 antenna
Date: Fri, 14 Apr 2006 22:35:10 +1000
Message-ID: 443f96ff$1_1@news.iprimus.com.au
Can SKS help me out with the spacings for traps on this antenna ?. Have an
unassembled antenna that I am trying to rebuild.
Regards
VK3CVF
John
Melbourne...

01-24-2005, 10:40 AM
Hi to all,
I am asking if anyone has the Specs for a VS33,Triband,beam for 10-15-20 M,I
have one and I can't find any info about it I have tried to contact
HIDAKA,in JA but no luck with them,I would like the trap info and element
lengths,as well,I have not pulled the traps apart to measure the coils
yet,so any thing would be a big help,Regards #TOM VK4HTM..
Thanks to all Who Looked at this Message.
http://www.qrz.com/iB_html/non-cgi/emoticons/tounge.gif

Maybe Tom can help you
73
John
VK2KC

"jae" <jaellio@gmail.com> wrote in message
news:2ab28035-5913-402e-b3e2-e59fea1b1901@12g2000pri.googlegroups.com...
> purchased a unit second hand. Working ok except for 14mhz . Anybody
> with experience in fault finding on these units ?. How do I know the
> guy I bought it off put the correct traps on the correct poles ?.
> Are there only two sizes of traps (6 in all) ?. Large one on the

> inside and the small one on the outside ??.
> Trouble reading the directions in Japanese ...
>
> Thanks
> John VK3CVF

1095. Looking for W9INN coil for 160/80 Broadbander

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-06 01:22:19 UTC
From: David Thompson <thompson@mindspring.com>
Message-ID: <l7udnW1qDqrWrefXnZ2dnUVZ_qGdnZ2d@earthlink.com>
Source record: 14007

I am looking for the W9INN resonactor coil for the W9INN MBC-068
Broad-Bander. This is a full size 1/4 wave 80 vertical or L with 160
shortened to about 115 feet.

I lost the coil several years ago but wil be glad to buy a complete antenna
if necessary.

thanks es 73 Dave K4JRB
thompson@mindspring.com

1096. Re: Minimum gauge wire for connection to ground rod

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-06 01:50:06 UTC
From: KJ4NTS <KJ4NTS@dontask.com>
Message-ID: <vuGdnSCtwq1Nq-fXnZ2dnUVZ_jidnZ2d@giganews.com>
Source record: 14008

On 5-Aug-2009, "JB" <nospam@goofball.net> wrote:

> This is a balanced antenna and if the antenna is stretched out in an area
> where there is no metal it should do it's best. You probably won't benefit
> from a counterpoise at all.

The idea behind the counterpoise was to provide an RF ground for the radio, not as a part of the
antenna.

> Your antenna will be too close to the ground and partly shielded
> by roofing materials as it is for optimal performance, but we do what we can
> just to get on the air when there is no good solution. Having said that, You
> should be able to load up with an outboard tuner and make some contacts.

I have a friend with an Alpha Delta DX-EE in his attic, and he has achieved DX CC -- contacts with
100 countries. I don't know if it is a one or two story house. I'm going over to look at his
installation his weekend.

1097. Re: Minimum gauge wire for connection to ground rod

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-06 01:52:17 UTC
From: KJ4NTS <KJ4NTS@dontask.com>
Message-ID: <fOOdnSqJ-ZHOqufXnZ2dnUVZ_jidnZ2d@giganews.com>
Source record: 14009

On 5-Aug-2009, Richard Clark <kb7qhc@comcast.net> wrote:

> The only bright point of there being so few reports of lightning
> strikes to attic antennas is that they present so little individual
> risk that low within a neighborhood of equally available targets - you
> could as easily use a closeline. Every home in a community over 30
> years old has a vertical radiator penetrating the roof line, the
> plumbing system vent that dives solidly straight into ground. How
> often is a house struck there?

As far as I know, we've never had a lightning strike. From a lightning perspective, we are fortune
to have a hill at least 4 times as high as the house immediately behind us. Pity the house on the
top of that hill.

1098. Cushcraft Site

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-06 12:47:50 UTC
From: Howard Kowall <hkowall@shaw.ca>
Message-ID: <biAem.98785$0e4.7852@newsfe19.iad>
Source record: 14010

Has anyone been able to go to Cushcraft site
I need to download a couple of manuals and the site is not found
They could be redoing there site or ???
thanks all
Howard
VE4ISP

1099. KGD antenna QrpProject ?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-06 12:57:43 UTC
From: Brobin <bbrobin127@free.fr>
Message-ID: <4a7ad347$0$17746$ba4acef3@news.orange.fr>
Source record: 14011

HI,

The KGD antenna of qrpproject is no longer sold.
I would like to build one and I am looking for infos about it : Coil,
capacitor and connections.
(The manual didn't say anything about that)

Thank you for your help

bern

1100. Re: Cushcraft Site

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-06 12:58:16 UTC
From: Bert Hyman <bert@iphouse.com>
Message-ID: <Xns9C5F5116B85A5VeebleFetzer@216.250.184.7>
Source record: 14012

In news:biAem.98785$0e4.7852@newsfe19.iad "Howard Kowall"
<hkowall@shaw.ca> wrote:

> Has anyone been able to go to Cushcraft site
> I need to download a couple of manuals and the site is not found

When I tried it, the lookup worked fine, but the access failed after
along wait:

"The connection to the server was reset while the page was loading."

> They could be redoing there site or ???

I visited the site just a couple of days ago, but it does seem to be
down at the moment.

--
Bert Hyman W0RSB St. Paul, MN bert@iphouse.com

1101. Re: Cushcraft Site

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-06 13:01:08 UTC
From: Howard Kowall <hkowall@shaw.ca>
Message-ID: <IuAem.98799$0e4.68061@newsfe19.iad>
Source record: 14013

Ok great
Thanks very much for the return post
Howard
VE4ISP
"Howard Kowall" <hkowall@shaw.ca> wrote in message
news:biAem.98785$0e4.7852@newsfe19.iad...
> Has anyone been able to go to Cushcraft site
> I need to download a couple of manuals and the site is not found
> They could be redoing there site or ???
> thanks all
> Howard
> VE4ISP
>

1102. Re: Cushcraft Site

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-06 15:12:21 UTC
From: Ralph Mowery <rmowery28146@earthlink.net>
Message-ID: <hvGdnZrDsJgbeOfXnZ2dnUVZ_hCdnZ2d@earthlink.com>
Source record: 14014

"Howard Kowall" <hkowall@shaw.ca> wrote in message
news:biAem.98785$0e4.7852@newsfe19.iad...
> Has anyone been able to go to Cushcraft site
> I need to download a couple of manuals and the site is not found
> They could be redoing there site or ???
> thanks all
> Howard
> VE4ISP
>

Still seems to be down. I went to another url that sends you to their web
page and it did not go from there either.

1103. Re: KGD antenna QrpProject ?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-06 15:23:57 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <29tl755gbqj93sg5sbe0q50d9f5bbc5u83@4ax.com>
Source record: 14015

On Thu, 6 Aug 2009 14:57:43 +0200, "Brobin" <bbrobin127@free.fr>
wrote:

>HI,
>
>The KGD antenna of qrpproject is no longer sold.
>I would like to build one and I am looking for infos about it : Coil,
>capacitor and connections.
>(The manual didn't say anything about that)
>
>Thank you for your help
>
>bern
>

Hi Bern,

No information, a manual that isn't helpful, aside from that, what
makes it so good?

In other words, why not build an antenna that suits your needs? As
far as that goes, what about the KGD antenna was appealing? There is
nothing particularly remarkable about gracing it with a term like QRP.

73's
Richard Clark, KB7QHC

1104. Re: Minimum gauge wire for connection to ground rod

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-06 15:48:23 UTC
From: Michael Coslo <mjc5@psu.edu>
Message-ID: <h5eu08$dk1a$1@tr22n12.aset.psu.edu>
Source record: 14016

KJ4NTS wrote:
> On 5-Aug-2009, "JB" <nospam@goofball.net> wrote:
>
>> This is a balanced antenna and if the antenna is stretched out in an area
>> where there is no metal it should do it's best. You probably won't benefit
>> from a counterpoise at all.
>
> The idea behind the counterpoise was to provide an RF ground for the radio, not as a part of the
> antenna.

Ah, I'd never mind the counterpoise if you are using the balanced antenna. Just put up the antenna, run the coax or ladder line, get yourself a good station ground and some lightning protection. You are not likely to get struck directly, but could be the victim of a large static buildup. Polyphaser makes very good ones, and there is a simpler one that uses a spark gap, which also provides protection. Don't know the brand of that one. Disconnect the antenna and ground it when not in use.

I'd say with this setup, you could do DXCC. DXCC and other awards have been achieved on more modest setups than what you are looking at building. You won't be the loudest signal on the band, but there can only be one of those anyhow.

Now get to work! 8^)

- 73 de Mike N3LI -

1105. Re: KGD antenna QrpProject ?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-06 16:01:48 UTC
From: Brobin <bbrobin127@free.fr>
Message-ID: <4a7afe6c$0$12625$ba4acef3@news.orange.fr>
Source record: 14017

> No information, a manual that isn't helpful, aside from that, what
> makes it so good?
>
> In other words, why not build an antenna that suits your needs? As
> far as that goes, what about the KGD antenna was appealing? There is
> nothing particularly remarkable about gracing it with a term like QRP.

Hello...
Richard, you are right ! This antenna isn't a special case. It is only a very short dipole with a capacitor which adapt the impedance of the antenna at the coaxial line. Nothing very new or even miraculous! (I do not believe in miracles ;o).
I just want to make a comparison between several types of antenna (including a miraculous o).
I do not therefore wish to innovate in the miracle, but simply to replicate some in order to compare them (without spend to many money ;o)

72

1106. Re: Minimum gauge wire for connection to ground rod

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-06 16:39:03 UTC
From: JB <nospam@goofball.net>
Message-ID: <HGDem.918$Jg.325@nwrddc01.gnilink.net>
Source record: 14018

"Michael Coslo" <mjc5@psu.edu> wrote in message
news:h5eu08$dk1a$1@tr22n12.aset.psu.edu...
> KJ4NTS wrote:
> > On 5-Aug-2009, "JB" <nospam@goofball.net> wrote:
> >
> >> This is a balanced antenna and if the antenna is stretched out in an
area
> >> where there is no metal it should do it's best. You probably won't
benefit
> >> from a counterpoise at all.
> >
> > The idea behind the counterpoise was to provide an RF ground for the
radio, not as a part of the
> > antenna.
>
There is no need for the "radio" to have an RF ground.
If you are feeding the radio with 50 ohm coax that is matched in a 50 ohm
non-reactive load (ie tuner or dummy load) the RF will stay where it
belongs. The only concern for the balanced antenna, is lightning protection
and shock hazard from the power supply.
The best lightning protection depends on your specific situation so I will
leave you to read up on that.
>
> Ah, I'd never mind the counterpoise if you are using the balanced
> antenna. Just put up the antenna, run the coax or ladder line, get
> yourself a good station ground and some lightning protection. You are
> not likely to get struck directly, but could be the victim of a large
> static buildup. Polyphaser makes very good ones, and there is a simpler
> one that uses a spark gap, which also provides protection. Don't know
> the brand of that one. Disconnect the antenna and ground it when not in
use.
>
> I'd say with this setup, you could do DXCC. DXCC and other awards have
> been achieved on more modest setups than what you are looking at
> building. You won't be the loudest signal on the band, but there can
> only be one of those anyhow.

I don't have DXCC but I do have a wall of cards from around the world. Many
of them were logged when I was mobile to and from work or school. It will
sharpen your skills to steal them from the big guns. I had a regular daily
lunch break sked with an Aussie from my truck in the parking lot.when the
sunspots were working. Conditions can even favor the well placed weak
station over the big guns. That is the sport of it all.
>

> Now get to work! 8^)
>
>
> - 73 de Mike N3LI -

1107. Re: KGD antenna QrpProject ?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-06 17:05:42 UTC
From: Brobin <bbrobin127@free.fr>
Message-ID: <4a7b4a95$0$12647$ba4acef3@news.orange.fr>
Source record: 14022

">
> hmmm, sure you don't mean inductor?

Yes ;o) it is why I would like to try that antenna...
Here is the link you could find more info about it :
http://www.qrpproject.de/UK/kg-dipole.htm

1108. Re: KGD antenna QrpProject ?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-06 17:11:59 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <ch3m751vua2giug135vkpfn9jf318gs4c0@4ax.com>
Source record: 14019

On Thu, 6 Aug 2009 18:01:48 +0200, "Brobin" <bbrobin127@free.fr>
wrote:

>This antenna isn't a special case. It is only a
>very short dipole with a capacitor which adapt the impedance of the antenna
>at the coaxial line.

The combination of "very short" with capacitor does not lend itself to
a match.

>I do not therefore wish to innovate in the miracle, but simply to replicate
>some in order to compare them (without spend to many money ;o)

Save ALL your money, aside from heating effects (which I doubt you
could measure anyway), there won't be wit of difference.

73's
Richard Clark, KB7QHC

1109. Re: Minimum gauge wire for connection to ground rod

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-06 17:47:54 UTC
From: Michael Coslo <mjc5@psu.edu>
Message-ID: <h5f50a$dk1e$1@tr22n12.aset.psu.edu>
Source record: 14020

JB wrote:

> I don't have DXCC but I do have a wall of cards from around the world. Many
> of them were logged when I was mobile to and from work or school. It will
> sharpen your skills to steal them from the big guns. I had a regular daily
> lunch break sked with an Aussie from my truck in the parking lot.when the
> sunspots were working. Conditions can even favor the well placed weak
> station over the big guns. That is the sport of it all.

Concur 100 percent, JB. I know that new guys love the high power and high gain antenna setups, but NTS will learn a lot on how to be a better operator with a modest setup such as he proposes.

- 73 de Mike N3LI -

1110. Re: KGD antenna QrpProject ?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-06 19:14:20 UTC
From: Brobin <bbrobin127@free.fr>
Message-ID: <4a7bf07d$0$23463$ba4acef3@news.orange.fr>
Source record: 14028

> Hmmm. It looks to me as if this may be a sort of L-match.
>
> The basic antenna is a dipole, with each arm being inductively loaded
> at its base with a coil wound from magnet wire. The inductive loading
> would allow the relatively short dipole (which would have a very low
> radiation resistance, and a high capacitive reactance) to resonate
> properly on the 40-meter frequency.
>
> Even when resonated, and even with the relatively high losses in the
> coils, the antenna's feedpoint impedance would probably be on the low
> side. If I'm understanding the German manual correctly, it's on the
> order of 20 ohms.
>
> It sounds to me as if the antenna uses an L-match arrangement to raise
> the feedpoint impedance. This would be done by:
>
> - Lengthening the tuning rods at the end slightly (or adding a turn or
> two more to the coils than would be required for resonance). This
> would increase the resistive portion of the feedpoint impedance
> very slightly (trivially), and would add some inductive reactance
> in series with the resistance. With the correct adjustment, the
> feedpoint impedance would be equivalent to 50 ohms resistive, in
> parallel with some amount of reactance.
>
> - Place a shunt capacitor directly across the feedpoint, with the
> capacitor's value chosen to have a capacitive reactance equal in
> magnitude (but opposite in sign) to the antenna's parallel
> reactance. The two reactances would add, resulting in a zero
> reactance, and thus a feedpoint impedance of 50 ohms resistive.
>
> A similar matching arrangement is sometimes used with mobile HF
> antennas such as screwdrivers and bug-catchers.

Yes it is.
I found the description on my old ARRL Handbook (1994 p33.22)
Thanks a lot...that was simply but I had some difficulties to find the start
of the trail...

1111. Re: KGD antenna QrpProject ?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-06 19:21:53 UTC
From: Michael Coslo <mjc5@psu.edu>
Message-ID: <h5fagh$dk1g$1@tr22n12.aset.psu.edu>
Source record: 14021

Brobin wrote:
Hello...
> Richard, you are right ! This antenna isn't a special case. It is only a
> very short dipole with a capacitor which adapt the impedance of the antenna
> at the coaxial line.

hmmm, sure you don't mean inductor?

- 73 de Mike N3LI -

1112. Re: KGD antenna QrpProject ?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-06 21:28:46 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <fnim75po91filsb1s7e4tcqh3a8104jnqp@4ax.com>
Source record: 14023

On Thu, 6 Aug 2009 19:05:42 +0200, "Brobin" <bbrobin127@free.fr>
wrote:

>Yes ;o) it is why I would like to try that antenna...
>Here is the link you could find more info about it :
>http://www.qrpproject.de/UK/kg-dipole.htm

Hmmm, I was wrong. With those tightly wound coils handy, you can
measure the heat loss.

73's
Richard Clark, KB7QHC

1113. Re: KGD antenna QrpProject ?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-06 22:46:30 UTC
From: dplatt@radagast.org
Message-ID: <633sk6-t8f.ln1@radagast.org>
Source record: 14024

>> hmmm, sure you don't mean inductor?
>
>
>
>Yes ;o) it is why I would like to try that antenna...
>Here is the link you could find more info about it :
>http://www.qrpproject.de/UK/kg-dipole.htm

Hmmm. It looks to me as if this may be a sort of L-match.

The basic antenna is a dipole, with each arm being inductively loaded at its base with a coil wound from magnet wire. The inductive loading would allow the relatively short dipole (which would have a very low radiation resistance, and a high capacitive reactance) to resonate properly on the 40-meter frequency.

Even when resonated, and even with the relatively high losses in the coils, the antenna's feedpoint impedance would probably be on the low side. If I'm understanding the German manual correctly, it's on the order of 20 ohms.

It sounds to me as if the antenna uses an L-match arrangement to raise the feedpoint impedance. This would be done by:

- Lengthening the tuning rods at the end slightly (or adding a turn or two more to the coils than would be required for resonance). This would increase the resistive portion of the feedpoint impedance very slightly (trivially), and would add some inductive reactance in series with the resistance. With the correct adjustment, the feedpoint impedance would be equivalent to 50 ohms resistive, in parallel with some amount of reactance.

- Place a shunt capacitor directly across the feedpoint, with the capacitor's value chosen to have a capacitive reactance equal in magnitude (but opposite in sign) to the antenna's parallel reactance. The two reactances would add, resulting in a zero reactance, and thus a feedpoint impedance of 50 ohms resistive.

A similar matching arrangement is sometimes used with mobile HF antennas such as screwdrivers and bug-catchers.

--
Dave Platt <dplatt@radagast.org> AE6EO
Friends of Jade Warrior home page: http://www.radagast.org/jade-warrior
I do _not_ wish to receive unsolicited commercial email, and I will boycott any company which has the gall to send me such ads!

1114. Log periodic antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-07 02:06:32 UTC
From: professorpaul <deadgoose@comcast.net>
Message-ID: <573444b6-9301-4c0b-abc9-ab4a49651342@33g2000vbe.googlegroups.com>
Source record: 14025

Does anyone have design for a log periodic antenna comparable to the Elk one for 2 meters and 70 cm. I'd like to build one for satellite work, and with the log periodic, I believe I could avoid the diplexer issue.

Please respond directly to W3FIS@arrl.net

Thanks!
/paul W3FIS

1115. Seeking New FAQ/Intro Maintainers for rec.radio.amateur.*

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-07 06:05:01 UTC
From: rram@panix.com
Message-ID: <radio/ham-radio/recruitment-1-1249625101@panix.com>
Source record: 14026
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.dx,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.policy,rec.radio.info

```
Posted-By: auto-faq 3.3.2 beta (PGPMoose V2.0, Perl 5.005)
Archive-name: radio/ham-radio/recruitment
Revision: 1.1 2007/09/29 18:42:47
Posting-Frequency: posted monthly
URL: http://www.faqs.org/faqs/radio/personal-intro/

Changes followed by "|".

The rec.radio.info newsgroup, first established in 1993, has been
recently revived by an active moderation team. We are currently seeking
suitable information, FAQ, and bulletin articles from the entire
rec.radio.* newsgroup hierarchy for simultaneous cross-posting to our
newsgroup.

We are seeking a replacement maintainer for the following information
bulletin formerly posted to rec.radio.amateur.* (and currently archived
at http://www.faqs.org/faqs/radio/personal-intro/ ):

radio/personal-intro
Subject: Guide to the rec.radio Newsgroups
Maintainer: jeffreyh@Hawaii.Edu (Jeffrey Herman)
Last Posted: 9 Nov 2001 06:18:17 GMT
Posting-Frequency: 15th of each month

We are willing to provide any technical support necessary to get this
article updated and automatically posted again at a regular interval.
This would include establishing contact with the original maintainer for
any necessary permissions. We would prefer to seek a new, dedicated
maintainer at this time, rather than start auto-posting the original
article ourselves.

For more information about our newsgroup, see:

http://www.panix.com/~rram/usenet/rri/index.html

Please direct any comments, questions, or criticisms to
rec-radio-info-request@panix.com.
```

1116. Wideband Antenna Design Software?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-07 07:14:22 UTC
From: Lee <lo12a4519@blueyonder.co.uk>
Message-ID: <ivQem.150764$OA1.49206@newsfe29.ams2>
Source record: 14027

Is there any software to design high gain wideband Yagis or Quads ??

I wish to build for DX VHF/FM Broadcast band, also for Band 1 45-70Mhz for DX TV ..

Thanks.

Lee ...

1117. Re: How Can you Make a VHF TV Antenna for an Attic

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-07 15:32:41 UTC
From: richardharrison@webtv.net
Message-ID: <2508-4A7C4919-7401@storefull-3172.bay.webtv.net>
Source record: 14029

Rikoski wrote:
"How critical was the aiming of the antenna?"
Depends on the number of wavelengths in a side at the frequency you are trying to receive.

Arnold B. Bailey in "TV and Other Receiving Antennas" gives data for a typical rhombic on page 528. He shows a beamwidth of about 30 fegrees with deep nulls on either side of the center lobe. Gain is 14.5 db over a dipole or less. The rhombic is comparable to the parabolic antenna Bailey shows on page 525.

Best regards, Richard Harrison, KB5WZI

1118. Re: Log periodic antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-07 16:09:24 UTC
From: Jim Lux <jimlux@earthlink.net>
Message-ID: <41b4a27b-2a61-49eb-be5a-644988b3d929@p10g2000prm.googlegroups.com>
Source record: 14030

On Aug 6, 7:06 pm, professorpaul <deadgo...@comcast.net> wrote:
> Does anyone have design for a log periodic antenna comparable to the
> Elk one for 2 meters and 70 cm. I'd like to build one for satellite
> work, and with the log periodic, I believe I could avoid the diplexer
> issue.
>
> Please respond directly to W3...@arrl.net
>
> Thanks!
> /paul W3FIS

Actually, for a dual band to one feed, you can probably just
interleave the elements of a 2m and 70cm beam on the same boom and
connect the driven elements in parallel.

http://www.arrowantennas.com/ look at the model 146/437... they have
plans on the site to build it yourself. While they have a filter box
available, I'm not sure you actually need it.

1119. Re: Log periodic antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-07 17:54:16 UTC
From: Jerry <jerrymartes@verizon.net>
Message-ID: <cTZem.1124$Jg.10@nwrddc01.gnilink.net>
Source record: 14031

"professorpaul" <deadgoose@comcast.net> wrote in message
news:573444b6-9301-4c0b-abc9-ab4a49651342@33g2000vbe.googlegroups.com...
> Does anyone have design for a log periodic antenna comparable to the
> Elk one for 2 meters and 70 cm. I'd like to build one for satellite
> work, and with the log periodic, I believe I could avoid the diplexer
> issue.
>
> Please respond directly to W3FIS@arrl.net
>
> Thanks!
> /paul W3FIS

Hi Paul

"For what it is worth", I support Jim Lux's advice. A 70 cm Yagii wont couple much power from the transmitter when sending on 2.meters It would be easy to test the effect of shunting the 435 receiving Yagii with the 2 meter Yagii. You could even do that with EZNEC.
An antenna like Jim suggests would be easy to build on a broom stick to test the effects of the 'other antenna'.

The principal value of the Log Periodic is it's bandwidth. That is not significant when only two discrete frequencies are considered. A disadvantage of the Log Periodic is it's limited gain. I fail to see where the Log Periodic benefits the user when only two frequencies are being considered.

Jerry KD6JDJ

1120. Re: Log periodic antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-07 18:42:58 UTC
From: "Helmut Wabnig"
Message-ID: <k9to75ttf18fgvsl6dq473ltrkajpq46sp@4ax.com>
Source record: 14032

On Fri, 07 Aug 2009 17:54:16 GMT, "Jerry" <jerrymartes@verizon.net>
wrote:

>
>"professorpaul" <deadgoose@comcast.net> wrote in message
>news:573444b6-9301-4c0b-abc9-ab4a49651342@33g2000vbe.googlegroups.com...
>> Does anyone have design for a log periodic antenna comparable to the
>> Elk one for 2 meters and 70 cm. I'd like to build one for satellite
>> work, and with the log periodic, I believe I could avoid the diplexer
>> issue.
>>
>> Please respond directly to W3FIS@arrl.net
>>
>> Thanks!
>> /paul W3FIS
>
> Hi Paul
>
> "For what it is worth", I support Jim Lux's advice. A 70 cm Yagii wont
>couple much power from the transmitter when sending on 2.meters It would
>be easy to test the effect of shunting the 435 receiving Yagii with the 2
>meter Yagii. You could even do that with EZNEC.
> An antenna like Jim suggests would be easy to build on a broom stick to
>test the effects of the 'other antenna'.
>
> The principal value of the Log Periodic is it's bandwidth. That is not
>significant when only two discrete frequencies are considered. A
>disadvantage of the Log Periodic is it's limited gain. I fail to see where
>the Log Periodic benefits the user when only two frequencies are being
>considered.
>
> Jerry KD6JDJ
>

Mechanical and electrical precision.

A single frequency antenna must be tuned very carefully.
The LPDA is "self-adjusting" and easy to make.
And you may change frequency any time.

w.

1121. Re: Cushcraft Site

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-07 19:45:57 UTC
From: Bert Hyman <bert@iphouse.com>
Message-ID: <Xns9C6096349A270VeebleFetzer@216.250.184.7>
Source record: 14033

In news:biAem.98785$0e4.7852@newsfe19.iad "Howard Kowall" <hkowall@shaw.ca>
wrote:

> Has anyone been able to go to Cushcraft site

This might have something to do with the problem:

http://www.hamwave.com/cgi-bin/index.cgi?action=viewnews&id=2243

"On August 7, MFJ Enterprises announced they had purchased the Cushcraft
Amateur Radio antennas product line from Missouri-based Laird Technologies
effective July 31. ..."

--
Bert Hyman St. Paul, MN bert@iphouse.com

1122. Re: Log periodic antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-07 21:03:20 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <tE0fm.100907$ZN.19773@newsfe23.iad>
Source record: 14034

Helmut Wabnig wrote:
> The LPDA is "self-adjusting" and easy to make.
> And you may change frequency any time.

Question is: Why would an amateur radio operator
want to cover 148 MHz to 420 MHz with a transmitting
antenna?
--
73, Cecil, IEEE, OOTC, http://www.w5dxp.com

1123. Re: Log periodic antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-07 22:37:59 UTC
From: Jerry <jerrymartes@verizon.net>
Message-ID: <b12fm.1187$Jg.616@nwrddc01.gnilink.net>
Source record: 14035

"Helmut Wabnig" <hwabnig@ .- --- -. dotat> wrote in message
news:k9to75ttf18fgvsl6dq473ltrkajpq46sp@4ax.com...
> On Fri, 07 Aug 2009 17:54:16 GMT, "Jerry" <jerrymartes@verizon.net>
> wrote:
>
>>
>>"professorpaul" <deadgoose@comcast.net> wrote in message
>>news:573444b6-9301-4c0b-abc9-ab4a49651342@33g2000vbe.googlegroups.com...
>>> Does anyone have design for a log periodic antenna comparable to the
>>> Elk one for 2 meters and 70 cm. I'd like to build one for satellite
>>> work, and with the log periodic, I believe I could avoid the diplexer
>>> issue.
>>>
>>> Please respond directly to W3FIS@arrl.net
>>>
>>> Thanks!
>>> /paul W3FIS
>>
>> Hi Paul
>>
>> "For what it is worth", I support Jim Lux's advice. A 70 cm Yagii wont
>>couple much power from the transmitter when sending on 2.meters It would
>>be easy to test the effect of shunting the 435 receiving Yagii with the 2
>>meter Yagii. You could even do that with EZNEC.
>> An antenna like Jim suggests would be easy to build on a broom stick to
>>test the effects of the 'other antenna'.
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>> The principal value of the Log Periodic is it's bandwidth. That is not
>>significant when only two discrete frequencies are considered. A
>>disadvantage of the Log Periodic is it's limited gain. I fail to see
>>where
>>the Log Periodic benefits the user when only two frequencies are being
>>considered.
>>
>> Jerry KD6JDJ
>>
>
> Mechanical and electrical precision.
>
> A single frequency antenna must be tuned very carefully.
> The LPDA is "self-adjusting" and easy to make.
> And you may change frequency any time.
>
> w.

Hi W

I hadnt realized that Yagiis were so difficult to build and tune. Have you considered telling the AMSAT guys about how they can benefit from your advice? It seems that most of the AMSAT guys have been using the "Arrows" for LEO satellite work.

Jerry KD6JDJ

1124. Re: Log periodic antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-07 23:52:36 UTC
From: professorpaul <deadgoose@comcast.net>
Message-ID: <abd9070a-ca07-43d0-a0f8-3610d52381e0@g1g2000vbr.googlegroups.com>
Source record: 14036

On Aug 7, 5:03 pm, Cecil Moore <nos...@w5dxp.com> wrote:
> Helmut Wabnig wrote:
> > The LPDA is "self-adjusting" and easy to make.
> > And you may change frequency any time.
>
> Question is: Why would an amateur radio operator
> want to cover 148 MHz to 420 MHz with a transmitting
> antenna?
> --
> 73, Cecil, IEEE, OOTC, http://www.w5dxp.com

I only want to cover 144 and 420, nothing in between! Just for LEO
satellites, where the uplink is on 144 and the downlink is 420, or vis
versa.

/paul W3FIS

1125. Re: Minimum gauge wire for connection to ground rod

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-08 00:22:21 UTC
From: KJ4NTS <KJ4NTS@dontask.com>
Message-ID: <WuqdnSMGCenYWOHXnZ2dnUVZ_qCdnZ2d@giganews.com>
Source record: 14037

On 6-Aug-2009, Michael Coslo <mjc5@psu.edu> wrote:

> I'd say with this setup, you could do DXCC. DXCC and other awards have
> been achieved on more modest setups than what you are looking at
> building. You won't be the loudest signal on the band, but there can
> only be one of those anyhow.

How much attenuation is a wood roof with asphalt shingles going to introduce? All of the duct work
in my house is in the crawl space, and the phone and cable TV lines are also in the crawl space. So
there is no metal other than the roofing nails, and there's nothing between the antenna and the sky
other than the roof decking and shingles. I don't expect them to add a lot of attenuation, but I
could be wrong.

1126. Re: Log periodic antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-08 01:25:59 UTC
From: Jerry <jerrymartes@verizon.net>
Message-ID: <Hu4fm.1066$nh2.987@nwrddc02.gnilink.net>
Source record: 14038

"professorpaul" <deadgoose@comcast.net> wrote in message
news:abd9070a-ca07-43d0-a0f8-3610d52381e0@g1g2000vbr.googlegroups.com...
On Aug 7, 5:03 pm, Cecil Moore <nos...@w5dxp.com> wrote:
> Helmut Wabnig wrote:
> > The LPDA is "self-adjusting" and easy to make.
> > And you may change frequency any time.
>
> Question is: Why would an amateur radio operator
> want to cover 148 MHz to 420 MHz with a transmitting
> antenna?
> --
> 73, Cecil, IEEE, OOTC, http://www.w5dxp.com

I only want to cover 144 and 420, nothing in between! Just for LEO
satellites, where the uplink is on 144 and the downlink is 420, or vis
versa.

/paul W3FIS

Hi Paul

AO-51 is a good HAM satellite. It is 146 up and 435 down.
If you do want to get some good experience designing Log Periodic
antennas, you might consider a Log Periodic V. The V configuration takes
advantage of a three to one frequency spread, where a center fed 1/2 wave
dipole becomes 3/4 wave at 3 times the frequency. The low frequencie
pattern is little effected by the "V". The high frequencies (3 times the
low frequencies) appreciate the bending to the V because that allows the
sidelobes to add toward the "front".

Jerry KD6JDJ

1127. Cushcraft Sale to MFJ

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-08 02:27:06 UTC
From: Rollie <rollie@iowatelecom.net>
Message-ID: <h5inps$s0r$1@news.netins.net>
Source record: 14039

I can't reach the Cushcraft website either, but I did run into an article about MFJ Enterprises aquiring Cushcraft.

http://www.arrl.org/?artid=9114

1128. Re: Minimum gauge wire for connection to ground rod

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-08 03:05:14 UTC
From: Mike Coslo <mjc5@psu.edu>
Message-ID: <h5iq1b$sg3i$1@tr22n12.aset.psu.edu>
Source record: 14040

KJ4NTS wrote:
> On 6-Aug-2009, Michael Coslo <mjc5@psu.edu> wrote:
>
>> I'd say with this setup, you could do DXCC. DXCC and other awards have
>> been achieved on more modest setups than what you are looking at
>> building. You won't be the loudest signal on the band, but there can
>> only be one of those anyhow.
>
> How much attenuation is a wood roof with asphalt shingles going to introduce? All of the duct work
> in my house is in the crawl space, and the phone and cable TV lines are also in the crawl space. So
> there is no metal other than the roofing nails, and there's nothing between the antenna and the sky
> other than the roof decking and shingles. I don't expect them to add a lot of attenuation, but I
> could be wrong.

There will be a slight effect of the other wires. Nails? probably not measurable. The roof itself at HF is not attenuating much, it increases as the frequency goes up. The biggest issue of this sort of antenna is the height above ground, and the possibility of RF interference with things in the house.

- 73 de Mike N3LI -

1129. Re: Log periodic antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-08 11:12:18 UTC
From: Dave <noone@nowhere.com>
Message-ID: <m4dfm.1239$Jg.31@nwrddc01.gnilink.net>
Source record: 14041

"professorpaul" <deadgoose@comcast.net> wrote in message
news:abd9070a-ca07-43d0-a0f8-3610d52381e0@g1g2000vbr.googlegroups.com...
>I only want to cover 144 and 420, nothing in between! Just for LEO
>satellites, where the uplink is on 144 and the downlink is 420, or vis
>versa.

then forget all the complications of log periodics and just make 2 simple
yagis on the same boom. that is the common method of constructing
directional satellite antennas. same boom too complicated, just make 2
separate ones and mount them on a cross arm a few feet apart.

1130. Re: Cushcraft Sale to MFJ

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-08 12:28:34 UTC
From: Howard Kowall <hkowall@shaw.ca>
Message-ID: <acefm.102952$rg4.102853@newsfe02.iad>
Source record: 14042

Good Morning
I personally don't think this is a good thing
Howard

"Rollie" <rollie@iowatelecom.net> wrote in message
news:h5inps$s0r$1@news.netins.net...
>I can't reach the Cushcraft website either, but I did run into an article
>about MFJ Enterprises aquiring Cushcraft.
>
> http://www.arrl.org/?artid=9114
>

1131. Re: Log periodic antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-08 13:37:28 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <wcffm.103660$ZN.84536@newsfe23.iad>
Source record: 14043

professorpaul wrote:
> On Aug 7, 5:03 pm, Cecil Moore <nos...@w5dxp.com> wrote:
>> Question is: Why would an amateur radio operator
>> want to cover 148 MHz to 420 MHz with a transmitting
>> antenna?
>
> I only want to cover 144 and 420, nothing in between! Just for LEO
> satellites, where the uplink is on 144 and the downlink is 420, or vis
> versa.

Then you would be wasting 98% of the frequency coverage
of the log periodic. The unused antenna elements would
constitute almost the total cost of the antenna.
--
73, Cecil, IEEE, OOTC, http://www.w5dxp.com

1132. Re: Cushcraft Sale to MFJ

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-08 16:13:01 UTC
From: John Ferrell <jferrell13@triad.rr.com>
Message-ID: <hh8r75tqa98offf6eqjdi1csqfrao2tnvg@4ax.com>
Source record: 14044

On Fri, 7 Aug 2009 21:27:06 -0500, "Rollie" <rollie@iowatelecom.net>
wrote:

>I can't reach the Cushcraft website either, but I did run into an article
>about MFJ Enterprises aquiring Cushcraft.
>
>http://www.arrl.org/?artid=9114
>
As a happy user of MFJ and Cushcraft products I think it is good. As I
recall, Cushcraft was bought as part of an antenna manufacturing
package that was mostly commercial antenna products. As such, it was
not as profitable as the other products and most felt it would be
eventually be shut down. It should thrive under the MFJ flag.

1133. Re: Log periodic antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-08 17:12:18 UTC
From: JB <nospam@goofball.net>
Message-ID: <Slifm.1270$Jg.254@nwrddc01.gnilink.net>
Source record: 14045

"professorpaul" <deadgoose@comcast.net> wrote in message
news:abd9070a-ca07-43d0-a0f8-3610d52381e0@g1g2000vbr.googlegroups.com...
On Aug 7, 5:03 pm, Cecil Moore <nos...@w5dxp.com> wrote:
> Helmut Wabnig wrote:
> > The LPDA is "self-adjusting" and easy to make.
> > And you may change frequency any time.
>
> Question is: Why would an amateur radio operator
> want to cover 148 MHz to 420 MHz with a transmitting
> antenna?
> --
> 73, Cecil, IEEE, OOTC, http://www.w5dxp.com

I only want to cover 144 and 420, nothing in between! Just for LEO
satellites, where the uplink is on 144 and the downlink is 420, or vis
versa.

/paul W3FIS

I have an ELK and it works on those frequencies out of the box without any tuning. The 5 element ELK has the same performance as Cushcraft 2/70 beam it replaced. The Cushcraft was essentially two separate 3 element Yagis (6 elements) with a splitter harness to feed the two.

You say you only want to work 2 specific frequencies, but for the Yagi you will have to make adjustments because most that are pre-tuned, are optimized for 146-148 on 2 meters. Also, very few hams are content to stay on one frequency. There is so much to do and experiment with. ELK actually performs as a beam from 144 Mhz multi-mode action to far flung NOAA WX stations at 162 Mhz. ELK works at both ends of 2 meters without tuning.

It is also lightweight, portable and takedown and assembly is quick and easy. The downside is that you need to use lockwashers on the elements and glue the tips or they will work loose in the wind. Mine has been up for 5 years and I added a bell crank/pulley and cord running to the base of the mast to change polarization.

The upper limit of gain for a Log-Periodic is about 10db. A 3 element Yagi is about 7db and a 5 element is about 9 db. You have to go to a long boom to exceed 10 db with a Yagi.

There have been several LPDA construction articles in QST over the years, and there are a few on the Internet too. One that looked interesting, used angle stock bolted together with Nylon hardware for the boom/feeder, and another that used parallel Copper tubes with the coax routed from the rear through one of the tubes for the front feed point. One real big plus is

that you can get Brass and Aluminum tubing and rod in numerous hobby shops and hardware stores stock sizes that are just too short for 1/2 wave on 2 meters.

1134. Re: Minimum gauge wire for connection to ground rod

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-08 17:28:19 UTC
From: JB <nospam@goofball.net>
Message-ID: <TAifm.1273$Jg.1089@nwrddc01.gnilink.net>
Source record: 14046

there's nothing between the antenna and the sky
> other than the roof decking and shingles. I don't expect them to add a lot of attenuation, but I
> could be wrong.

Maybe 3' makes a big difference. I have always seen a difference between antennas in the attic or stretched out on the roof, and antennas even a few feed above the roof. I don't know if it was shingles or what. It would really be interesting to see what kind of shingles are transparent. I have seen antenna farms hidden behind fake gables.

1135. Re: Cushcraft Sale to MFJ

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-08 19:48:37 UTC
From: Gerald Simonowits <jerseyj@superlink.net>
Message-ID: <jerseyj-04CB94.15483708082009@cpe-76-190-186-198.neo.res.rr.com>
Source record: 14047

Why ?

In article <acefm.102952$rg4.102853@newsfe02.iad>,
"Howard Kowall" <hkowall@shaw.ca> wrote:

> Good Morning
> I personally don't think this is a good thing
> Howard
>
> "Rollie" <rollie@iowatelecom.net> wrote in message
> news:h5inps$s0r$1@news.netins.net...
> >I can't reach the Cushcraft website either, but I did run into an article
> >about MFJ Enterprises aquiring Cushcraft.
> >
> > http://www.arrl.org/?artid=9114
> >

1136. Re: Cushcraft Sale to MFJ

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-08 20:34:02 UTC
From: Bert Hyman <bert@iphouse.com>
Message-ID: <Xns9C619E5C4B03FVeebleFetzer@216.250.184.7>
Source record: 14048

In news:jerseyj-04CB94.15483708082009@cpe-76-190-186-198.neo.res.rr.com
Gerald Simonowits <jerseyj@superlink.net> wrote:

> Why ?

Maybe because they already own Hy-Gain.

> In article <acefm.102952$rg4.102853@newsfe02.iad>,
> "Howard Kowall" <hkowall@shaw.ca> wrote:
>
>> Good Morning
>> I personally don't think this is a good thing
>> Howard
>>
>> "Rollie" <rollie@iowatelecom.net> wrote in message
>> news:h5inps$s0r$1@news.netins.net...
>> >I can't reach the Cushcraft website either, but I did run into an
>> >article about MFJ Enterprises aquiring Cushcraft.
>> >
>> > http://www.arrl.org/?artid=9114
>> >
>

--
Bert Hyman St. Paul, MN bert@iphouse.com

1137. Re: Cushcraft Sale to MFJ

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-09 00:53:04 UTC
From: Howard Kowall <hkowall@shaw.ca>
Message-ID: <76pfm.88135$8l4.44867@newsfe10.iad>
Source record: 14049

Hello
Why you ask
Well I have owned a few MFJ products,and everyone of them failed,buy poor
parts and assembly.
Hence the MFJ stands for More F_cken Junk.
I have also herd horror stories about MFJ Buying Hygain,and the support for
Hygain products went right down the tubes.
With all my experience with MFJ products,I will pay the extra $$ and buy a
better product then they produce
Just my opinion about the company,sure there prices are cheap but there
price reflects the product
Howard

"John Ferrell" <jferrell13@triad.rr.com> wrote in message
news:hh8r75tqa98offf6eqjdi1csqfrao2tnvg@4ax.com...
> On Fri, 7 Aug 2009 21:27:06 -0500, "Rollie" <rollie@iowatelecom.net>
> wrote:
>
>>I can't reach the Cushcraft website either, but I did run into an article
>>about MFJ Enterprises aquiring Cushcraft.
>>
>>http://www.arrl.org/?artid=9114
>>
> As a happy user of MFJ and Cushcraft products I think it is good. As I
> recall, Cushcraft was bought as part of an antenna manufacturing
> package that was mostly commercial antenna products. As such, it was
> not as profitable as the other products and most felt it would be
> eventually be shut down. It should thrive under the MFJ flag.
>

1138. Re: Minimum gauge wire for connection to ground rod

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-09 03:46:32 UTC
From: "Myron A. Calhoun" <mcalhoun@freeshell.org>
Message-ID: <h5lgqookj1@chessie.cirr.com>
Source record: 14050

>>there's nothing between the antenna and the sky other than the roof
>>decking and shingles. I don't expect them to add a lot of attenuation,
>>but I could be wrong.

>Maybe 3' makes a big difference. I have always seen a difference between
>antennas in the attic or stretched out on the roof, and antennas even a few
>feed above the roof. I don't know if it was shingles or what. It would
>really be interesting to see what kind of shingles are transparent. I have
>seen antenna farms hidden behind fake gables.

I've never "played" with it at HF, but I do know that the dielectric
constant of nearby materials affects antennas at VHF.

--
--Myron A. Calhoun.
Five boxes preserve our freedoms: soap, ballot, witness, jury, and cartridge
NRA Life Member & Certified Instructor for Rifle, Pistol, & Home Firearm Safety
Also Certified Instructor for the Kansas Concealed-Carry Handgun (CCH) license

1139. Re: Cushcraft Sale to MFJ

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-09 13:19:41 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <O1Afm.110065$ZN.80546@newsfe23.iad>
Source record: 13901

Howard Kowall wrote:
> ... sure there prices are cheap but there price reflects the product

If MFJ's price to quality ratio was much
too low or much too high, they would go out of
business. Their success indicates that they hit
their target market and maybe even the bullseye.
--
73, Cecil, IEEE, OOTC, http://www.w5dxp.com

1140. Re: Cushcraft Sale to MFJ

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-09 15:07:41 UTC
From: Mike Coslo <mjc5@psu.edu>
Message-ID: <h5mont$884g$1@tr22n12.aset.psu.edu>
Source record: 13902

Cecil Moore wrote:
> Howard Kowall wrote:
>> ... sure there prices are cheap but there price reflects the product
>
> If MFJ's price to quality ratio was much
> too low or much too high, they would go out of
> business. Their success indicates that they hit
> their target market and maybe even the bullseye.

MFJ thrives, and that is because they are serving a niche market.

MFJ designs tend to be good, the execution isn't always so good.

That being said, they make their stuff for Amateurs, they make stuff that I just wouldn't buy otherwise because it would be too expensive. That's that first point above.

The metric I've always used for a person if they are thinking about buying mfj is:

If you are a strict appliance operator, if you would send your radio back to the mfgr to repair a defective power cord - don't even consider MFJ. You need the added quality provided by a QC and rework department. You need to pay for those people.

If you don't mind opening up the case or looking around inside your radio, then you might like MFJ. If I have to tighten a bolt or two, or check solder joints, I'm okay with that. I'm going to crack the case on anything I get anyhow.

And how do you beat the warranty? My 259 antenna analyzer quit. I sent it back and they sent me a new one. All I had to do was tell them I was sending it.

- 73 de Mike N3LI -

1141. Re: Cushcraft Sale to MFJ

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-09 20:34:35 UTC
From: kc5fws <kc5fws.4c4ff69@radiobanter.com>
Message-ID: <kc5fws.4c4ff69@radiobanter.com>
Source record: 13903

'Mike Coslo[_2_ Wrote:
> ;685462']Cecil Moore wrote:-
> Howard Kowall wrote:-
> ... sure there prices are cheap but there price reflects the product-
>
> If MFJ's price to quality ratio was much
> too low or much too high, they would go out of
> business. Their success indicates that they hit
> their target market and maybe even the bullseye.-
>
> MFJ thrives, and that is because they are serving a niche market.
>
> MFJ designs tend to be good, the execution isn't always so good.
>
> That being said, they make their stuff for Amateurs, they make stuff
> that I just wouldn't buy otherwise because it would be too expensive.
> That's that first point above.
>
> The metric I've always used for a person if they are thinking about
> buying mfj is:
>
> If you are a strict appliance operator, if you would send your radio
> back to the mfgr to repair a defective power cord - don't even consider
>
> MFJ. You need the added quality provided by a QC and rework department.
>
> You need to pay for those people.
>
> If you don't mind opening up the case or looking around inside your
> radio, then you might like MFJ. If I have to tighten a bolt or two, or
>
> check solder joints, I'm okay with that. I'm going to crack the case on
>
> anything I get anyhow.
>
> And how do you beat the warranty? My 259 antenna analyzer quit. I sent
>
> it back and they sent me a new one. All I had to do was tell them I was
>
> sending it.
>
> - 73 de Mike N3LI -

I agree 100% on the above statement

i mean theres so many types of people in this hobby now days some want a plug and play radio that uses a computer to work some want on hands some like working on there own radios some arent intrested in learning how to me thats why i got into the hobby was to test play with and work on my stuff thats what i enjoy doing if a person just wants to plug and play (talk on) then MFj might not be for you other wise its all good

ive been using MFJ products for years and will continue to enjoy those products for years to come

73's
Kc5fws

--
kc5fws

1142. Home Depot antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-10 00:17:05 UTC
From: JIMMIE <JIMMIEDEE123@YAHOO.COM>
Message-ID: <d155c26c-56cc-4931-9531-9a36c21bda0c@e34g2000vbm.googlegroups.com>
Source record: 13904

Ive been doing some house painting this week so I bought an extension handle at Home Depot. Its a colapsable aluminum handle that extends to 18 ft. It was on sale for $39.95. I dont think I could have bought the tubing that cheap. I only saw a couple of the metal poles left all the others were fiberglass.

Jimmie

1143. Re: Home Depot antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-10 01:41:36 UTC
From: professorpaul <deadgoose@comcast.net>
Message-ID: <303deac1-4106-4830-8cc2-f1300677e21c@l35g2000vba.googlegroups.com>
Source record: 13905

Buddy of mine got something like that. Put a 2 meter whip/ground plane
on the top, and rigged a bracket to go under his tire -- for ARES,
field day, etc. Works great!

/paul W3FIS

1144. Circular versus linear polarization

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-10 04:24:01 UTC
From: Art Unwin <ArthurUnwin@gmail.com>
Message-ID: <ee55bd10-5ff5-468b-ab17-65443cf125fe@e18g2000vbe.googlegroups.com>
Source record: 13906

The majority of antennas used today are (commercial) circularly
polarized
Ham antennas remain in the linear domain (ala the Yagi and similar)
There are many reasons espoused in CP advantages in "point to point"
What is the main advantage hams hold over the more popular circular
polarized antennas in its "skip" type useage versus "point to point" ?

1145. Re: Circular versus linear polarization

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-10 06:30:35 UTC
From: Jeff Liebermann <jeffl@cruzio.com>
Message-ID: <88ev755j9bk29uj7b8k1taktha97n7i62h@4ax.com>
Source record: 13907

On Sun, 9 Aug 2009 21:24:01 -0700 (PDT), Art Unwin
<ArthurUnwin@gmail.com> wrote:

>The majority of antennas used today are (commercial) circularly
>polarized
>Ham antennas remain in the linear domain (ala the Yagi and similar)
>There are many reasons espoused in CP advantages in "point to point"
>What is the main advantage hams hold over the more popular circular
>polarized antennas in its "skip" type useage versus "point to point" ?

Huh? By "skip", I presume you mean for HF and DX. Numbers are always
nice.

There are CP antennas for HF:
<http://www.bruhns.us/CP_on_HF/CP_on_HF.html>
<www.roke.co.uk/resources/datasheets/locate-sarsen.pdf>
<www.ascsignal.com/images/content/gov_radar/pdfs/TA103.pdf>
<http://www.antennaproducts.com/ht30detail.html>
The main advantage is that they deal with multipath better and don't
have a deep cross polarization null. I've never tried one so I have
no idea how well (or badly) they work.

For what it's worth, we did some experimentation with CP on 146MHz
repeaters in the 1970's. The results were an impressive reduction in
"picket fence" type of fading for mobiles. However, the anenna gain
was less than an equivalent size linear array, so there was some range
reduction.

More:
<http://www.qsl.net/n/n9zia//cir_pol_rpt.html>

--
Jeff Liebermann jeffl@cruzio.com
150 Felker St #D http://www.LearnByDestroying.com
Santa Cruz CA 95060 http://802.11junk.com
Skype: JeffLiebermann AE6KS 831-336-2558

1146. Humor jokes

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-10 08:06:24 UTC
From: Antonio negrito <antonionegrito@gmail.com>
Message-ID: <3b8577ee-3f59-4a8a-8124-6236e76c751d@g1g2000vbr.googlegroups.com>
Source record: 13908

****

****

ENTER HERE:

>>> http://wd-content.cc/about/humor-jokes <<<

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day humor joke mother
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1147. Re: Circular versus linear polarization

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-10 11:29:03 UTC
From: Bob Bob <bob3bob3@suddenlink.net>
Message-ID: <jtc5l6-6dt.ln1@p400bob.personal.cox.net>
Source record: 13909

Jeff/Art

Keep in mind too that cross polarized (circular) point to point links
(ie with a CP ant at each end) suffer from odd reflection attenuation
(ie the polarization sense gets reversed by reflection)

In 70cm UHF experiments I did back in the 80's I found out that a
horiz-horiz system (base to mobile) outperformed a circular-circular by
at least 12dB when moving. This wasnt actually the base reason for the
experiments so I didnt make accurate measurements.

OT Art, but I hope interesting.

How random is the propogated linear antenna HF wave polarization and
does it vary much with single hop and/or high angle? That might be a
starting point for determining how useful CP on HF might be.

Tnxs for the link Jeff.

Cheers Bob VK2YQA

Jeff Liebermann wrote:
> On Sun, 9 Aug 2009 21:24:01 -0700 (PDT), Art Unwin
> <ArthurUnwin@gmail.com> wrote:
>
>> The majority of antennas used today are (commercial) circularly
>> polarized

1148. Antenna pattern fro a summit

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-10 12:19:41 UTC
From: ve2pid <ve2pid@videotron.ca>
Message-ID: <3c03e02f-c547-485e-9f39-53224a1b7116@p15g2000vbl.googlegroups.com>
Source record: 13910

Hi to all,

NEC gives the pattern for an antenna mounted at a certain height above
an infinite flat ground.

But suppose that we are on a mountain top (summit) with a relatively
steep grade. Does the pattern changes, i,e. is the TO angle going
lower above an horizontal line coming from the antenna?

If so, is there a kind of 'correcting factor' giving the modified
height applicable?

1149. Re: Cushcraft Sale to MFJ

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-10 12:24:39 UTC
From: Mike Kaliski <michael.kaliski@tesco.net>
Message-ID: <69adnV6e1rIBjB3XnZ2dnUVZ8rudnZ2d@brightview.co.uk>
Source record: 13911

"kc5fws" <kc5fws.4c4ff69@radiobanter.com> wrote in message
news:kc5fws.4c4ff69@radiobanter.com...
>
> 'Mike Coslo[_2_ Wrote:
>> ;685462']Cecil Moore wrote:-
>> Howard Kowall wrote:-
>> ... sure there prices are cheap but there price reflects the product-
>>
>> If MFJ's price to quality ratio was much
>> too low or much too high, they would go out of
>> business. Their success indicates that they hit
>> their target market and maybe even the bullseye.-
>>
>> MFJ thrives, and that is because they are serving a niche market.
>>
>> MFJ designs tend to be good, the execution isn't always so good.
>>
>> That being said, they make their stuff for Amateurs, they make stuff
>> that I just wouldn't buy otherwise because it would be too expensive.
>> That's that first point above.
>>
>> The metric I've always used for a person if they are thinking about
>> buying mfj is:
>>
>> If you are a strict appliance operator, if you would send your radio
>> back to the mfgr to repair a defective power cord - don't even consider
>>
>> MFJ. You need the added quality provided by a QC and rework department.
>>
>> You need to pay for those people.
>>
>> If you don't mind opening up the case or looking around inside your
>> radio, then you might like MFJ. If I have to tighten a bolt or two, or
>>
>> check solder joints, I'm okay with that. I'm going to crack the case on
>>
>> anything I get anyhow.
>>
>> And how do you beat the warranty? My 259 antenna analyzer quit. I sent
>>
>> it back and they sent me a new one. All I had to do was tell them I was
>>
>> sending it.
>>

>> - 73 de Mike N3LI -
>
>
>
> I agree 100% on the above statement
>
> i mean theres so many types of people in this hobby now days some want
> a plug and play radio that uses a computer to work some want on hands
> some like working on there own radios some arent intrested in learning
> how to me thats why i got into the hobby was to test play with and work
> on my stuff thats what i enjoy doing if a person just wants to plug and
> play (talk on) then MFj might not be for you other wise its all good
>
> ive been using MFJ products for years and will continue to enjoy those
> products for years to come
>
> 73's
> Kc5fws
>
>
>
>
> --
> kc5fws

I have bought MFJ products through retailers in the UK and direct from MFJ in the States. The products do what they claim and are generally cheaper and a lot less hassle than building it myself. MFJ seem to be quite happy for customers to poke around inside the cases of their equipment and tightening up the odd screw or rectifying a small fault is all part of the amateur radio learning experience.

In my phone conversations with the factory I have always found them to be very polite, helpful and professional.

I would recommend their products with the proviso that they are built to a price point and you do need a certain level of knowledge to get the best out of their products. I particularly like their range of manually tuned ATU's and the antenna analysers. Pick an ATU with higher power handling if you are going to operate close to the upper limits of any of their models and you should be fine.

Regards

Mike G0ULI

1150. Re: Circular versus linear polarization

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-10 13:23:46 UTC
From: Art Unwin <ArthurUnwin@gmail.com>
Message-ID: <a57ea93e-1450-4ed1-ab6f-754f897b7c79@p23g2000vbl.googlegroups.com>
Source record: 13912

On Aug 10, 6:29 am, Bob Bob <bob3b...@suddenlink.net> wrote:
> Jeff/Art
>
> Keep in mind too that cross polarized (circular) point to point links
> (ie with a CP ant at each end) suffer from odd reflection attenuation
> (ie the polarization sense gets reversed by reflection)
>
> In 70cm UHF experiments I did back in the 80's I found out that a
> horiz-horiz system (base to mobile) outperformed a circular-circular by
> at least 12dB when moving. This wasnt actually the base reason for the
> experiments so I didnt make accurate measurements.
>
> OT Art, but I hope interesting.
>
> How random is the propogated linear antenna HF wave polarization and
> does it vary much with single hop and/or high angle? That might be a
> starting point for determining how useful CP on HF might be.
>
> Tnxs for the link Jeff.
>
> Cheers Bob VK2YQA
>
> Jeff Liebermann wrote:
> > On Sun, 9 Aug 2009 21:24:01 -0700 (PDT), Art Unwin
> > <ArthurUn...@gmail.com> wrote:
>
> >> The majority of antennas used today are (commercial) circularly
> >> polarized

What stands out for me is the audio improvement.

1151. Re: Circular versus linear polarization

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-10 14:04:52 UTC
From: christofire <christofire@btinternet.com>
Message-ID: <fOWdnXUVvsyUtB3XnZ2dnUVZ8iidnZ2d@bt.com>
Source record: 13913

"Art Unwin" <ArthurUnwin@gmail.com> wrote in message
news:ee55bd10-5ff5-468b-ab17-65443cf125fe@e18g2000vbe.googlegroups.com...
> The majority of antennas used today are (commercial) circularly polarized

That probably isn't true for VHF/UHF. Take a look at the website of a major supplier of professional antennas such as http://www.amphenol-jaybeam.com/base-station-antennas-search.php. Entering CP in their search engine for base-station antennas yielded 2 results wheras entering VP yielded 365!

One of the reasons for greater use of linear polarisations in professional applications is frequency re-use on the orthogonal polarisation some distance away - i.e. the value of the limited VHF/UHF spectrum. That's certainly true in Europe.

> Ham antennas remain in the linear domain (ala the Yagi and similar)
> There are many reasons espoused in CP advantages in "point to point"
> What is the main advantage hams hold over the more popular circular
> polarized antennas in its "skip" type useage versus "point to point" ?

Extensive use is made of 'mixed polarisation' for transmitting VHF FM broadcast services in Europe. It may not be pure circular but it contains significant vertically- and horizontally-polarised components. The mobile and portable receiving antennas have whatever polarisation they end up with, more or less by accident, and fixed rooftop antennas are usually linearly polarised. DAB and terrestrial television are transmitted using V or H linear polarisation.

Chris

1152. Re: Minimum gauge wire for connection to ground rod

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-10 14:25:23 UTC
From: Michael Coslo <mjc5@psu.edu>
Message-ID: <h5pakk$a452$1@tr22n12.aset.psu.edu>
Source record: 13914

JB wrote:
> there's nothing between the antenna and the sky
>> other than the roof decking and shingles. I don't expect them to add a
> lot of attenuation, but I
>> could be wrong.
>
> Maybe 3' makes a big difference. I have always seen a difference between
> antennas in the attic or stretched out on the roof, and antennas even a few
> feet above the roof. I don't know if it was shingles or what. It would
> really be interesting to see what kind of shingles are transparent. I have
> seen antenna farms hidden behind fake gables.

Well, there's nothing like ground truth, JB, so I'll defer to your experience vs my conjecture. Possibilities for further RF attenuation might be the materials in use. Those little rocks used for color and grip. Fiberglass is used a lot for the base, but there may be other fabrics too. It's a composite material, who knows, there might be carbon in it as well.

- 73 de Mike N3LI -

1153. Re: Cushcraft Sale to MFJ

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-10 14:49:03 UTC
From: Michael Coslo <mjc5@psu.edu>
Message-ID: <h5pc0v$a454$1@tr22n12.aset.psu.edu>
Source record: 13915

Edmund H. Ramm wrote:
> In <76pfm.88135$8l4.44867@newsfe10.iad> "Howard Kowall" <hkowall@shaw.ca> writes:
>
>> [...]
>> Well I have owned a few MFJ products,and everyone of them failed,buy poor
>> parts and assembly.
>> [...]
>
> Lucky man. I still have to buy an MFJ product which will work out of
> the box.

What have you bought from MFJ?

- 73 de Mike N3LI -

1154. Re: Circular versus linear polarization

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-10 15:11:48 UTC
From: Art Unwin <ArthurUnwin@gmail.com>
Message-ID: <caf43a39-4ccb-40c6-a937-2829974c6175@r27g2000vbn.googlegroups.com>
Source record: 13916

On Aug 10, 9:04 am, "christofire" <christof...@btinternet.com> wrote:
> "Art Unwin" <ArthurUn...@gmail.com> wrote in message
>
> news:ee55bd10-5ff5-468b-ab17-65443cf125fe@e18g2000vbe.googlegroups.com...
>
> > The majority of antennas used today are (commercial) circularly polarized
>
> That probably isn't true for VHF/UHF. Take a look at the website of a major
> supplier of professional antennas such
ashttp://www.amphenol-jaybeam.com/base-station-antennas-search.php. Entering
> CP in their search engine for base-station antennas yielded 2 results wheras
> entering VP yielded 365!
>
> One of the reasons for greater use of linear polarisations in professional
> applications is frequency re-use on the orthogonal polarisation some
> distance away - i.e. the value of the limited VHF/UHF spectrum. That's
> certainly true in Europe.
>
> > Ham antennas remain in the linear domain (ala the Yagi and similar)
> > There are many reasons espoused in CP advantages in "point to point"
> > What is the main advantage hams hold over the more popular circular
> > polarized antennas in its "skip" type useage versus "point to point" ?
>
> Extensive use is made of 'mixed polarisation' for transmitting VHF FM
> broadcast services in Europe. It may not be pure circular but it contains
> significant vertically- and horizontally-polarised components. The mobile
> and portable receiving antennas have whatever polarisation they end up with,
> more or less by accident, and fixed rooftop antennas are usually linearly
> polarised. DAB and terrestrial television are transmitted using V or H
> linear polarisation.
>
> Chris

Hmm A bit too technical for me! When I model my antennas it
shows gain for cp being 3 db above the gains of vertical and
horizontal for the same antenna. Is that what you call "mixed
polarization? In other words, it picks up all polarizations with a
max deviation in signal strength of only 3 db.
I find it hard to make any sort of comparison when using reflective
waves at HF because it is not clear to me exactly what sort of
rotations occur at the reflections on earth and of its layers
together with possible rotation in transit in between in the absence
of true comparison experiments.

1155. Re: Circular versus linear polarization

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-10 15:20:54 UTC
From: "P.R.Humphreys" <pedr@gw6yms.demon.co.uk>
Message-ID: <sVWfm.214211$xB.170653@newsfe10.ams2>
Source record: 13917

christofire wrote:
> "Art Unwin" <ArthurUnwin@gmail.com> wrote in message
> news:ee55bd10-5ff5-468b-ab17-65443cf125fe@e18g2000vbe.googlegroups.com...
>> The majority of antennas used today are (commercial) circularly polarized
>
>
> That probably isn't true for VHF/UHF. Take a look at the website of a major
> supplier of professional antennas such as
> http://www.amphenol-jaybeam.com/base-station-antennas-search.php. Entering
> CP in their search engine for base-station antennas yielded 2 results wheras
> entering VP yielded 365!
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> One of the reasons for greater use of linear polarisations in professional
> applications is frequency re-use on the orthogonal polarisation some
> distance away - i.e. the value of the limited VHF/UHF spectrum. That's
> certainly true in Europe.
>
>
>> Ham antennas remain in the linear domain (ala the Yagi and similar)
>> There are many reasons espoused in CP advantages in "point to point"
>> What is the main advantage hams hold over the more popular circular
>> polarized antennas in its "skip" type useage versus "point to point" ?
>
>
> Extensive use is made of 'mixed polarisation' for transmitting VHF FM
> broadcast services in Europe. It may not be pure circular but it contains
> significant vertically- and horizontally-polarised components. The mobile
> and portable receiving antennas have whatever polarisation they end up with,
> more or less by accident, and fixed rooftop antennas are usually linearly
> polarised. DAB and terrestrial television are transmitted using V or H
> linear polarisation.
>
> Chris
>
>
Off subject I know but as a matter of interest what happens to a TX CP
antenna with a clockwise twist transmitting to a RX CP antenna with an
anticlockwise twist, over short to medium vhf/uhf paths, I would have
thought a reduction in signal ?

Pedr GW6YMS

1156. Re: Antenna pattern fro a summit

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-10 15:49:06 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <v7g085h657rcntu2r377au7j756umem46c@4ax.com>
Source record: 13919

On Mon, 10 Aug 2009 05:19:41 -0700 (PDT), ve2pid <ve2pid@videotron.ca>
wrote:

>Does the pattern changes, i,e. is the TO angle going
>lower above an horizontal line coming from the antenna?

Depends on wavelength vs. distance to nearest ground vs. angle of that
distance.

All things about the pattern are related to phase/time/distance.

73's
Richard Clark, KB7QHC

1157. Re: Home Depot antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-10 16:35:41 UTC
From: Spamm Trappe <bit-bucket@config.com>
Message-ID: <slrnh80j2t.1hrg.bit-bucket@shell.config.com>
Source record: 13920

On Sun, 9 Aug 2009 18:41:36 -0700 (PDT), professorpaul wrote:
> Buddy of mine got something like that.

Got WHAT?? Just what are you nattering on about?

Geez! One google grooper replying to another google grooper.

1158. Re: Circular versus linear polarization

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-10 16:37:50 UTC
From: Ralph Mowery <rmowery28146@earthlink.net>
Message-ID: <y9-dnZYc8d39ox3XnZ2dnUVZ_gqdnZ2d@earthlink.com>
Source record: 13918

"P.R.Humphreys" <pedr@gw6yms.demon.co.uk> wrote in message
news:sVWfm.214211$xB.170653@newsfe10.ams2...
> Off subject I know but as a matter of interest what happens to a TX CP
> antenna with a clockwise twist transmitting to a RX CP antenna with an
> anticlockwise twist, over short to medium vhf/uhf paths, I would have
> thought a reduction in signal ?
>
> Pedr GW6YMS

About the same as going from a horizontal to a vertical antenna. You loose
about 20 db of signal.
One thing a CP signal will do that a horizontal or vertical signal won't is
to reverse when it bounces off an object. That is if you are doing moon
bounce and send up a signal using right hand CP , your receiving antenna
will need to be left hand CP or you loose lots of db of signal.

Also on the satellites it is helpful to be able to change the CP from left
to right as the signal sometimes reverses depending on the angle the
satellite antenna is pointing as it passes over.

1159. Re: Circular versus linear polarization

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-10 16:40:43 UTC
From: nm5k@wt.net
Message-ID: <e9089efa-db83-4d62-b71a-a7dd5ef5e069@d34g2000vbm.googlegroups.com>
Source record: 13921

On Aug 10, 8:23 am, Art Unwin <ArthurUn...@gmail.com> wrote:

>
> What stands out for me is the audio improvement.

Only very high Q antennas should noticeably effect audio.
Comparing a dipole to say a turnstile, you should notice
no real difference at all.
I've used turnstiles on 75 and 40 meters for years.
They work very well, but audio improvement is not
one of the usual features noted.
I prefer a turnstile over a dipole on the low bands
if I have my choice.
They seem slightly more efficient overall, but I've
never done any accurate testing. They also tend
to fill in the nulls off the ends that a dipole can show.
I've heard that running a circular polarized antenna
like the turnstile on HF, only shows circular polarization
at the higher angles. Which is what I'm usually using
when working NVIS on the lower bands.

1160. Re: Circular versus linear polarization

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-10 16:59:02 UTC
From: Jeff Liebermann <jeffl@cruzio.com>
Message-ID: <jii085tmam5pmouj1mpm65a979ebsfdo6b@4ax.com>
Source record: 13923

On Mon, 10 Aug 2009 06:29:03 -0500, Bob Bob <bob3bob3@suddenlink.net>
wrote:

>Keep in mind too that cross polarized (circular) point to point links
>(ie with a CP ant at each end) suffer from odd reflection attenuation
>(ie the polarization sense gets reversed by reflection)

That's one of the big advantages of CP for point to point links. The
polarization reversal on odd numbered reflections means that multipath
is greatly reduced.

>In 70cm UHF experiments I did back in the 80's I found out that a
>horiz-horiz system (base to mobile) outperformed a circular-circular by
>at least 12dB when moving. This wasnt actually the base reason for the
>experiments so I didnt make accurate measurements.

The book "Microwave Mobile Communications" by Willaim C. Jakes Jr
(1974) has a few words on the subject. As I recall, Ma Bell concluded
that neither linear or cirucular polarization is good enough and that
some form of diversity is required.

Incidentally, "The Practical Handbook of Amateur Radio FM and
Repeaters" (1981) (Tab 1212) by Pasternak and Morris, has chapter 31
on CP tests on the WA6VQP repeater on Loop Mtn. They draw a polar
plot of the measured repeater antenna pattern and note that they get
the typical "flower" pattern, with attendent deep nulls with linear
polarization. With CP, the nulls are far less pronounced.

My tinkering in the 1970's was specifically to reduce severe multipath
fades along a section of freeway in Smog Angeles. It worked, but with
some loss in signal stength from mismatched linear and CP
(theoretically -3dB).

>OT Art, but I hope interesting.
>
>How random is the propogated linear antenna HF wave polarization and
>does it vary much with single hop and/or high angle? That might be a
>starting point for determining how useful CP on HF might be.

I did some tinkering with measuring the polarization of skywave
signals using a rotating loop antenna. Including Faraday rotation, my
guess(tm) is that it's quite random and changes rapidly.

--
Jeff Liebermann jeffl@cruzio.com
150 Felker St #D http://www.LearnByDestroying.com
Santa Cruz CA 95060 http://802.11junk.com

Skype: JeffLiebermann AE6KS 831-336-2558

1161. Re: Antenna pattern fro a summit

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-10 17:07:18 UTC
From: Jeff Liebermann <jeffl@cruzio.com>
Message-ID: <fik085pcpq23bpgc4i2ctrnnc9dk0d0898@4ax.com>
Source record: 13924

On Mon, 10 Aug 2009 05:19:41 -0700 (PDT), ve2pid <ve2pid@videotron.ca>
wrote:

>Hi to all,

All too high.

>NEC gives the pattern for an antenna mounted at a certain height above
>an infinite flat ground.
>
>But suppose that we are on a mountain top (summit) with a relatively
>steep grade. Does the pattern changes, i,e. is the TO angle going
>lower above an horizontal line coming from the antenna?
>
>If so, is there a kind of 'correcting factor' giving the modified
>height applicable?

See:
<http://www.cplus.org/rmw/english1.html>
Locate the antenna exactly on the terrain model (SRTM2) and you'll get
the real antenna pattern. You can input the actual antenna pattern
into Radio-Mobile for better accuracy instead of using generic omni,
cardioid, yagi, etc patterns.

Bad examples (but all I have online):
<http://802.11junk.com/jeffl/coverage/kg6nri/>

--
Jeff Liebermann jeffl@cruzio.com
150 Felker St #D http://www.LearnByDestroying.com
Santa Cruz CA 95060 http://802.11junk.com
Skype: JeffLiebermann AE6KS 831-336-2558

1162. Re: Circular versus linear polarization

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-10 18:00:18 UTC
From: Ralph Mowery <rmowery28146@earthlink.net>
Message-ID: <78KdnfuRP5MuzB3XnZ2dnUVZ_sSdnZ2d@earthlink.com>
Source record: 13922

<nm5k@wt.net> wrote in message
news:e9089efa-db83-4d62-b71a-a7dd5ef5e069@d34g2000vbm.googlegroups.com...
On Aug 10, 8:23 am, Art Unwin <ArthurUn...@gmail.com> wrote:

>
>> What stands out for me is the audio improvement.

>Only very high Q antennas should noticeably effect audio.
>Comparing a dipole to say a turnstile, you should notice
>no real difference at all.

I have though that also, but I have noticed that on 75 meters there
sometimes seems to be a differance in the voice of the other station when I
switch from my off center fed antenna at 50 feet and a dipole at 20 feet.
This is when signals are around the same on either antanna. Around the s-9
point. I am using an Icom 746pro and an external switch to change the
antennas.

1163. Re: Circular versus linear polarization

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-10 18:44:52 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <pomdnQImoa879x3XnZ2dnUVZ_hadnZ2d@giganews.com>
Source record: 13925

I also did some experiments in the early '70s to see if CP would reduce fading. I built a couple of types of omnidirectional CP antennas -- a "skew planar", and a copy of a commercial FM BC antenna, for mobile use with the local 450 MHz repeater. I soon discovered that as soon as I placed the antenna over the top of the car, the polarization became nearly linear. I've since learned that it's because of the nature of the reflections from the ground plane, and it's easily seen with EZNEC+. When I put the antenna far enough away from the car to minimize reflections, the lowered gain offset any possible advantage. Overall, they worked out worse than a conventional vertically polarized antenna. It might have been interesting to try CP at the repeater, but that was never done.

The problem with ground reflection ruining the circularity makes it very difficult to achieve circular polarization for HF skip communication. A second problem is that the majority of CP antennas, such as the quadrature fed crossed dipole "turnstile", are circular only directly broadside, and increasingly elliptical as you move away from that direction.

Roy Lewallen, W7EL

1164. Re: Minimum gauge wire for connection to ground rod

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-10 21:02:38 UTC
From: Jim Lux <james.p.lux@jpl.nasa.gov>
Message-ID: <h5q1te$u95$1@news.jpl.nasa.gov>
Source record: 13926

KJ4NTS wrote:
> On 6-Aug-2009, Michael Coslo <mjc5@psu.edu> wrote:
>
>> I'd say with this setup, you could do DXCC. DXCC and other awards have
>> been achieved on more modest setups than what you are looking at
>> building. You won't be the loudest signal on the band, but there can
>> only be one of those anyhow.
>
> How much attenuation is a wood roof with asphalt shingles going to introduce? All of the duct work
> in my house is in the crawl space, and the phone and cable TV lines are also in the crawl space. So
> there is no metal other than the roofing nails, and there's nothing between the antenna and the sky
> other than the roof decking and shingles. I don't expect them to add a lot of attenuation, but I
> could be wrong.

Attenuation isn't a real concern, except when it's raining or the roof
is wet.

What should be a concern is the following:

1) weird interactions between antenna and conductive stuff in the attic.
Don't expect the same feedpoint impedance vs frequency you get with
the antenna out in the open.

2) Fire: The voltage gets pretty high at the ends of a dipole when
you're radiating even 100W. Or, more to the point, the voltage gets
high in nearby wires that happen to be the "wrong" length. A small
ember smoldering in your attic is a huge problem. This is something you
need to figure out how to check.. keeping the active ends of the dipole
clear of flammable stuff is straightforward, but the accidental
excitation of something else, isn't. (wiring isn't a problem.. it's
usually connected to something else that shunts the current.. it's
isolated conductors, like plumbing, HVAC ducts, etc. In your situation,
yours is in the crawl space, so you're in good shape.)

3) RF exposure. Do your calculations and make sure you're not cooking
things you shouldn't be.

1165. Re: Circular versus linear polarization

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-10 22:21:15 UTC
From: dave <dave@dave.dave>
Message-ID: <4a809d5f$0$7416$bd467cd0@news.dslextreme.com>
Source record: 13927

Art Unwin wrote:
> The majority of antennas used today are (commercial) circularly
> polarized
> Ham antennas remain in the linear domain (ala the Yagi and similar)
> There are many reasons espoused in CP advantages in "point to point"
> What is the main advantage hams hold over the more popular circular
> polarized antennas in its "skip" type useage versus "point to point" ?

Is there a CPOL advantage for atmospherically propagated HF? I can
think of some disadvantages.

1166. Re: Circular versus linear polarization

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-10 23:23:09 UTC
From: Art Unwin <ArthurUnwin@gmail.com>
Message-ID: <f0a8bc4e-8078-4f13-9291-4471d0bfe4b6@b14g2000yqd.googlegroups.com>
Source record: 13928

On Aug 10, 5:21 pm, dave <d...@dave.dave> wrote:
> Art Unwin wrote:
> > The majority of antennas used today are (commercial) circularly
> > polarized
> > Ham antennas remain in the linear domain (ala the Yagi and similar)
> > There are many reasons espoused in CP advantages in "point to point"
> > What is the main advantage hams hold over the more popular circular
> > polarized antennas in its "skip" type useage versus "point to point" ?
>
> Is there a CPOL advantage for atmospherically propagated HF? I can
> think of some disadvantages.

I am all ears. Go for it

1167. Re: Log periodic antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-11 03:58:44 UTC
From: tom <news4792@taring.org>
Message-ID: <4a80ecd5$0$77051$8046368a@newsreader.iphouse.net>
Source record: 13929

Jim Lux wrote:
> On Aug 6, 7:06 pm, professorpaul <deadgo...@comcast.net> wrote:
>> Does anyone have design for a log periodic antenna comparable to the
>> Elk one for 2 meters and 70 cm. I'd like to build one for satellite
>> work, and with the log periodic, I believe I could avoid the diplexer
>> issue.
>>
>> Please respond directly to W3...@arrl.net
>>
>> Thanks!
>> /paul W3FIS
>
> Actually, for a dual band to one feed, you can probably just
> interleave the elements of a 2m and 70cm beam on the same boom and
> connect the driven elements in parallel.
>
> http://www.arrowantennas.com/ look at the model 146/437... they have
> plans on the site to build it yourself. While they have a filter box
> available, I'm not sure you actually need it.

Except most of these designs don't work well. The problem is that the
2m elements really mess up what you're trying to do on 70.

There are ways to deal with it. One is that you tilt the elements
forward and use them for both bands. Old trick.

tom
K0TAR

1168. Re: Cushcraft Sale to MFJ

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-11 04:06:27 UTC
From: tom <news4792@taring.org>
Message-ID: <4a80eea3$0$77059$8046368a@newsreader.iphouse.net>
Source record: 13930

John Ferrell wrote:
> On Fri, 7 Aug 2009 21:27:06 -0500, "Rollie" <rollie@iowatelecom.net>
> wrote:
>
>> I can't reach the Cushcraft website either, but I did run into an article
>> about MFJ Enterprises aquiring Cushcraft.
>>
>> http://www.arrl.org/?artid=9114
>>
> As a happy user of MFJ and Cushcraft products I think it is good. As I
> recall, Cushcraft was bought as part of an antenna manufacturing
> package that was mostly commercial antenna products. As such, it was
> not as profitable as the other products and most felt it would be
> eventually be shut down. It should thrive under the MFJ flag.
>

Cushcraft hasn't been worth a damn since JR left for a very good reason.
Or 3.

tom
K0TAR

1169. Re: Circular versus linear polarization

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-11 04:14:10 UTC
From: tom <news4792@taring.org>
Message-ID: <4a80f072$0$77051$8046368a@newsreader.iphouse.net>
Source record: 13931

Art Unwin wrote:
> The majority of antennas used today are (commercial) circularly
> polarized
> Ham antennas remain in the linear domain (ala the Yagi and similar)
> There are many reasons espoused in CP advantages in "point to point"
> What is the main advantage hams hold over the more popular circular
> polarized antennas in its "skip" type useage versus "point to point" ?

Please provide examples of commercial antennas that are CP. Space
communication antennas are not ok to include.

Please give counts of CP versus linear in commercial use.

tom
K0TAR

1170. free porn videos anal

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-11 07:06:32 UTC
From: angelina <thordmhoneycutt38838@gmail.com>
Message-ID: <4be99a1a-ddeb-476b-8dec-e3bcccbc88ef@c34g2000yqi.googlegroups.com>
Source record: 13932

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1171. Re: Circular versus linear polarization

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-11 14:31:19 UTC
From: Art Unwin <ArthurUnwin@gmail.com>
Message-ID: <0dfe185c-73ff-4825-9abc-678c265cea67@w6g2000yqw.googlegroups.com>
Source record: 13933

On Aug 10, 11:14 pm, tom <news4...@taring.org> wrote:
> Art Unwin wrote:
> > The majority of antennas used today are (commercial) circularly
> > polarized
> > Ham antennas remain in the linear domain (ala the Yagi and similar)
> > There are many reasons espoused in CP advantages in "point to point"
> > What is the main advantage hams hold over the more popular circular
> > polarized antennas in its "skip" type useage versus "point to point" ?
>
> Please provide examples of commercial antennas that are CP. Space
> communication antennas are not ok to include.
>
> Please give counts of CP versus linear in commercial use.
>
> tom
> K0TAR

Use your own thread to ask for assistance on your question.
Be prepared to answer why you are requesting this personal service .
I asked a question on this thread with respect to the main advantage
for hams that linear
polarization has over CP. I have no resistance to change if it can be
justified. I see
that it can pick up signals that linear antennas cannot hear because
of a 30 db attenuation
where as CP has only a 3 db attenuation!
So what is it on the other side of the coin is what this thread is
posing to those who are familiar with respect to radiators.

1172. Re: Circular versus linear polarization

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-11 15:04:05 UTC
From: JB <nospam@goofball.net>
Message-ID: <FLfgm.1689$Jg.1664@nwrddc01.gnilink.net>
Source record: 13934

"Art Unwin" <ArthurUnwin@gmail.com> wrote in message
news:0dfe185c-73ff-4825-9abc-678c265cea67@w6g2000yqw.googlegroups.com...
On Aug 10, 11:14 pm, tom <news4...@taring.org> wrote:
> Art Unwin wrote:
> > The majority of antennas used today are (commercial) circularly
> > polarized
> > Ham antennas remain in the linear domain (ala the Yagi and similar)
> > There are many reasons espoused in CP advantages in "point to point"
> > What is the main advantage hams hold over the more popular circular
> > polarized antennas in its "skip" type useage versus "point to point" ?
>
> Please provide examples of commercial antennas that are CP. Space
> communication antennas are not ok to include.
>
> Please give counts of CP versus linear in commercial use.
>
> tom
> K0TAR

Use your own thread to ask for assistance on your question.
Be prepared to answer why you are requesting this personal service .
I asked a question on this thread with respect to the main advantage
for hams that linear
polarization has over CP. I have no resistance to change if it can be
justified. I see
that it can pick up signals that linear antennas cannot hear because
of a 30 db attenuation
where as CP has only a 3 db attenuation!
So what is it on the other side of the coin is what this thread is
posing to those who are familiar with respect to radiators.

Cross polarization can be used to provide isolation for duplex links or
co-channel sharing.

1173. Re: Circular versus linear polarization

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-11 15:16:35 UTC
From: Jeff <jeff@local.host>
Message-ID: <4a818c29$0$2386$834e42db@reader.greatnowhere.com>
Source record: 13936

>
> Use your own thread to ask for assistance on your question.
> Be prepared to answer why you are requesting this personal service .
> I asked a question on this thread with respect to the main advantage
> for hams that linear
> polarization has over CP. I have no resistance to change if it can be
> justified. I see
> that it can pick up signals that linear antennas cannot hear because
> of a 30 db attenuation
> where as CP has only a 3 db attenuation!
> So what is it on the other side of the coin is what this thread is
> posing to those who are familiar with respect to radiators.
>
> Cross polarization can be used to provide isolation for duplex links or
> co-channel sharing.
>

I think that you are looking at it from the wrong point of view. CP does not have 3dB attenuation, but a linearly polarized signal received on a CP antenna will be 3db down (whether that be H, V or slant).

So for amateur use CP is useful in that with another CP station multipath due to reflections will be reduced (reflections taking on the opposite hand CP and thus attenuated). However, if a CP antenna is used to receive H or V you may well not see the full 3dB reduction due to twisting of the polarization on the path. In fact over some paths the signal on a CP antenna will be better than on a linearly polarized antenna due the a greater attenuation due to polarization twisting.

Of course the best of both worlds is to have a crossed yagi with a phase switching box so that you can select CP (both hands) H, V or slant 45 both ways.

Commercially (terrestrially) I don't think that CP is used much except perhaps on microwave point to point links.

Jeff

1174. Re: Circular versus linear polarization

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-11 15:33:43 UTC
From: JIMMIE <JIMMIEDEE123@YAHOO.COM>
Message-ID: <93872b35-daa4-4c5a-84d7-9249bf34d7bf@k19g2000yqn.googlegroups.com>
Source record: 13935

On Aug 10, 12:24 am, Art Unwin <ArthurUn...@gmail.com> wrote:
> The majority of antennas used today are (commercial) circularly
> polarized
> Ham antennas remain in the linear domain (ala the Yagi and similar)
> There are many reasons espoused in CP advantages in "point to point"
> What is the main advantage hams hold over the more popular circular
> polarized antennas in its "skip" type useage versus "point to point" ?

Where did you get the info that most commercial antenna use is
circular polarity?

Jimmie

1175. Re: Circular versus linear polarization

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-11 16:37:33 UTC
From: Art Unwin <ArthurUnwin@gmail.com>
Message-ID: <2c176ffd-b95d-479f-a136-ba388d9e373d@h31g2000yqd.googlegroups.com>
Source record: 13937

snpOn Aug 11, 10:16 am, "Jeff" <j...@local.host> wrote:

>
> Of course the best of both worlds is to have a crossed yagi with a phase
> switching box so that you can select CP (both hands) H, V or slant 45 both
> ways.

Jeff, I want the" best of both" worlds but before one jumps one needs
to know the advantages and disadvantages of both first. To be frank, I
do not know what happens to all signals when they are reflected
including the reflection off the ground to a receiver or a direct hit
on the receiver from our upper layers so I have no way of undertaking
a comparison. Now most hams are resistant to change or will only
follow the majoratory thus the questions "who has the majoratory". For
me I see CP as an ideal approach for smaller volume antennas which is
the "holy grail" for hams, but one has to determine if smaller is
important enough to overide possible faults.Now I have a whip antenna
(no ground plane) on my tower that is CP for top band but the bands
are poor it is difficult to determine its worth especially since
there are no similar radiators out there. So I fall back and ask for
"what is known already" as there is no point in re inventing the
wheel. Is that so bad?
Now before the catwalling about the possibility of having a whip (a 5
foot pole) for top band
my intention is to release all that during the next month. So lets not
waste energy in side tracking comments and stay on the essence of this
thread. Remember the last time I intended to release it was evident
that most did not want to hear it........ so I went along !

>
> Commercially (terrestrially) I don't think that CP is used much except
> perhaps on microwave point to point links.
>
> Jeff

1176. Re: Circular versus linear polarization

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-11 16:44:04 UTC
From: Jeff Liebermann <jeffl@cruzio.com>
Message-ID: <s06385p2mvlu97ui3sjevpqo0p4cc53pun@4ax.com>
Source record: 13938

On Mon, 10 Aug 2009 11:44:52 -0700, Roy Lewallen <w7el@eznec.com>
wrote:

>I also did some experiments in the early '70s to see if CP would reduce
>fading. I built a couple of types of omnidirectional CP antennas -- a
>"skew planar", and a copy of a commercial FM BC antenna, for mobile use
>with the local 450 MHz repeater.

A "halo" type of antenna? Some of the commercial broadcast FM
antennas are eliptical polarized. Most of the signal is horizontally
polarized, but there is a small vertical component in order to improve
performance in vehicles.

We tried several antennas at the repeater end. Something like this
one seemed to work best:
<http://iris.nyit.edu/~sblank/VPFMfig5.gif>
We had 4 elements with a coax cable phasing mess.

>I soon discovered that as soon as I
>placed the antenna over the top of the car, the polarization became
>nearly linear. I've since learned that it's because of the nature of the
>reflections from the ground plane, and it's easily seen with EZNEC+.
>When I put the antenna far enough away from the car to minimize
>reflections, the lowered gain offset any possible advantage. Overall,
>they worked out worse than a conventional vertically polarized antenna.

I tried to use CP on both ends and eventually gave up. Thanks for the
explanation, but I have a different theory. The polarization changes
sense (direction) every times it's reflected. We standardized on RH
CP. When the RH CP signal hits the car, it is reflected as LH CP. If
the LH CP signal arrives at the repeater antenna, which is RH
polarized, they cancel. If it became linear, it would theoretically
only present a -3dB polarization loss, which is not huge.

>It might have been interesting to try CP at the repeater, but that was
>never done.

I can testify that it worked quite well for solving the specific
problem. We were trying to eliminate picket fencing (frequency
selective fading or Rayleigh fading). While there were some half
hearted experiments with various CP mobile antennas, the major effort
was at the repeater end. This was about 1971 so the technology used
was rather crude. One student was doing his senior project (reqd for
graduation) around this test. Several of us were enlisted to help.
When was in the land mobile radio biz many years later, I repeated the
tests with similar results.

We hung a thermal chart recorder onto the first limiter testpoint (on
a Motorola Sensicon T43 receiver) and plotted signal strength versus
time as a mobile drove through the problem area with the xmitter keyed
continuously. The test was repeated with various tower mounted
antennas. The linear antenna had more signal (gain) than CP, but also
had many more fades, what were far more pronounced. In all, I would
call it an improvement in quality, but not in range.

>The problem with ground reflection ruining the circularity makes it very
>difficult to achieve circular polarization for HF skip communication.

Well, I supplied several examples of commercial HF antennas that are
circularly polarized. I'm tempted to try building one, just to see
what works or breaks.

>A second problem is that the majority of CP antennas, such as the
>quadrature fed crossed dipole "turnstile", are circular only directly
>broadside, and increasingly elliptical as you move away from that direction.

That's why high accuracy GPS antennas use choke rings at the antenna.
It widens the pattern so that it picks up more of the sky, but also
maintains some semblence of CP at the horizon.

Any interest in me scanning and posting the chapter on circular
polarization repeater antennas from the TAB book? 13 pages with some
low quality pictures.

>Roy Lewallen, W7EL

--
Jeff Liebermann jeffl@cruzio.com
150 Felker St #D http://www.LearnByDestroying.com
Santa Cruz CA 95060 http://802.11junk.com
Skype: JeffLiebermann AE6KS 831-336-2558

1177. Re: Circular versus linear polarization

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-11 16:51:53 UTC
From: Jeff Liebermann <jeffl@cruzio.com>
Message-ID: <vv73851ee3f87hh1hd48fkdfblpuk0kran@4ax.com>
Source record: 13939

On Mon, 10 Aug 2009 16:23:09 -0700 (PDT), Art Unwin
<ArthurUnwin@gmail.com> wrote:

>On Aug 10, 5:21ï¿½pm, dave <d...@dave.dave> wrote:
>> Art Unwin wrote:
>> > The majority of antennas used today are (commercial) circularly
>> > polarized
>> > Ham antennas remain in the linear domain (ala the Yagi and similar)
>> > There are many reasons espoused in CP advantages in "point to point"
>> > What is the main advantage hams hold over the more popular circular
>> > polarized antennas in its "skip" type useage versus "point to point" ?
>>
>> Is there a CPOL advantage for atmospherically propagated HF? ï¿½I can
>> think of some disadvantages.
>
>I am all ears. Go for it

Applied CP made simple:

1. Circular polarization is like a drill. Instead of bouncing off
the ionosphere, it drills right through it. Therefore, little or no
skip with CP.

2. Circular polarization is sensitive to the direction of rotation.
If you're sending CP with your right hand, or using a microphone in
your right hand, then you can only hear right hand circular
polarization.

3. CP changes sense every times it bounces off something. Therefore,
you can only hear even numbered bounces with the same sense. Odd
bounces disappear meaning you can hear short skip signals (NVIS), and
long path, but nothing in between.

4. Right hand CP is the most common, because most tuning screws use a
right hand thread. If you want to use left hand CP, you'll need to
find some rather scarce left hand threaded coil forms and tuning
slugs.

I hope this helps.

--
Jeff Liebermann jeffl@cruzio.com
150 Felker St #D http://www.LearnByDestroying.com
Santa Cruz CA 95060 http://802.11junk.com
Skype: JeffLiebermann AE6KS 831-336-2558

1178. Re: Circular versus linear polarization

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-11 17:30:03 UTC
From: JB <nospam@goofball.net>
Message-ID: <vUhgm.1711$Jg.581@nwrddc01.gnilink.net>
Source record: 13940

You need to read up on it. It does have it's uses and I know hams that use it. Usually by Satellite guys that talk to mobiles too. It gets used by quite a few commercial broadcast FM stations. The theory is that a mobile antenna will hear either the main path or reflected path but to a lesser extent, both so multi-path distortion is minimized. Typically the reflection cause a reversal of polarization. There is no substitute for talking to the far station in whatever polarity is agreed on.

1179. Re: Circular versus linear polarization

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-11 20:13:38 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <z42dnaC118BoTRzXnZ2dnUVZ_gSdnZ2d@giganews.com>
Source record: 13941

Jeff Liebermann wrote:
> On Mon, 10 Aug 2009 11:44:52 -0700, Roy Lewallen <w7el@eznec.com>
> wrote:
>
>> I also did some experiments in the early '70s to see if CP would reduce
>> fading. I built a couple of types of omnidirectional CP antennas -- a
>> "skew planar", and a copy of a commercial FM BC antenna, for mobile use
>> with the local 450 MHz repeater.
>
> A "halo" type of antenna? Some of the commercial broadcast FM
> antennas are eliptical polarized. Most of the signal is horizontally
> polarized, but there is a small vertical component in order to improve
> performance in vehicles.

The "skew planar" looked like a cloverleaf antenna with each "petal"
rotated 45 degrees. The other was a copy of a broadcast antenna
advertised to be circularly polarized. I used a simple hand held dipole
and field strength meter to judge polarization. I know now it was
subject to a number of shortcomings, but I feel it did a reasonable job
of indicating circularity. Both antennas were reasonably circular.
>
> . . .
>
> I tried to use CP on both ends and eventually gave up. Thanks for the
> explanation, but I have a different theory. The polarization changes
> sense (direction) every times it's reflected. We standardized on RH
> CP. When the RH CP signal hits the car, it is reflected as LH CP. If
> the LH CP signal arrives at the repeater antenna, which is RH
> polarized, they cancel. If it became linear, it would theoretically
> only present a -3dB polarization loss, which is not huge.

No, that's a common misconception. A circularly polarized wave produces
a circularly polarized wave of the opposite handedness only when
reflected from a plane normal to its direction of propagation. That's
seldom the case in a communication environment. When reflected from
surfaces at other angles, the result is a change in circularity, from
elliptical to nearly linear depending on the angle of reflection and the
reflection coefficients of the surface. A short while with the modeling
program of your choice will confirm this.

> . . .

>> A second problem is that the majority of CP antennas, such as the
>> quadrature fed crossed dipole "turnstile", are circular only directly
>> broadside, and increasingly elliptical as you move away from that direction.

>
> That's why high accuracy GPS antennas use choke rings at the antenna.
> It widens the pattern so that it picks up more of the sky, but also
> maintains some semblence of CP at the horizon.

I wasn't aware of any GPS receivers using crossed dipole "turnstile"
type antennas. All the ones I've seen use either quadrifilar helix or
patch antennas. Can you point to a reference or two regarding the choke
rings -- I don't know what these are or what they do, and would like to
learn.

> . . .

Roy Lewallen, W7EL

1180. Re: Circular versus linear polarization

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-11 20:24:43 UTC
From: Art Unwin <ArthurUnwin@gmail.com>
Message-ID: <d5e50b4b-81a6-4e8c-960a-afe231291d21@c1g2000yqi.googlegroups.com>
Source record: 13942

On Aug 11, 12:30 pm, "JB" <nos...@goofball.net> wrote:
> You need to read up on it. It does have it's uses and I know hams that use
> it. Usually by Satellite guys that talk to mobiles too. It gets used by
> quite a few commercial broadcast FM stations. The theory is that a mobile
> antenna will hear either the main path or reflected path but to a lesser
> extent, both so multi-path distortion is minimized. Typically the
> reflection cause a reversal of polarization. There is no substitute for
> talking to the far station in whatever polarity is agreed on.

You bet that they have to read up on it.
For those who consider themselves experts and others idiots.
There is some sort of federation for antenna builders and the
President of that group states we will have a disaster on our hands if
we do not come up with a new technology for what is required in 5
years. Apparently cell phones will be divided into three bands and the
big boys want access to all. This means that they need three separate
antennas on the cell phone to cater for all (his words). They don't
like that idea because it means three antennas in close proximation to
each other. The response to that challenge is to group together the
research facilities to find a "new" technology if ever there is one. A
lot of money at stake and it is for any of you that are knowledgable
in the field to apply for.
Those who are really "knowledgable" already know there is no "new"
technology only the one that they use and they all have researched it
to death such that all the answers have been unfolded to them. It is
also too late to ask God to be a bit more fair and provides some
different options to what we already have.
All I ask of them is to share with the rest of us exactly what
happens to CP when it collides with anything in transit to a receiver.

1181. Re: Circular versus linear polarization

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-11 20:28:52 UTC
From: JIMMIE <JIMMIEDEE123@YAHOO.COM>
Message-ID: <bac31410-9926-4118-90a9-86b679fe2186@18g2000yqa.googlegroups.com>
Source record: 13943

On Aug 10, 11:11 am, Art Unwin <ArthurUn...@gmail.com> wrote:
> On Aug 10, 9:04 am, "christofire" <christof...@btinternet.com> wrote:
>
>
>
>
>
> > "Art Unwin" <ArthurUn...@gmail.com> wrote in message
>
> >news:ee55bd10-5ff5-468b-ab17-65443cf125fe@e18g2000vbe.googlegroups.com...
>
> > > The majority of antennas used today are (commercial) circularly polarized
>
> > That probably isn't true for VHF/UHF. Take a look at the website of a major
> > supplier of professional antennas such
ashttp://www.amphenol-jaybeam.com/base-station-antennas-search.php. Entering
> > CP in their search engine for base-station antennas yielded 2 results wheras
> > entering VP yielded 365!
>
> > One of the reasons for greater use of linear polarisations in professional
> > applications is frequency re-use on the orthogonal polarisation some
> > distance away - i.e. the value of the limited VHF/UHF spectrum. That's
> > certainly true in Europe.
>
> > > Ham antennas remain in the linear domain (ala the Yagi and similar)
> > > There are many reasons espoused in CP advantages in "point to point"
> > > What is the main advantage hams hold over the more popular circular
> > > polarized antennas in its "skip" type useage versus "point to point" ?
>
> > Extensive use is made of 'mixed polarisation' for transmitting VHF FM
> > broadcast services in Europe. It may not be pure circular but it contains
> > significant vertically- and horizontally-polarised components. The mobile
> > and portable receiving antennas have whatever polarisation they end up with,
> > more or less by accident, and fixed rooftop antennas are usually linearly
> > polarised. DAB and terrestrial television are transmitted using V or H
> > linear polarisation.
>
> > Chris
>
> Hmm   A bit too technical for me! When I model my antennas it
> shows gain for cp being 3 db above the gains of vertical and
> horizontal for the same antenna. Is that what you call "mixed
> polarization? In other words, it picks up all polarizations with a
> max deviation in signal strength of only 3 db.

> I find it hard to make any sort of comparison when using reflective
> waves at HF because it is not clear to me exactly what sort of
> rotations occur at the reflections on earth and of its layers
> together with possible rotation in transit in between in the absence
> of true comparison experiments.- Hide quoted text -
>
> - Show quoted text -

Describe the circular antenna you are modeling? With the gain you are claiming it doesnt seem to be an apples to apples comparison. I suspect you are comparing a fullwave loop to a halfwave dipole. Show the data you are using for your model or be prepared for most to suspect you of the usual handwaving.

Jimmie.

1182. Re: Circular versus linear polarization

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-11 21:10:10 UTC
From: Art Unwin <ArthurUnwin@gmail.com>
Message-ID: <e73b1c9a-f579-4390-949c-411e54c239a7@32g2000yqj.googlegroups.com>
Source record: 13944

On Aug 11, 3:28 pm, JIMMIE <JIMMIEDEE...@YAHOO.COM> wrote:
> On Aug 10, 11:11 am, Art Unwin <ArthurUn...@gmail.com> wrote:
>
>
>
> > On Aug 10, 9:04 am, "christofire" <christof...@btinternet.com> wrote:
>
> > > "Art Unwin" <ArthurUn...@gmail.com> wrote in message
>
> > >news:ee55bd10-5ff5-468b-ab17-65443cf125fe@e18g2000vbe.googlegroups.com...
>
> > > > The majority of antennas used today are (commercial) circularly polarized
>
> > > That probably isn't true for VHF/UHF. Take a look at the website of a major
> > > supplier of professional antennas such
ashttp://www.amphenol-jaybeam.com/base-station-antennas-search.php. Entering
> > > CP in their search engine for base-station antennas yielded 2 results wheras
> > > entering VP yielded 365!
>
> > > One of the reasons for greater use of linear polarisations in professional
> > > applications is frequency re-use on the orthogonal polarisation some
> > > distance away - i.e. the value of the limited VHF/UHF spectrum. That's
> > > certainly true in Europe.
>
> > > > Ham antennas remain in the linear domain (ala the Yagi and similar)
> > > > There are many reasons espoused in CP advantages in "point to point"
> > > > What is the main advantage hams hold over the more popular circular
> > > > polarized antennas in its "skip" type useage versus "point to point" ?
>
> > > Extensive use is made of 'mixed polarisation' for transmitting VHF FM
> > > broadcast services in Europe. It may not be pure circular but it contains
> > > significant vertically- and horizontally-polarised components. The mobile
> > > and portable receiving antennas have whatever polarisation they end up with,
> > > more or less by accident, and fixed rooftop antennas are usually linearly
> > > polarised. DAB and terrestrial television are transmitted using V or H
> > > linear polarisation.
>
> > > Chris
>
> > Hmm   A bit too technical for me! When I model my antennas it
> > shows gain for cp being 3 db above the gains of vertical and
> > horizontal for the same antenna. Is that what you call "mixed
> > polarization? In other words, it picks up all polarizations with a
> > max deviation in signal strength of only 3 db.

> > I find it hard to make any sort of comparison when using reflective
> > waves at HF because it is not clear to me exactly what sort of
> > rotations occur at the reflections on earth and of its layers
> > together with possible rotation in transit in between in the absence
> > of true comparison experiments.- Hide quoted text -
>
> > - Show quoted text -
>
> Describe the circular antenna you are modeling? With the gain you are
> claiming it doesnt seem to be an apples to apples comparison. I
> suspect you are comparing a fullwave loop to a halfwave dipole. Show
> the data you are using for your model or be prepared for most to
> suspect you of the usual handwaving.
>
> Jimmie.

NO

1183. Re: Has "antenna" died?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-11 21:20:08 UTC
From: JIMMIE <JIMMIEDEE123@YAHOO.COM>
Message-ID: <be4876b0-51e6-482a-88c0-8891cd7c0055@b14g2000yqd.googlegroups.com>
Source record: 13945

On Jul 30, 11:35 pm, tom <news4...@taring.org> wrote:
> J. Mc Laughlin wrote:
> > Dear Group: While I attend only now-and-then, it seems as it has been days
> > since new communications have been posted.
>
> > Something might have changed with my ISP or I asserted some secret
> > instruction.
>
> > 73, Mac N8TT
>
> You're fine. Sometimes it's just quiet.
>
> Art is in an institution or fresh back with good meds. Others are
> probably busy with it being summer. Those of us in the upper midwest
> haven't had a "normal" summer yet this year which is just fine by me.
> Bring on the drought, bring on more cold summers!
>
> tom
> K0TAR

Hes back things should pick up.

1184. Re: Circular versus linear polarization

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-11 21:47:10 UTC
From: Bob Bob <bob3bob3@suddenlink.net>
Message-ID: <tg59l6-mi1.ln1@p400bob.personal.cox.net>
Source record: 13946

Roy/Jeff

This is all interesting stuff that I have always wanted to experiment on some more. I note the comment (was it Roy?) about the positioning of a CP antenna over a vehicle roof and the effect that had on the total signal polarization. I slapped my forehead on that one! (ie I should have known and tested for it)

I also used a skew planar loop. It was I guess maybe 400mm above the vehicle roof. It had 4 loops in phase. The halo/3 leaf HP (clover) was the same basic construction. At the time the results of H vs V really astounded me. In my case OTH UHF performance was maybe 12db "better" mainly from the reduction in flutter.

> No, that's a common misconception. A circularly polarized wave produces
> a circularly polarized wave of the opposite handedness only when
> reflected from a plane normal to its direction of propagation. That's
> seldom the case in a communication environment. When reflected from
> surfaces at other angles, the result is a change in circularity, from
> elliptical to nearly linear depending on the angle of reflection and the
> reflection coefficients of the surface. A short while with the modeling
> program of your choice will confirm this.

Yes of course! (slaps forehead again!)

This is something that has come out recently in some experiments I have been doing with mobile data comms on VHF SSB. I have a badly written and incomplete page;

http://pages.suddenlink.net/vk2yqa

Before getting into the data side of it I had noted that a lot of intelligence could be gleaned by looking at the Doppler effect from the moving vehicle. Only a tiny 30Hz or so was noted on 144MHz but it showed to my mind that a lot of signal comes from multiplathing and even some comes from double reflections. The level of shift over the Doppler "bandwidth" also showed that it was fairly evenly distributed. ie reflections off plane objects like oncoming vehicles were not really any stronger than from other directions. Such things as large oil tanks though are quite obvious when I correlate the trip timing with nearby objects. This also bought sense to the experiments I did back in the 80's where I tried a 3 el quad on the vehicle with dissappointing results.

So where is this going? I wonder what the result would be Doppler "bandpass" wise if I used a CP antenna on the vehicle and base now? (The above mentioned results are all VP) Given the sense change reflections I wonder if I would get a "null" in the received bandpass due to movement.

I am trying to visualize the result of this;

http://pages.suddenlink.net/vk2yqa/img1.png

during that test. Would I get a series of bands parallel to the envelope edges that would further indicate direction of travel relative to the base. I realize that the direct path already gives that info, just trying to get the likely scenbario in my head.

Apologies to Art for taking his post so far OT.

Cheers Bob VK2YQA

1185. Re: Home Depot antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-11 22:06:33 UTC
From: professorpaul <deadgoose@comcast.net>
Message-ID: <427a0b88-6405-417d-a3c0-7d3b5f41f19e@c14g2000yqm.googlegroups.com>
Source record: 13947

It was an extension for cleaning a swimming pool. Great "extensible"
antenna mast. Sorry for the confusion...

/paul W3FIS

1186. Re: Cushcraft Sale to MFJ

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-11 23:11:45 UTC
From: Gary <jgboyles@aol.com>
Message-ID: <62113251-546e-4e12-867e-eaa649d44b2e@r18g2000yqd.googlegroups.com>
Source record: 13948

On Aug 11, 4:34 pm, ehr...@dk3uz.ampr.org (Edmund H. Ramm) wrote:
> In <h5pc0v$a45...@tr22n12.aset.psu.edu> Michael Coslo <m...@psu.edu> writes:
>
> >Edmund H. Ramm wrote:
> >> [...]
> >> I still have to buy an MFJ product which will work out of the box.
> > What have you bought from MFJ?
>
> IIRC 9?9 Versa Tuner (sri, don't remember the middle figure, but it
> was the 300w version with switched inductor and built-in dummy load),
> 259B SWR Analyzer, 1112 DC rail, 4724 TRX/ANT switch with remote control.
>
> I left my evaluation for the antenna coupler and the switch on
> eham.net. I won't bore you with the gory details here, as they would
> fill pages.
>
> 73, Eddi ._._.
> --
> e-mail: dk3uz AT arrl DOT net | AMPRNET: dk...@db0hht.ampr.org
> If replying to a Usenet article, please use above e-mail address.
> Linux/m68k, the best U**x ever to hit an Atari!

The 300 watt versa tuner utilized an inductor selector switch which had too low voltage rating. I have recently repaired one for a friend to replace the switch. This was a design flaw, and not a QC problem.

I have had an MFJ 259B for 10 years and have about worn it out. Had to replace the coax connector, and the on-off switch, but it keeps on truckin. It did not suffer from a QC problem.

As for the other products you mention, I have no experience. I have bought a number of other products, and all I can say is you get what you pay for.

Gary N4AST

1187. Re: Circular versus linear polarization

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-11 23:37:34 UTC
From: Art Unwin <ArthurUnwin@gmail.com>
Message-ID: <508fc4ad-6dab-4f21-aa2d-6e2b2aaf2d46@s31g2000yqs.googlegroups.com>
Source record: 13949
Body handling: HTML body converted to readable text

On Aug 10, 11:37 am, "Ralph Mowery"
wrote:
> "P.R.Humphreys" wrote in message
>
> news:sVWfm.214211$xB.170653@newsfe10.ams2...
>
> > > Off subject I know but as a matter of interest what happens to a TX CP
> > > antenna with a clockwise twist transmitting to a RX CP antenna with an
> > > anticlockwise twist, over short to medium vhf/uhf paths, I would have
> > > thought a reduction in signal ?
>
> > > Pedr GW6YMS
>
> About the same as going from a horizontal to a vertical antenna. You loose
> about 20 db of signal.
> One thing a CP signal will do that a horizontal or vertical signal won't is
> to reverse when it bounces off an object. That is if you are doing moon
> bounce and send up a signal using right hand CP , your receiving antenna
> will need to be left hand CP or you loose lots of db of signal.
>
> Also on the satellites it is helpful to be able to change the CP from left
> to right as the signal sometimes reverses depending on the angle the
> satellite antenna is pointing as it passes over.

Do you ever get to the point that your signal bounces off the upper
layers instead of passing thru? I note that some users of the vhf have
seen ducting effects (temp inversions?)

1188. Re: Circular versus linear polarization

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-11 23:51:22 UTC
From: Art Unwin <ArthurUnwin@gmail.com>
Message-ID: <dcf49a00-af9b-47d0-97b5-1ed5f60911d5@t13g2000yqt.googlegroups.com>
Source record: 13950

On Aug 11, 4:47 pm, Bob Bob <bob3b...@suddenlink.net> wrote:
> Roy/Jeff
>
> This is all interesting stuff that I have always wanted to experiment on
> some more. I note the comment (was it Roy?) about the positioning of a
> CP antenna over a vehicle roof and the effect that had on the total
> signal polarization. I slapped my forehead on that one! (ie I should
> have known and tested for it)
>
> I also used a skew planar loop. It was I guess maybe 400mm above the
> vehicle roof. It had 4 loops in phase. The halo/3 leaf HP (clover) was
> the same basic construction. At the time the results of H vs V really
> astounded me. In my case OTH UHF performance was maybe 12db "better"
> mainly from the reduction in flutter.
>
> > No, that's a common misconception. A circularly polarized wave produces
> > a circularly polarized wave of the opposite handedness only when
> > reflected from a plane normal to its direction of propagation. That's
> > seldom the case in a communication environment. When reflected from
> > surfaces at other angles, the result is a change in circularity, from
> > elliptical to nearly linear depending on the angle of reflection and the
> > reflection coefficients of the surface. A short while with the modeling
> > program of your choice will confirm this.
>
> Yes of course! (slaps forehead again!)
>
> This is something that has come out recently in some experiments I have
> been doing with mobile data comms on VHF SSB. I have a badly written and
> incomplete page;
>
> http://pages.suddenlink.net/vk2yqa
>
> Before getting into the data side of it I had noted that a lot of
> intelligence could be gleaned by looking at the Doppler effect from the
> moving vehicle. Only a tiny 30Hz or so was noted on 144MHz but it showed
> to my mind that a lot of signal comes from multiplathing and even some
> comes from double reflections. The level of shift over the Doppler
> "bandwidth" also showed that it was fairly evenly distributed. ie
> reflections off plane objects like oncoming vehicles were not really any
> stronger than from other directions. Such things as large oil tanks
> though are quite obvious when I correlate the trip timing with nearby
> objects. This also bought sense to the experiments I did back in the
> 80's where I tried a 3 el quad on the vehicle with dissappointing results.
>

> So where is this going? I wonder what the result would be Doppler
> "bandpass" wise if I used a CP antenna on the vehicle and base now? (The
> above mentioned results are all VP) Given the sense change reflections I
> wonder if I would get a "null" in the received bandpass due to movement.
> I am trying to visualize the result of this;
>
> http://pages.suddenlink.net/vk2yqa/img1.png
>
> during that test. Would I get a series of bands parallel to the
> envelope edges that would further indicate direction of travel relative
> to the base. I realize that the direct path already gives that info,
> just trying to get the likely scenbario in my head.
>
> Apologies to Art for taking his post so far OT.
>
> Cheers Bob VK2YQA

I don't see it as OT, if you get a response run with it
cheers

1189. Re: Home Depot antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-12 00:10:18 UTC
From: Spamm Trappe <bit-bucket@config.com>
Message-ID: <slrnh8423a.19pr.bit-bucket@shell.config.com>
Source record: 13952

On Tue, 11 Aug 2009 15:06:33 -0700 (PDT), professorpaul wrote:
> It was an extension for cleaning a swimming pool.

WHAT was "an extension for cleaning a swimming pool"?
No, wait. I give up.
It's killfile google groopers from now on......

1190. Re: Circular versus linear polarization

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-12 01:00:30 UTC
From: Ralph Mowery <rmowery28146@earthlink.net>
Message-ID: <Nc6dneozXKsymB_XnZ2dnUVZ_uCdnZ2d@earthlink.com>
Source record: 13951

"Art Unwin" <ArthurUnwin@gmail.com> wrote in message
news:508fc4ad-6dab-4f21-aa2d-6e2b2aaf2d46@s31g2000yqs.googlegroups.com...
>Do you ever get to the point that your signal bounces off >the upper
>layers instead of passing thru? I note that some users of >the vhf have
>seen ducting effects (temp inversions?)

I hae not noticed it, but will not say that it can not hapen.

I have worked Texas from NC on two meters and lots of times way to the north
on 2 and 432. I was not working the sats while that was going on.

1191. Re: Circular versus linear polarization

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-12 01:08:55 UTC
From: Jeff Liebermann <jeffl@cruzio.com>
Message-ID: <pu2485h3sutg8g6lquv0cd7tpq8odj12hv@4ax.com>
Source record: 13953

On Tue, 11 Aug 2009 13:13:38 -0700, Roy Lewallen <w7el@eznec.com>
wrote:

>>> A second problem is that the majority of CP antennas, such as the
>>> quadrature fed crossed dipole "turnstile", are circular only directly
>>> broadside, and increasingly elliptical as you move away from that direction.

Sorry, my original reply to this comment was screwed up thanks to me
talking on the phone while writing.

Yeah, the problem with turnstiles CP is at the horizon. At the
horizon, one element of the turnstile would be roughly perpendicular
to me, thus acting as a simple linear dipole. The other crossed
element would be seen from the end, resulting in no radiation in my
direction. So, at the horizon, a turnstile is mostly linear
polarization.

>> That's why high accuracy GPS antennas use choke rings at the antenna.
>> It widens the pattern so that it picks up more of the sky, but also
>> maintains some semblence of CP at the horizon.
>
>I wasn't aware of any GPS receivers using crossed dipole "turnstile"
>type antennas. All the ones I've seen use either quadrifilar helix or
>patch antennas. Can you point to a reference or two regarding the choke
>rings -- I don't know what these are or what they do, and would like to
>learn.

If you really want a turnstile GPS antenna:
<www.arrl.org/tis/info/pdf/0210036.pdf>

As for the choke ring, you've probably seen them in the center of
C-band DBS/TVRO dish antennas.

Links:
<http://www.javad.com/jns/index.html?/jns/technology/Choke%20Ring%20Theory.html>
<http://www.trimble.com/infrastructure/gnss-choke-ring-antenna.aspx?dtID=overview>
<http://www.gpsworld.com/survey/news/trimble-choke-ring-antenna-uses-dorne-and-margolin-di
pole-3620>

More detail:
<www.novatel.com/Documents/Papers/3D_choke_ring.pdf>
If you remove the radome in the center, it's a "pinwheel" antenna,
with which I'm totally unfamiliar. Note the comments on "low
elevation tracking", which is what I was mumbling about for improving
the performance at the horizon. The above article don't show it, but
the choke ring does maintain some semblance of CP near the horizon.

Patent on the dual frequency (L1 and L2 for GPS) choke ring:
<http://www.google.com/patents/about?id=EiwIAAAAEBAJ&dq=6278407>

1192. Measuring loss of vertical antenna roof counterpoise?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-12 01:43:14 UTC
From: TF3KX <kristinn1@gmail.com>
Message-ID: <0327ab84-193e-4305-976b-eda4b7dc1272@g10g2000yqh.googlegroups.com>
Source record: 13954

I have erected various vertical and wire antennas from my roof, using its metallic surface as a counterpoise (approx. 10x10m or 30x30ft). I have come to suspect that there are some resistive losses in the roof or the connections to it. My question is: Does anyone have a suggestion for how to estimate by measurements the resistive losses of the roof or its connection?

One idea might be erecting a quarter wave vertical for, say, 20m, and measure the feed resistance. If modeling would suggest, say, an "ideal" resistance of 35 Ohms, but the measured feed resistance would be 45 Ohms, I could conclude that the extra 10 ohms were coming from the resistance at the base, i.e. from the roof or its connections. This assumes that the vertical had otherwise negligible loss (for example, an aluminum tube). Now, to complicate things the roof is sloping (approx. 45 degrees) and the antenna base is located at its peak. This would be hard to model precisely, so that "ideal resistance" would be hard to ascertain, to begin with.

Any other suggestions for estimating the roof connection losses?

73 - Kristinn, TF3KX

1193. Re: Measuring loss of vertical antenna roof counterpoise?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-12 02:03:55 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <gvGdnYxSoOiTvh_XnZ2dnUVZ_tCdnZ2d@giganews.com>
Source record: 13955

TF3KX wrote:
> I have erected various vertical and wire antennas from my roof, using
> its metallic surface as a counterpoise (approx. 10x10m or 30x30ft). I
> have come to suspect that there are some resistive losses in the roof
> or the connections to it. My question is: Does anyone have a
> suggestion for how to estimate by measurements the resistive losses of
> the roof or its connection?
>
> One idea might be erecting a quarter wave vertical for, say, 20m, and
> measure the feed resistance. If modeling would suggest, say, an
> "ideal" resistance of 35 Ohms, but the measured feed resistance would
> be 45 Ohms, I could conclude that the extra 10 ohms were coming from
> the resistance at the base, i.e. from the roof or its connections.
> This assumes that the vertical had otherwise negligible loss (for
> example, an aluminum tube). Now, to complicate things the roof is
> sloping (approx. 45 degrees) and the antenna base is located at its
> peak. This would be hard to model precisely, so that "ideal
> resistance" would be hard to ascertain, to begin with.
>
> Any other suggestions for estimating the roof connection losses?
>
> 73 - Kristinn, TF3KX

I don't know of a good way to do it except modeling. Don't expect 35
ohms, though -- the resistance will depend on the size and shape of the
roof as well as height and diameter of the vertical, and can vary quite
a lot.

Roy Lewallen, W7EL

1194. Re: Circular versus linear polarization

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-12 03:21:05 UTC
From: JIMMIE <JIMMIEDEE123@YAHOO.COM>
Message-ID: <f66126fb-2625-40a0-a1fe-876f12b05fd6@b14g2000yqd.googlegroups.com>
Source record: 13956

On Aug 11, 9:00 pm, "Ralph Mowery" <rmowery28...@earthlink.net> wrote:
> "Art Unwin" <ArthurUn...@gmail.com> wrote in message
>
> news:508fc4ad-6dab-4f21-aa2d-6e2b2aaf2d46@s31g2000yqs.googlegroups.com...
>
> >Do you ever get to the point that your signal bounces off >the upper
> >layers instead of passing thru? I note that some users of >the vhf have
> >seen ducting effects (temp inversions?)
>
> I hae not noticed it, but will not say that it can not hapen.
>
> I have worked Texas from NC on two meters and lots of times way to the north
> on 2 and 432. I was not working the sats while that was going on.

I used to have a longwire that really liked to work into Louisanna
from NC. One of the lobes must have been going right into Sldell.

Jimmie

1195. Re: Circular versus linear polarization

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-12 03:24:15 UTC
From: JIMMIE <JIMMIEDEE123@YAHOO.COM>
Message-ID: <32da9de6-c9d7-4b1e-8503-83a101155529@h21g2000yqa.googlegroups.com>
Source record: 13957

On Aug 11, 5:10 pm, Art Unwin <ArthurUn...@gmail.com> wrote:
> On Aug 11, 3:28 pm, JIMMIE <JIMMIEDEE...@YAHOO.COM> wrote:
>
>
>
>
>
> > On Aug 10, 11:11 am, Art Unwin <ArthurUn...@gmail.com> wrote:
>
> > > On Aug 10, 9:04 am, "christofire" <christof...@btinternet.com> wrote:
>
> > > > "Art Unwin" <ArthurUn...@gmail.com> wrote in message
>
> > > >news:ee55bd10-5ff5-468b-ab17-65443cf125fe@e18g2000vbe.googlegroups.com...
>
> > > > > The majority of antennas used today are (commercial) circularly polarized
>
> > > > That probably isn't true for VHF/UHF. Take a look at the website of a major
> > > > supplier of professional antennas such
ashttp://www.amphenol-jaybeam.com/base-station-antennas-search.php. Entering
> > > > CP in their search engine for base-station antennas yielded 2 results wheras
> > > > entering VP yielded 365!
>
> > > > One of the reasons for greater use of linear polarisations in professional
> > > > applications is frequency re-use on the orthogonal polarisation some
> > > > distance away - i.e. the value of the limited VHF/UHF spectrum. That's
> > > > certainly true in Europe.
>
> > > > > Ham antennas remain in the linear domain (ala the Yagi and similar)
> > > > > There are many reasons espoused in CP advantages in "point to point"
> > > > > What is the main advantage hams hold over the more popular circular
> > > > > polarized antennas in its "skip" type useage versus "point to point" ?
>
> > > > Extensive use is made of 'mixed polarisation' for transmitting VHF FM
> > > > broadcast services in Europe. It may not be pure circular but it contains
> > > > significant vertically- and horizontally-polarised components. The mobile
> > > > and portable receiving antennas have whatever polarisation they end up with,
> > > > more or less by accident, and fixed rooftop antennas are usually linearly
> > > > polarised. DAB and terrestrial television are transmitted using V or H
> > > > linear polarisation.
>
> > > > Chris
>
> > > Hmm   A bit too technical for me! When I model my antennas it

> > > shows gain for cp being 3 db above the gains of vertical and
> > > horizontal for the same antenna. Is that what you call "mixed
> > > polarization? In other words, it picks up all polarizations with a
> > > max deviation in signal strength of only 3 db.
> > > I find it hard to make any sort of comparison when using reflective
> > > waves at HF because it is not clear to me exactly what sort of
> > > rotations occur at the reflections on earth and of its layers
> > > together with possible rotation in transit in between in the absence
> > > of true comparison experiments.- Hide quoted text -
>
> > > - Show quoted text -
>
> > Describe the circular antenna you are modeling? With the gain you are
> > claiming it doesnt seem to be an apples to apples comparison. I
> > suspect you are comparing a fullwave loop to a halfwave dipole. Show
> > the data you are using for your model or be prepared for most to
> > suspect you of the usual handwaving.
>
> > Jimmie.
>
> NO- Hide quoted text -
>
> - Show quoted text -

Sounds like the same old Art to me, wants opinions and help on an
antenna and he is not willing to disclose what he is really talking
about.
I would Ploink him if I could.

Jimmie

1196. Re: Home Depot antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-12 03:35:29 UTC
From: JIMMIE <JIMMIEDEE123@YAHOO.COM>
Message-ID: <28b1528c-79c9-4c73-8f98-f03f7e406d1e@c1g2000yqi.googlegroups.com>
Source record: 13958

On Aug 9, 9:41 pm, professorpaul <deadgo...@comcast.net> wrote:
> Buddy of mine got something like that. Put a 2 meter whip/ground plane
> on the top, and rigged a bracket to go under his tire -- for ARES,
> field day, etc. Works great!
>
> /paul W3FIS

I think this one is going to become a portable HF antenna. When fully
extended the electrical connection between sections is not very
reliable so jumpers may be required.\

Jimmie

1197. Re: Circular versus linear polarization

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-12 03:54:35 UTC
From: tom <news4792@taring.org>
Message-ID: <4a823d56$0$77051$8046368a@newsreader.iphouse.net>
Source record: 13959

JIMMIE wrote:
> On Aug 11, 5:10 pm, Art Unwin <ArthurUn...@gmail.com> wrote:
>> On Aug 11, 3:28 pm, JIMMIE <JIMMIEDEE...@YAHOO.COM> wrote:
>> NO- Hide quoted text -
>>
>> - Show quoted text -
>
> Sounds like the same old Art to me, wants opinions and help on an
> antenna and he is not willing to disclose what he is really talking
> about.
> I would Ploink him if I could.
>
> Jimmie
>

No, don't even think of it. He is the best entertainment on the net
when he is off his meds.

tom
K0TAR

1198. Re: Circular versus linear polarization

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-12 04:01:49 UTC
From: tom <news4792@taring.org>
Message-ID: <4a823ea8$0$36009$8046368a@newsreader.iphouse.net>
Source record: 13960

Jeff Liebermann wrote:
>
> Applied CP made simple:
>
> 1. Circular polarization is like a drill. Instead of bouncing off
> the ionosphere, it drills right through it. Therefore, little or no
> skip with CP.

So the ionosphere knows the difference between CP and linear?

Interesting, since horizontal and vertical both reflect, and CP is a
combination of both.

Could you please explain what's happening with CP?

Thanks.

tom
K0TAR

1199. Re: Circular versus linear polarization

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-12 06:17:00 UTC
From: Jeff Liebermann <jeffl@cruzio.com>
Message-ID: <33n48590d3k6esshpi2hp3h3dju5714fvd@4ax.com>
Source record: 13961

On Tue, 11 Aug 2009 23:01:49 -0500, tom <news4792@taring.org> wrote:

>Jeff Liebermann wrote:
>>
>> Applied CP made simple:
>>
>> 1. Circular polarization is like a drill. Instead of bouncing off
>> the ionosphere, it drills right through it. Therefore, little or no
>> skip with CP.
>
>So the ionosphere knows the difference between CP and linear?

I suspect the decision making abilities of the ionosphere approaches
zero. Attributing intelligence to inanimate objects is generally a
bad idea.

>Interesting, since horizontal and vertical both reflect, and CP is a
>combination of both.
>
>Could you please explain what's happening with CP?

Ummm.... no, I can't.
Please read my other points and see if they pass a sanity check.

Incidentally #2 should read:
"If you're sending CW (not CP) with your right hand..."
Sorry(tm).

I just hate it when someone takes me seriously.

--
Jeff Liebermann jeffl@cruzio.com
150 Felker St #D http://www.LearnByDestroying.com
Santa Cruz CA 95060 http://802.11junk.com
Skype: JeffLiebermann AE6KS 831-336-2558

1200. Re: Circular versus linear polarization

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-12 07:00:21 UTC
From: Jeff Liebermann <jeffl@cruzio.com>
Message-ID: <avn485tdu8rqbhnobkqe3h3inlgp8v0e9t@4ax.com>
Source record: 13962

On Tue, 11 Aug 2009 13:13:38 -0700, Roy Lewallen <w7el@eznec.com>
wrote:

>Jeff Liebermann wrote:
>> On Mon, 10 Aug 2009 11:44:52 -0700, Roy Lewallen <w7el@eznec.com>
>> wrote:
>>
>>> I also did some experiments in the early '70s to see if CP would reduce
>>> fading. I built a couple of types of omnidirectional CP antennas -- a
>>> "skew planar", and a copy of a commercial FM BC antenna, for mobile use
>>> with the local 450 MHz repeater.
>>
>> A "halo" type of antenna? Some of the commercial broadcast FM
>> antennas are eliptical polarized. Most of the signal is horizontally
>> polarized, but there is a small vertical component in order to improve
>> performance in vehicles.
>
>The "skew planar" looked like a cloverleaf antenna with each "petal"
>rotated 45 degrees. The other was a copy of a broadcast antenna
>advertised to be circularly polarized. I used a simple hand held dipole
>and field strength meter to judge polarization. I know now it was
>subject to a number of shortcomings, but I feel it did a reasonable job
>of indicating circularity. Both antennas were reasonably circular.

Sounds reasonable. Incidentally, the FM broadcast "cloverleaf"
antenna was invented by Philip Smith, the inventor of the Smith Chart:
<http://www.ieeeghn.org/wiki/index.php/Philip_H._Smith_Oral_History#FM_Broadcasting_and_th
e_Cloverleaf_Antenna>

I blundered cross this page on a 6/2 meter CP antenna design. Looks
workable but very narrow band:
<http://www.wa7x.com/cycloid_info.html>

>> I tried to use CP on both ends and eventually gave up. Thanks for the
>> explanation, but I have a different theory. The polarization changes
>> sense (direction) every times it's reflected. We standardized on RH
>> CP. When the RH CP signal hits the car, it is reflected as LH CP. If
>> the LH CP signal arrives at the repeater antenna, which is RH
>> polarized, they cancel. If it became linear, it would theoretically
>> only present a -3dB polarization loss, which is not huge.
>
>No, that's a common misconception. A circularly polarized wave produces
>a circularly polarized wave of the opposite handedness only when
>reflected from a plane normal to its direction of propagation. That's
>seldom the case in a communication environment. When reflected from

>surfaces at other angles, the result is a change in circularity, from
>elliptical to nearly linear depending on the angle of reflection and the
>reflection coefficients of the surface. A short while with the modeling
>program of your choice will confirm this.

With my limited abilities, it will probably take more than a "short while" with an antenna modeling program. I've never done any polarization studies. I'll take your word for this, but it would seem that there would be a gradual transition from total reversal in sense from a perpendicular reflector, to conversion to linear polarization with shallow reflection angles. I'll see if I can find some research on this. (I'm curious).

I once did some crude experimentation on the degree of isolation provided by a reflective sense reversal. I just happen to have two big 2.4Ghz helical antennas, both RH CP. I separated them by about 15 meters and measured the received signal level. I then placed an obstruction (corner of building) along the line of sight, and supplied a flat plate reflector. I didn't think to try varying angles of incidence and reflection and just ran it at 45 degrees from the plane of the flat plate reflector. The signal dropped about -15dB which I guess is about all I could expect in an uncontrolled environment. The loss would indicate that the signal was still substantially circularly polarized at 45 degrees. I still have the helix antennas and can repeat the test if necessary (and if I can find the time).

Thanks for the clarification.

--
Jeff Liebermann jeffl@cruzio.com
150 Felker St #D http://www.LearnByDestroying.com
Santa Cruz CA 95060 http://802.11junk.com
Skype: JeffLiebermann AE6KS 831-336-2558

1201. Re: Circular versus linear polarization

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-12 12:18:15 UTC
From: tom <news4792@taring.org>
Message-ID: <4a82b361$0$77054$8046368a@newsreader.iphouse.net>
Source record: 13963

Jeff Liebermann wrote:
>
> Ummm.... no, I can't.
> Please read my other points and see if they pass a sanity check.
>
> Incidentally #2 should read:
> "If you're sending CW (not CP) with your right hand..."
> Sorry(tm).
>
> I just hate it when someone takes me seriously.
>

Ahh. I see.

Should have read on rather than just reading the first and responding.

tom
K0TAR

1202. GPS/Choke Ring Re: Circular versus linear polarization

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-12 15:46:11 UTC
From: Jim Lux <james.p.lux@jpl.nasa.gov>
Message-ID: <h5uo44jcp1@news.jpl.nasa.gov>
Source record: 13964

Roy Lewallen wrote:

> I wasn't aware of any GPS receivers using crossed dipole "turnstile"
> type antennas. All the ones I've seen use either quadrifilar helix or
> patch antennas. Can you point to a reference or two regarding the choke
> rings -- I don't know what these are or what they do, and would like to
> learn.
>
> > . . .
>
> Roy Lewallen, W7EL

For high performance GPS receivers and measurements, it's important that the apparent position of the antenna be be independent of the look angle to the various satellites. Partly this is by making antennas with a phase center that is look angle independent, partly this is by making sure you're not receiving a combination of direct and reflected waves.

Remember that for precision GPS, what you're looking at is essentially the carrier phase within a single chip time (about 100ns). The carrier phase outside the correlator's time window doesn't contribute to the observable measurement (because it's got a random 180 degree phase shift superimposed on it).

So what you're really worried about is interference that causes an apparent change in phase of the carrier (at 1.5GHz.. call it 20cm wavelength). In precision GPS, you're talking millimeter scale measurements, or, say, better than 1 degree of apparent phase shift. A reflected signal that is 35 dB down is enough to get this sort of error.

The multipath from "distant" reflectors is fairly easily dealt with by putting the antenna on a pole. Distant, here, means a few meters away.. farther than that, and the multipath signal's code phase is far enough away that it doesn't contribute to the measurement. The chip length is about 100 ns, or 30 meters. So, putting the antenna on a pole a few meters up, with a plate underneath it that cuts off the "view" of the ground closer than a few meters away guarantees that you won't see any reflections from something closer than 20 meters path length different.

You also choose an antenna that has very little gain below several degrees above the horizon.

But, just any old flat plate won't work, because you can have a creeping wave propagate across the surface AND you don't want the plate itself to reflect a signal. Solution: make a plate that is a RF "black hole" at the frequency of interest.. it's a series of grooves that are carefully

designed to attenuate the reflected and evanescent wave propagating
across the surface (just like in a corrugated horn).

The most common design is by Dorne and Margolin, and I guarantee you've
seen these if you've seen surveyors doing GPS measurements. They're
about 2' in diameter with several wide grooves around a small conical or
hemispherical radome covering the actual antenna. Sometimes, the whole
thing is covered by a hemispherical radome.

http://facility.unavco.org/project_support/permanent/equipment/antennas/antennas.html

Is a photo of a typical geodetic installation (sub-mm accuracies)

http://www.trimble.com/infrastructure/gnss-choke-ring-antenna.aspx?dtID=overview

is the actual antenna.

1203. Re: Cushcraft Sale to MFJ

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-12 16:09:15 UTC
From: "Geoffrey S. Mendelson" <gsm@mendelson.com>
Message-ID: <slrnh85q1d.fnf.gsm@cable.mendelson.com>
Source record: 13965

Edmund H. Ramm wrote:
> BTW, sending an e-mail to MFJ's support desk is like transmitting
> into a dummy load.

I have an MFJ-9020 20m CW transceiver I bought around 1994 or 1995. I also have a 40m one too. I noticed that the 40m was much better at receiving.

At one time I needed a manual for it, having lost the one I got with it when I moved, and filled out an olnline "manual request form". They sent one to me via airmail.

I was able to align it with the instructions in the manual, but was not able to determine the problem using the voltage measurements, substituting IC's, etc.

I sent them a detailed question via their support form (not an email) and received a helpful reply from the person who designed the rigs.

I know who it was because he referred to other rigs he had designed.

Considering that I bought the rig 13-14 years, I think that's good support.

In the end, if anyone ever reads this in an archive, I found that I got a lot more gain out of it by upping the internal voltage regulator to 10.7-10.8 volts instead of 10. I'm not sure in a high signal environment you would need it, here there are a lot less signals, and they are much weaker.

The cost of doing so is that the radio will now no longer work properly with less than 12 volts DC input. With the regulator set to 10 volts it will work down to about 11.2 volts.

I hate it when I find a post where someone says "I found the answer to" and never says what the answer was. :-)

Geoff.

--
Geoffrey S. Mendelson, Jerusalem, Israel gsm@mendelson.com N3OWJ/4X1GM

1204. Re: Circular versus linear polarization

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-12 17:10:17 UTC
From: JIMMIE <JIMMIEDEE123@YAHOO.COM>
Message-ID: <352a3329-8239-4709-8ede-2354139c1597@k19g2000yqn.googlegroups.com>
Source record: 13966

On Aug 12, 2:17 am, Jeff Liebermann <je...@cruzio.com> wrote:
> On Tue, 11 Aug 2009 23:01:49 -0500, tom <news4...@taring.org> wrote:
> >Jeff Liebermann wrote:
>
> >> Applied CP made simple:
>
> >> 1. Circular polarization is like a drill. Instead of bouncing off
> >> the ionosphere, it drills right through it. Therefore, little or no
> >> skip with CP.
>
> >So the ionosphere knows the difference between CP and linear?
>
> I suspect the decision making abilities of the ionosphere approaches
> zero. Attributing intelligence to inanimate objects is generally a
> bad idea.
>
> >Interesting, since horizontal and vertical both reflect, and CP is a
> >combination of both.
>
> >Could you please explain what's happening with CP?
>
> Ummm.... no, I can't.
> Please read my other points and see if they pass a sanity check.
>
> Incidentally #2 should read:
> "If you're sending CW (not CP) with your right hand..."
> Sorry(tm).
>
> I just hate it when someone takes me seriously.
>
> --
> Jeff Liebermann   je...@cruzio.com
> 150 Felker St #D   http://www.LearnByDestroying.com
> Santa Cruz CA 95060http://802.11junk.com
> Skype: JeffLiebermann   AE6KS   831-336-2558

Some people just have no sense of humor.

Jimmie

1205. Re: Home Depot antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-12 17:46:39 UTC
From: Jim Lux <james.p.lux@jpl.nasa.gov>
Message-ID: <h5uv61$pj2$1@news.jpl.nasa.gov>
Source record: 13967

JIMMIE wrote:
> On Aug 9, 9:41 pm, professorpaul <deadgo...@comcast.net> wrote:
>> Buddy of mine got something like that. Put a 2 meter whip/ground plane
>> on the top, and rigged a bracket to go under his tire -- for ARES,
>> field day, etc. Works great!
>>
>> /paul W3FIS
>
> I think this one is going to become a portable HF antenna. When fully
> extended the electrical connection between sections is not very
> reliable so jumpers may be required.\
>
> Jimmie

You are right.. there's no electrical connection between segments, and no way to simply jumper it (if you put some sort of connector, it doesn't telescope nicely).

However, what you CAN do is support a piece of wire from the top of the pole down to the ground next to the pole, and that works pretty well.

Another convenient and inexpensive support is a collapsible crappie or panfish pole. Cabela's has 20 ft collapsible rods for under $20 (or did a year or two ago).

The challenge with all these sorts of schemes is holding the pole upright. For a "no wind" situation, an orange traffic cone works fairly well. You shove the pole into the hole in the top.

If you need to tolerate even a small breeze, you need something more.

You can also use multiple painter or swimming pool poles (which are sturdier) to make a giant tripod. The handles from inexpensive paint rollers make the appropriate threaded socket for the male thread on the paint poles.

http://home.earthlink.net/~w6rmk/antenna/tripod.htm

1206. Re: Home Depot antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-12 18:56:50 UTC
From: Art Unwin <ArthurUnwin@gmail.com>
Message-ID: <3aee72d4-ce3d-414a-98d0-0e8c0afba05d@r38g2000yqn.googlegroups.com>
Source record: 13968

On Aug 12, 12:46 pm, Jim Lux <james.p....@jpl.nasa.gov> wrote:
> JIMMIE wrote:
> > On Aug 9, 9:41 pm, professorpaul <deadgo...@comcast.net> wrote:
> >> Buddy of mine got something like that. Put a 2 meter whip/ground plane
> >> on the top, and rigged a bracket to go under his tire -- for ARES,
> >> field day, etc. Works great!
>
> >> /paul W3FIS
>
> > I think this one is going to become a portable HF antenna. When fully
> > extended the electrical connection between sections is not very
> > reliable so jumpers may be required.\
>
> > Jimmie
>
> You are right.. there's no electrical connection between segments, and
> no way to simply jumper it (if you put some sort of connector, it
> doesn't telescope nicely).
>
> However, what you CAN do is support a piece of wire from the top of the
> pole down to the ground next to the pole, and that works pretty well.
>
> Another convenient and inexpensive support is a collapsible crappie or
> panfish pole. Cabela's has 20 ft collapsible rods for under $20 (or did
> a year or two ago).
>
> The challenge with all these sorts of schemes is holding the pole
> upright. For a "no wind" situation, an orange traffic cone works fairly
> well. You shove the pole into the hole in the top.
>
> If you need to tolerate even a small breeze, you need something more.
>
> You can also use multiple painter or swimming pool poles (which are
> sturdier) to make a giant tripod. The handles from inexpensive paint
> rollers make the appropriate threaded socket for the male thread on the
> paint poles.
>
> http://home.earthlink.net/~w6rmk/antenna/tripod.htm

I have used adhesive foil for years on fishing poles.
Ideal for a back pack, un assembled and with foil at the ready!
Last time I saw them on Ebay was $10

1207. Re: Circular versus linear polarization

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-12 19:02:45 UTC
From: Jeff Liebermann <jeffl@cruzio.com>
Message-ID: <fc3685l2sj0v81o9o25rbpp51c8ofkp4i1@4ax.com>
Source record: 13969

On Wed, 12 Aug 2009 10:10:17 -0700 (PDT), JIMMIE
<JIMMIEDEE123@YAHOO.COM> wrote:

>On Aug 12, 2:17ï¿½am, Jeff Liebermann <je...@cruzio.com> wrote:
>> I just hate it when someone takes me seriously.

>Some people just have no sense of humor.
>Jimmie

In my case, it's too much sense of humor. Answering questions with
accurate information is easy. Just Google the question, excavate
through the resultant debris field, and pontificate on what is found.
A dash of authority and a hint of arrogance provides a defensible
packaged answer. A few URL's are always useful.

However, that's too easy, no fun, and most important, can be done by
any mortal. What's more interesting is to supply a series of wrong
answers. In order to do that, one must know both the right answers,
how things really work, and enough about the problem to be able to
successfully misinterpret any data, phenomenon, and physics. That
requires considerably more skill than merely knowing or finding the
right answer. What looks like humor, is really an intellectual
exercise.

Note that supplying wrong answers is not limited to technical Usenet
newsgroups. Lawyers do it while presenting evidence to give the jury
a misleading packaged interpretation of the evidence.

There's also an educational benefit from providing wrong answers. If
one knows all the wrong answers, whatever is left, no matter how
complex or irrational, must be the right answer. Therefore, if you
study how thing do NOT work, you will have a default understanding of
how things actually do work.

--
Jeff Liebermann jeffl@cruzio.com
150 Felker St #D http://www.LearnByDestroying.com
Santa Cruz CA 95060 http://802.11junk.com
Skype: JeffLiebermann AE6KS 831-336-2558

1208. Re: Circular versus linear polarization

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-12 19:20:57 UTC
From: dave <dave@dave.dave>
Message-ID: <4a83161d$0$23227$bd467cd0@news.dslextreme.com>
Source record: 13970

tom wrote:
> Art Unwin wrote:
>> The majority of antennas used today are (commercial) circularly
>> polarized
>> Ham antennas remain in the linear domain (ala the Yagi and similar)
>> There are many reasons espoused in CP advantages in "point to point"
>> What is the main advantage hams hold over the more popular circular
>> polarized antennas in its "skip" type useage versus "point to point" ?
>
> Please provide examples of commercial antennas that are CP. Space
> communication antennas are not ok to include.
>
FM and TV broadcast.

1209. Re: Circular versus linear polarization

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-12 19:21:59 UTC
From: dave <dave@dave.dave>
Message-ID: <4a83165b$0$23227$bd467cd0@news.dslextreme.com>
Source record: 13971

Art Unwin wrote:

>
> Use your own thread to ask for assistance on your question.
> Be prepared to answer why you are requesting this personal service .
> I asked a question on this thread with respect to the main advantage
> for hams that linear
> polarization has over CP. I have no resistance to change if it can be
> justified. I see
> that it can pick up signals that linear antennas cannot hear because
> of a 30 db attenuation
> where as CP has only a 3 db attenuation!

Compared to what?

1210. Re: Circular versus linear polarization

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-12 20:42:35 UTC
From: JIMMIE <JIMMIEDEE123@YAHOO.COM>
Message-ID: <3559bb21-b370-4f4d-a0cc-835c79b3ed08@b15g2000yqd.googlegroups.com>
Source record: 13972

On Aug 12, 3:21 pm, dave <d...@dave.dave> wrote:
> Art Unwin wrote:
>
> > Use your own thread to ask for assistance on your question.
> > Be prepared to answer why you are requesting this personal service .
> > I asked a question on this thread with respect to the main advantage
> > for hams that linear
> > polarization has over CP. I have no resistance to change if it can be
> > justified. I see
> > that it can pick up signals that linear antennas cannot hear because
> > of a 30 db attenuation
> > where as CP has only a 3 db attenuation!
>
> Compared to what?

I thought he said earlirer that it had a 3 db gain

1211. re:vertical antenna on metal roof

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-12 20:53:12 UTC
From: Rollie <rollie@iowatelecom.net>
Message-ID: <h5va3r$47p$1@news.netins.net>
Source record: 13973

I thought it sounded like a good setup, but I checked the internet and found the URL below. Maybe it would help to spread a few ground wires out from the base of the antenna to be sure of the counterpoise effect. I have an SUV with one of the antennas in the middle of the roof. When talking to local operators they tell me they can see the difference in signal when the vehicle is pointed away or toward them. Must be a good counterpoise off the roof.....

http://en.allexperts.com/q/Ham-Radio-2161/Radio-Roofing-1.htm

1212. Source for Isolators ?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-12 22:56:06 UTC
From: Ed <Huckleberry_REMOVE_@bigvalley.net>
Message-ID: <Xns9C65A21A47CDCHuckleberrybigvalley@198.186.192.196>
Source record: 13974

Perhaps a bit out of norm for this group, but I am trying to find a source for VHF and UHF isolators that are somewhat less than the normal exhorbitant price of many public safety communications equipment providers.

Any leads appreciated.

Ed K7AAT

1213. Re: Circular versus linear polarization

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-12 23:39:04 UTC
From: Art Unwin <ArthurUnwin@gmail.com>
Message-ID: <32287f7b-3ad1-4790-83d4-528beef4b623@j21g2000yqe.googlegroups.com>
Source record: 13975

On Aug 12, 3:42 pm, JIMMIE <JIMMIEDEE...@YAHOO.COM> wrote:
> On Aug 12, 3:21 pm, dave <d...@dave.dave> wrote:
>
> > Art Unwin wrote:
>
> > > Use your own thread to ask for assistance on your question.
> > > Be prepared to answer why you are requesting this personal service .
> > > I asked a question on this thread with respect to the main advantage
> > > for hams that linear
> > > polarization has over CP. I have no resistance to change if it can be
> > > justified. I see
> > > that it can pick up signals that linear antennas cannot hear because
> > > of a 30 db attenuation
> > > where as CP has only a 3 db attenuation!
>
> > Compared to what?
>
> I thought he said earlirer that it had a 3 db gain

When I modeled my antenna the max gain was CP I then checked for
linear gains
on the same set up and they were 3 db down. I suppose I should have
set it up for max linear gain and then checked CP gain on the same set
up. (Made a note to myself for future). For end fed antenna, the gain
max was around 13 dbi but 10 dbi seemed to be more the norm. What
really pleased me was the near 50 ohm impedance feed.
The biggest advantage is that people with small yards will now have no
problems on getting on top band with directional antenna and be able
to use the whole band! However, regardless on the ideas I have checked
out on it I am very confident that hams will immediately will be able
to improve it in ways I have not thought of. As with all thoughts
others will say I knew that but I couldn't be bothered because once
the dots are connected
everything appears to be obvious. A jigsaw puzzle with all the parts
turned over is tremendously hard to solve. Once you have seen the
picture it is a different ball game.
The antenna is extremely quiet, and as I have mentioned before the
audio quality is such that I immediately look at the meter only to see
it on the low side. Perhaps the CP pickup
does not register the same as for linear. It is my hope that all will
tackle building one this fall
so that the improvement horizon will broaden while I am still around.

1214. Re: Home Depot antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-12 23:54:59 UTC
From: K7ITM <k7itm@msn.com>
Message-ID: <8566e4a5-1cc6-461a-aa01-23e9b7a2e10c@i4g2000prm.googlegroups.com>
Source record: 13976

On Aug 9, 5:17 pm, JIMMIE <JIMMIEDEE...@YAHOO.COM> wrote:
> Ive been doing some house painting this week so I bought an extension
> handle at Home Depot. Its a colapsable aluminum handle that extends to
> 18 ft. It was on sale for $39.95. I dont think I could have bought the
> tubing that cheap. I only saw a couple of the metal poles left all the
> others were fiberglass.
>
> Jimmie

Another option at a similar price (and less when it's on sale) is
Harbor Freight's 3-section telescoping flagpole. It's three aluminum
sections, 16 feet (1/4 wave on 20 meters) when extended. Their stock
number is 92901-8VGA.

Cheers,
Tom

1215. Re: Source for Isolators ?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-12 23:57:32 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <W-GdncZQZKtyyx7XnZ2dnUVZ_jZi4p2d@giganews.com>
Source record: 13977

Ed wrote:
> Perhaps a bit out of norm for this group, but I am trying to find a
> source for VHF and UHF isolators that are somewhat less than the normal
> exhorbitant price of many public safety communications equipment providers.
>
> Any leads appreciated.
>
> Ed K7AAT

EBay?

Roy Lewallen, W7EL

1216. Re: Circular versus linear polarization

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-13 01:28:01 UTC
From: tom <news4792@taring.org>
Message-ID: <4a836c79$0$77051$8046368a@newsreader.iphouse.net>
Source record: 13978

Art Unwin wrote:
>
> Use your own thread to ask for assistance on your question.
> Be prepared to answer why you are requesting this personal service .
> I asked a question on this thread with respect to the main advantage
> for hams that linear
> polarization has over CP. I have no resistance to change if it can be
> justified. I see
> that it can pick up signals that linear antennas cannot hear because
> of a 30 db attenuation
> where as CP has only a 3 db attenuation!
> So what is it on the other side of the coin is what this thread is
> posing to those who are familiar with respect to radiators.

You stated that MOST commercial antennas are CP. Having been in that
business to some extent, I know that statement to be false. I'm simple
asking you to prove it.

Also where is this information that shows linear antennas have 30dB of
attenuation? When? How? What conditions?

And when do the CP antennas have 3dB by comparison? Give references.

I know you can't since all these things are figments of your addled brain.

tom
K0TAR

1217. Re: Circular versus linear polarization

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-13 01:30:59 UTC
From: Art Unwin <ArthurUnwin@gmail.com>
Message-ID: <93a4620e-eba3-4827-8471-d6a373f070cb@w6g2000yqw.googlegroups.com>
Source record: 13979

On Aug 12, 3:42 pm, JIMMIE <JIMMIEDEE...@YAHOO.COM> wrote:
> On Aug 12, 3:21 pm, dave <d...@dave.dave> wrote:
>
> > Art Unwin wrote:
>
> > > Use your own thread to ask for assistance on your question.
> > > Be prepared to answer why you are requesting this personal service .
> > > I asked a question on this thread with respect to the main advantage
> > > for hams that linear
> > > polarization has over CP. I have no resistance to change if it can be
> > > justified. I see
> > > that it can pick up signals that linear antennas cannot hear because
> > > of a 30 db attenuation
> > > where as CP has only a 3 db attenuation!
>
> > Compared to what?
>
> I thought he said earlirer that it had a 3 db gain

If you are horizontally polarized a vertical will be down 30db
theoretically than if it was horizontal and vica versa. If the
radiator is set for CP transmissions other polarizations
will be down only 3 db theoretically. Seems obvious which is best to
have, except a lot of hams like long distance communication which
means you have to deal with reflections.
From this thread it is obvious to me that we are not sure, at this
point, what changes occur
when reflection comes about. Roy pointed out a "misconception" at
least to his findings but the fact is there is no list of known
changes that one can bank on for reflections of CP at least for the
present. If I am incorrect then please post your thoughts.

1218. Re: Circular versus linear polarization

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-13 01:31:22 UTC
From: tom <news4792@taring.org>
Message-ID: <4a836d41$0$77051$8046368a@newsreader.iphouse.net>
Source record: 13980

Art Unwin wrote:
> On Aug 12, 3:42 pm, JIMMIE <JIMMIEDEE...@YAHOO.COM> wrote:
>> On Aug 12, 3:21 pm, dave <d...@dave.dave> wrote:
>>
>>> Art Unwin wrote:
>>>> Use your own thread to ask for assistance on your question.
>>>> Be prepared to answer why you are requesting this personal service .
>>>> I asked a question on this thread with respect to the main advantage
>>>> for hams that linear
>>>> polarization has over CP. I have no resistance to change if it can be
>>>> justified. I see
>>>> that it can pick up signals that linear antennas cannot hear because
>>>> of a 30 db attenuation
>>>> where as CP has only a 3 db attenuation!
>>> Compared to what?
>> I thought he said earlirer that it had a 3 db gain
>
> When I modeled my antenna the max gain was CP I then checked for
> linear gains
> on the same set up and they were 3 db down. I suppose I should have
> set it up for max linear gain and then checked CP gain on the same set
> up. (Made a note to myself for future). For end fed antenna, the gain
> max was around 13 dbi but 10 dbi seemed to be more the norm. What
> really pleased me was the near 50 ohm impedance feed.
> The biggest advantage is that people with small yards will now have no
> problems on getting on top band with directional antenna and be able
> to use the whole band! However, regardless on the ideas I have checked
> out on it I am very confident that hams will immediately will be able
> to improve it in ways I have not thought of. As with all thoughts
> others will say I knew that but I couldn't be bothered because once
> the dots are connected
> everything appears to be obvious. A jigsaw puzzle with all the parts
> turned over is tremendously hard to solve. Once you have seen the
> picture it is a different ball game.
> The antenna is extremely quiet, and as I have mentioned before the
> audio quality is such that I immediately look at the meter only to see
> it on the low side. Perhaps the CP pickup
> does not register the same as for linear. It is my hope that all will
> tackle building one this fall
> so that the improvement horizon will broaden while I am still around.

And except for his ridiculous claims he will give no details of the
antennas he makes the claims for.

You are a fraud Art.

tom
K0TAR

1219. Re: Circular versus linear polarization

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-13 01:33:53 UTC
From: tom <news4792@taring.org>
Message-ID: <4A836D81.70103@taring.org>
Source record: 13981

dave wrote:
> tom wrote:
>> Art Unwin wrote:
>>> The majority of antennas used today are (commercial) circularly
>>> polarized
>>> Ham antennas remain in the linear domain (ala the Yagi and similar)
>>> There are many reasons espoused in CP advantages in "point to point"
>>> What is the main advantage hams hold over the more popular circular
>>> polarized antennas in its "skip" type useage versus "point to point" ?
>>
>> Please provide examples of commercial antennas that are CP. Space
>> communication antennas are not ok to include.
>>
> FM and TV broadcast.

I asked him, not you because he wouldn't know any answers.

Now you've given it all away!

And he said "the majority" which is untrue.

tom
K0TAR

1220. Re: Circular versus linear polarization

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-13 02:08:09 UTC
From: Art Unwin <ArthurUnwin@gmail.com>
Message-ID: <42f7e345-b765-42b5-9af9-d6fb272f6bb0@d4g2000yqa.googlegroups.com>
Source record: 13982

On Aug 12, 8:31 pm, tom <news4...@taring.org> wrote:
> Art Unwin wrote:
> > On Aug 12, 3:42 pm, JIMMIE <JIMMIEDEE...@YAHOO.COM> wrote:
> >> On Aug 12, 3:21 pm, dave <d...@dave.dave> wrote:
>
> >>> Art Unwin wrote:
> >>>> Use your own thread to ask for assistance on your question.
> >>>> Be prepared to answer why you are requesting this personal service .
> >>>> I asked a question on this thread with respect to the main advantage
> >>>> for hams that linear
> >>>> polarization has over CP. I have no resistance to change if it can be
> >>>> justified. I see
> >>>> that it can pick up signals that linear antennas cannot hear because
> >>>> of a 30 db attenuation
> >>>> where as CP has only a 3 db attenuation!
> >>> Compared to what?
> >> I thought he said earlirer that it had a 3 db gain
>
> > When I modeled my antenna the max gain was CP I then checked for
> > linear gains
> > on the same set up and they were 3 db down. I suppose I should have
> > set it up for max linear gain and then checked CP gain on the same set
> > up. (Made a note to myself for future). For end fed antenna, the gain
> > max was around 13 dbi but 10 dbi seemed to be more the norm. What
> > really pleased me was the near 50 ohm impedance feed.
> > The biggest advantage is that people with small yards will now have no
> > problems on getting on top band with directional antenna and be able
> > to use the whole band! However, regardless on the ideas I have checked
> > out on it I am very confident that hams will immediately will be able
> > to improve it in ways I have not thought of. As with all thoughts
> > others will say I knew that but I couldn't be bothered because once
> > the dots are connected
> > everything appears to be obvious. A jigsaw puzzle with all the parts
> > turned over is tremendously hard to solve. Once you have seen the
> > picture it is a different ball game.
> > The antenna is extremely quiet, and as I have mentioned before the
> > audio quality is such that I immediately look at the meter only to see
> > it on the low side. Perhaps the CP pickup
> > does not register the same as for linear. It is my hope that all will
> > tackle building one this fall
> > so that the improvement horizon will broaden while I am still around.
>
> And except for his ridiculous claims he will give no details of the
> antennas he makes the claims for.

>
> You are a fraud Art.
>
> tom
> K0TAR

No, I am not Tom you are just extending your mouth. Obviously those who give me a hard time don't get to share. There are others who do not give me a hard time who get to share.
If you are an outsider to every thing then I understand why you lean on the term "ridiculous"
Remember the discussion on Gauss? You never did reverse your position which is against classical physics so you are an unproven quantity to most with respect to antennas and radiation.
You could, ofcourse, provide a list of polarity changes upon collision instead of your dart throwing which is never accurate. Why don't you plonk me or are you just a nasty person?
Maybe you can start a separate thread for just you and me so you can sound off, insult and have a good time.

1221. Re: Circular versus linear polarization

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-13 03:09:05 UTC
From: tom <news4792@taring.org>
Message-ID: <4a83842a$0$77053$8046368a@newsreader.iphouse.net>
Source record: 13983

Art Unwin wrote:>
> No, I am not Tom you are just extending your mouth. Obviously those
> who give me a hard time don't get to share. There are others who do
> not give me a hard time who get to share.
> If you are an outsider to every thing then I understand why you lean
> on the term "ridiculous"
> Remember the discussion on Gauss? You never did reverse your position
> which is against classical physics so you are an unproven quantity to
> most with respect to antennas and radiation.

I never expressed any opinion on Gauss. More of your mid slips.

> You could, ofcourse, provide a list of polarity changes upon collision

What polarity changes? I have not been in the discussion about CP
reflections, just the claims you made about CP antennas being dominant
in the commercial market, which they are not.

> instead of your dart throwing which is never accurate. Why don't you
> plonk me or are you just a nasty person?

I only throw darts at targets, and you give many.

> Maybe you can start a separate thread for just you and me so you can
> sound off, insult and have a good time.

I'd rather insult you here, since this is where you are currently
spouting your nonsense.

And it's not a good time. I feel sorry for you and wish you'd get help.

tom
K0TAR

1222. Re: Source for Isolators ?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-13 05:23:18 UTC
From: Ed <Huckleberry_REMOVE_@bigvalley.net>
Message-ID: <Xns9C65E3C02B537Huckleberrybigvalley@198.186.192.196>
Source record: 13984

>
> EBay?
>
> Roy Lewallen, W7EL
>

Thanks, Roy. Am checking EBay, but need a bunch in a month or so, so will likely have to purchase somewhere.

Got a note from one guy who said Telewave gives a 25% discount to hams. That's my best bet, so far.

Ed

.

1223. Underground antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-13 08:09:47 UTC
From: "-.-. --.-" <A@A.COM>
Message-ID: <h60hog$v2d$1@nnrp-beta.newsland.it>
Source record: 13985

Hello,

googling about "underground antenna", i found this article:
http://www.caves.org/section/commelect/nec-4/nec-4.html
that talk about a version of NEC capable to modeling under-the-ground wires.
IIRC also Roy W7EL write down months ago something about this, and about the
why the NEC capable of this kind of modeling (buried wires and so on) is not
released to the general public. Roy, if you gently can re-explain to me this
i'll be grateful.

Just for my personal information, wondering if someone played with buried or
submersed antennas and (especially from 40 meters going lower in frequency)
get some interesting result.

Thanks for reading and for replies, and as usual sry for my poor english.

-.-. --.- , Italy.

1224. Re: Underground antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-13 08:23:07 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <6sCdndDIuPjwUB7XnZ2dnUVZ_tKdnZ2d@giganews.com>
Source record: 13986

-.-. --.- wrote:
> Hello,
>
> googling about "underground antenna", i found this article:
> http://www.caves.org/section/commelect/nec-4/nec-4.html
> that talk about a version of NEC capable to modeling under-the-ground wires.
> IIRC also Roy W7EL write down months ago something about this, and about the
> why the NEC capable of this kind of modeling (buried wires and so on) is not
> released to the general public. Roy, if you gently can re-explain to me this
> i'll be grateful.
>
> Just for my personal information, wondering if someone played with buried or
> submersed antennas and (especially from 40 meters going lower in frequency)
> get some interesting result.
>
> Thanks for reading and for replies, and as usual sry for my poor english.
>
> -.-. --.- , Italy.

NEC-4 is capable of modeling buried wires, and NEC-4 is available to the public. For information about purchasing NEC-4 see https://ipo.llnl.gov/?q=technologies-software-browse_software-app&s=NEC.

Roy Lewallen, W7EL

1225. Re: Circular versus linear polarization

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-13 10:21:27 UTC
From: Ian Jackson <ianREMOVETHISjackson@g3ohx.demon.co.uk>
Message-ID: <0ZuGnrMnk+gKFw0S@g3ohx.demon.co.uk>
Source record: 13987

In message
<93a4620e-eba3-4827-8471-d6a373f070cb@w6g2000yqw.googlegroups.com>, Art
Unwin <ArthurUnwin@gmail.com> writes
>On Aug 12, 3:42ï¿½pm, JIMMIE <JIMMIEDEE...@YAHOO.COM> wrote:
>> On Aug 12, 3:21ï¿½pm, dave <d...@dave.dave> wrote:
>>
>> > Art Unwin wrote:
>>
>> > > Use your own thread to ask for assistance on your question.
>> > > ï¿½Be prepared to answer why you are requesting this personal service .
>> > > I asked a question on this thread with respect to the main advantage
>> > > for hams that linear
>> > > polarization has over CP. I have no resistance to change if it can be
>> > > justified. I see
>> > > that it can pick up signals that linear antennas cannot hear because
>> > > of a 30 db attenuation
>> > > where as CP has only a 3 db attenuation!
>>
>> > Compared to what?
>>
>> I thought he said earlirer that it had a 3 db gain
>
>If you are horizontally polarized a vertical will be down 30db
>theoretically than if it was horizontal and vica versa.

Where do you get 30dB from? 'Theoretically', it ought to be infinitely
down. In practice, because of reflections and things like that, it can
vary from 'a bit down' to 'a hell of a lot down'.

>If the
>radiator is set for CP transmissions other polarizations
>will be down only 3 db theoretically.

This is correct. You are splitting the transmitter power - half power to
each orthogonal polarisation and, with a 90 degree phase shift,
producing a circularly polarised signal (instead of a 45 degree slant).

>Seems obvious which is best to
>have, except a lot of hams like long distance communication which
>means you have to deal with reflections.
>From this thread it is obvious to me that we are not sure, at this
>point, what changes occur
>when reflection comes about. Roy pointed out a "misconception" at
>least to his findings but the fact is there is no list of known
>changes that one can bank on for reflections of CP at least for the

>present. If I am incorrect then please post your thoughts.
--
Ian

1226. Re: Circular versus linear polarization

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-13 14:45:49 UTC
From: Art Unwin <ArthurUnwin@gmail.com>
Message-ID: <1974317c-cdc3-4a1c-b866-e8d5ed2cb3db@j21g2000yqe.googlegroups.com>
Source record: 13988

On Aug 13, 5:21 am, Ian Jackson
<ianREMOVETHISjack...@g3ohx.demon.co.uk> wrote:
> In message
> <93a4620e-eba3-4827-8471-d6a373f07...@w6g2000yqw.googlegroups.com>, Art
> Unwin <ArthurUn...@gmail.com> writes
>
>
>
> >On Aug 12, 3:42 pm, JIMMIE <JIMMIEDEE...@YAHOO.COM> wrote:
> >> On Aug 12, 3:21 pm, dave <d...@dave.dave> wrote:
>
> >> > Art Unwin wrote:
>
> >> > > Use your own thread to ask for assistance on your question.
> >> > > Be prepared to answer why you are requesting this personal service .
> >> > > I asked a question on this thread with respect to the main advantage
> >> > > for hams that linear
> >> > > polarization has over CP. I have no resistance to change if it can be
> >> > > justified. I see
> >> > > that it can pick up signals that linear antennas cannot hear because
> >> > > of a 30 db attenuation
> >> > > where as CP has only a 3 db attenuation!
>
> >> > Compared to what?
>
> >> I thought he said earlirer that it had a 3 db gain
>
> >If you are horizontally polarized a vertical will be down 30db
> >theoretically than if it was horizontal and vica versa.
>
> Where do you get 30dB from? 'Theoretically', it ought to be infinitely
> down. In practice, because of reflections and things like that, it can
> vary from 'a bit down' to 'a hell of a lot down'.

Correct.
A reference supplied earlier by Jeff in this thread stated "real
world
20db to 35 db" (You used the term "in practice) A manufacturer used
the figure 30 db when I followed thru on his other references which
also appeared to me as being reasonable

>
> >If the
> >radiator is set for CP transmissions other polarizations
> >will be down only 3 db theoretically.

>
> This is correct. You are splitting the transmitter power - half power to
> each orthogonal polarisation and, with a 90 degree phase shift,
> producing a circularly polarised signal (instead of a 45 degree slant).
>
> >Seems obvious which is best to
> >have, except a lot of hams like long distance communication which
> >means you have to deal with reflections.
> >From this thread it is obvious to me that we are not sure, at this
> >point, what changes occur
> >when reflection comes about. Roy pointed out a "misconception" at
> >least to his findings but the fact is there is no list of known
> >changes that one can bank on for reflections of CP at least for the
> >present. If I am incorrect then please post your thoughts.
>
> --
> Ian

1227. Re: Home Depot antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-13 14:59:12 UTC
From: JIMMIE <JIMMIEDEE123@YAHOO.COM>
Message-ID: <fdb38660-1498-400b-9382-12a3e2d1b2ae@o15g2000yqm.googlegroups.com>
Source record: 13989

On Aug 12, 7:54 pm, K7ITM <k7...@msn.com> wrote:
> On Aug 9, 5:17 pm, JIMMIE <JIMMIEDEE...@YAHOO.COM> wrote:
>
> > Ive been doing some house painting this week so I bought an extension
> > handle at Home Depot. Its a colapsable aluminum handle that extends to
> > 18 ft. It was on sale for $39.95. I dont think I could have bought the
> > tubing that cheap. I only saw a couple of the metal poles left all the
> > others were fiberglass.
>
> > Jimmie
>
> Another option at a similar price (and less when it's on sale) is
> Harbor Freight's 3-section telescoping flagpole. It's three aluminum
> sections, 16 feet (1/4 wave on 20 meters) when extended. Their stock
> number is 92901-8VGA.
>
> Cheers,
> Tom

Looks like the sections fit together better than what I found too. I
was thinking of building a 5/8ths for 10M. This would certainly get me
almost there.

Jimmie

1228. Re: re:vertical antenna on metal roof

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-13 17:48:32 UTC
From: JB <nospam@goofball.net>
Message-ID: <QlYgm.1958$Jg.1696@nwrddc01.gnilink.net>
Source record: 13990

"Rollie" <rollie@iowatelecom.net> wrote in message
news:h5va3r$47p$1@news.netins.net...
> I thought it sounded like a good setup, but I checked the internet and
found
> the URL below. Maybe it would help to spread a few ground wires out from
> the base of the antenna to be sure of the counterpoise effect. I have an
> SUV with one of the antennas in the middle of the roof. When talking to
> local operators they tell me they can see the difference in signal when
the
> vehicle is pointed away or toward them. Must be a good counterpoise off
the
> roof.....
>
> http://en.allexperts.com/q/Ham-Radio-2161/Radio-Roofing-1.htm
>
For frequencies below 50 Mhz. you can't get enough counterpoise. Yes it
does matter which way you are facing because you probably can't get decent
symmetry below 144 Mhz either. Center of the roof helps but you will be
operating at rest, a bumper mount will at least do better somewhere. I have
a metal roof and it does change the loading from the typical ground mount,
but is an improvement. For a while I operated from the shack with 40' of RG
8 out to the truck with Hamsticks.

1229. Re: Underground antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-13 19:33:36 UTC
From: Art Unwin <ArthurUnwin@gmail.com>
Message-ID: <b0a62eb1-d51c-41d0-958d-160ae8956ccf@o6g2000yqj.googlegroups.com>
Source record: 13991

On Aug 13, 3:09 am, "-.-. --.-" <A...@A.COM> wrote:
> Hello,
>
> googling about "underground antenna", i found this
article:http://www.caves.org/section/commelect/nec-4/nec-4.html
> that talk about a version of NEC capable to modeling under-the-ground wires.
> IIRC also Roy W7EL write down months ago something about this, and about the
> why the NEC capable of this kind of modeling (buried wires and so on) is not
> released to the general public. Roy, if you gently can re-explain to me this
> i'll be grateful.
>
> Just for my personal information, wondering if someone played with buried or
> submersed antennas and (especially from 40 meters going lower in frequency)
> get some interesting result.
>
> Thanks for reading and for replies, and as usual sry for my poor english.
>
> -.-. --.- , Italy.

Hi there,
I noticed at one point a reference to displacement current
where ..... " in this case it cannot be ignored!" Where and why in
modeling would one ignore displacement current when it is part and
parcel of Maxwell's laws?
Many thanks

1230. Re: Measuring loss of vertical antenna roof counterpoise?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-13 20:26:23 UTC
From: Bruce in alaska <fast@btpost.net>
Message-ID: <fast-24EA53.12261913082009@unknown.usenetserver.com>
Source record: 13992

In article
<0327ab84-193e-4305-976b-eda4b7dc1272@g10g2000yqh.googlegroups.com>,
TF3KX <kristinn1@gmail.com> wrote:

> I have erected various vertical and wire antennas from my roof, using
> its metallic surface as a counterpoise (approx. 10x10m or 30x30ft). I
> have come to suspect that there are some resistive losses in the roof
> or the connections to it. My question is: Does anyone have a
> suggestion for how to estimate by measurements the resistive losses of
> the roof or its connection?
>
> One idea might be erecting a quarter wave vertical for, say, 20m, and
> measure the feed resistance. If modeling would suggest, say, an
> "ideal" resistance of 35 Ohms, but the measured feed resistance would
> be 45 Ohms, I could conclude that the extra 10 ohms were coming from
> the resistance at the base, i.e. from the roof or its connections.
> This assumes that the vertical had otherwise negligible loss (for
> example, an aluminum tube). Now, to complicate things the roof is
> sloping (approx. 45 degrees) and the antenna base is located at its
> peak. This would be hard to model precisely, so that "ideal
> resistance" would be hard to ascertain, to begin with.
>
> Any other suggestions for estimating the roof connection losses?
>
> 73 - Kristinn, TF3KX

The REAL Question here is how are the Roofing Material Sheets bonded
together, both physically and electrically?

I have a Galvanized Steel Roof on my Cabin, where each sheet is spot
welded to it's neighbor in four places along the common length. This
provides a very effective RF Ground for a 4BTV mounted in the center on
the peak. clear down to 2006 Khz, with an applicable Tuner. I also have
a 130 Ft End-feed Longwire that uses the same Roof, via a SEA330
Autotuner for 2.0-22 Mhz Marine Operations. I have install a lot of
these type systems around Alaska for Fixed Comm's Systems over the last
3 Decades, and most are still in use even today. The bonding and
connections between the panels is the critical point for this type of
system, and Self-Tapping Sheet-metal Screws, just don't cut it in the RF
World. It isn't hard to do when installing the Roofing material in the
first place, but it IS hard to retrofit once the roofing is in place.

--
Bruce in alaska
add <path> after <fast> to reply

1231. some teena pic from teh kosher ham techical blog tip and trick i hope u indeed find usefull

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-13 20:38:50 UTC
From: kb9rqz <kb9rqz@puncegotcha.com>
Message-ID: <4a8479f0$1@x-privat.org>
Source record: 13993
Cross-posted to: rec.radio.amateur.policy,rec.radio.amateur.antenna

hear they are a cuple more tomarrow
http://techkb9rqz.blogspot.com/2009/05/some-teena-pic.html

1232. Re: Quad multiband

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-13 20:58:10 UTC
From: Daniel Ferrato - IK2SGL <dferrato@infinito.it>
Message-ID: <4a847e66$0$700$5fc30a8@news.tiscali.it>
Source record: 13994

Since I haven't gotten any reply I'm trying again.
Thnak you in advance

Daniel
IK2SGL

"Daniel Ferrato - IK2SGL" <dferrato@infinito.it> ha scritto nel messaggio
news:...
> Dear OM, I would like to build a Cubical Quad multiband and I've found the
> site of EI7BA
> http://www.iol.ie/~bravo/Cubical%20Quad.htm, I'd be interested in building
> up something like that but with 3el. I was thinking about having the
> director and reflector opened at pyramid-shape like the EI7BA project but
> the radiator at normal crossing like the fixed spacing in the common
> multiband version.
> Do you have any projects or tips? I'm a newbe in building antennas.
>
> 73s
> Daniel
> IK2SGL
> Como - JN45MT
>
> volevo chiedere se esisteva
> qualcosa di simile perï¿½ a 3 elementi. Pensavo a qualcosa del genere
> riflettore e diretttore posti ad apertura conica e direttore a croce
> normale.
> Sapete illuminarmi su eventualli progetti?
> Salutoni
>
> Daniel
> IK2SGL

1233. Re: Underground antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-13 21:11:00 UTC
From: Jim Lux <james.p.lux@jpl.nasa.gov>
Message-ID: <h61vh4ngr1@news.jpl.nasa.gov>
Source record: 13996

Roy Lewallen wrote:
> -.-. --.- wrote:
>> Hello,
>>

>> -.-. --.- , Italy.
>
> NEC-4 is capable of modeling buried wires, and NEC-4 is available to the
> public. For information about purchasing NEC-4 see
> https://ipo.llnl.gov/?q=technologies-software-browse_software-app&s=NEC.
>
> Roy Lewallen, W7EL

I like the whole part of the form where I had to certify that I wasn't doing nuclear weapons design, nor was I planning on using NEC4 for the design, development, production, stockpiling, or use of chemical or biological weapons.

They apparently don't care if I do those things, I just might not be able to use NEC4 in the process.

1234. Re: Quad multiband

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-13 21:40:14 UTC
From: Gary <jgboyles@aol.com>
Message-ID: <030e56f9-491a-483c-a695-e15d28c3c9b3@r18g2000yqd.googlegroups.com>
Source record: 13995

On Aug 13, 3:58 pm, "Daniel Ferrato - IK2SGL" <dferr...@infinito.it>
wrote:
> Since I haven't gotten any reply I'm trying again.
> Thnak you in advance
>
> Daniel
> IK2SGL
>
> "Daniel Ferrato - IK2SGL" <dferr...@infinito.it> ha scritto nel messaggio
> news:...
>
>
>
> > Dear OM, I would like to build a Cubical Quad multiband and I've found the
> > site of EI7BA
> >http://www.iol.ie/~bravo/Cubical%20Quad.htm, I'd be interested in building
> > up something like that but with 3el. I was thinking about having the
> > director and reflector opened at pyramid-shape like the EI7BA project but
> > the radiator at normal crossing like the fixed spacing in the common
> > multiband version.
> > Do you have any projects or tips? I'm a newbe in building antennas.
>
> > 73s
> > Daniel
> > IK2SGL
> > Como - JN45MT
>
> > volevo chiedere se esisteva
> > qualcosa di simile per a 3 elementi. Pensavo a qualcosa del genere
> > riflettore e diretttore posti ad apertura conica e direttore a croce
> > normale.
> > Sapete illuminarmi su eventualli progetti?
> > Salutoni
>
> > Daniel
> > IK2SGL- Hide quoted text -
>
> - Show quoted text -

Hi Daniel, If you are new to antenna building, I would start with
something simplier, say a single band 2 element quad with a boom, or
if you are good at welding and metal fabrication, a single band Spyder
quad. Usually they are D.E. and Reflector.

A 3 element multi band Spyder quad is quite an undertaking both in terms of building, and getting it to work satisfactorily on all bands, not for a beginner.

Gary N4AST

1235. kelp

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-13 23:51:33 UTC
From: kb9rqz <mark@kb9rqz.com>
Message-ID: <c9c4ab51-d41c-416c-a66b-01029a811def@p9g2000vbl.googlegroups.com>
Source record: 13997
Cross-posted to: rec.radio.amateur.policy,rec.radio.amateur.antenna

On Aug 13, 4:38 pm, "kb9rqz" <kb9...@puncegotcha.com> wrote:
>
fake

1236. Re: Underground antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-14 01:03:22 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <75idndki3opAKhnXnZ2dnUVZ_u2dnZ2d@giganews.com>
Source record: 13998

Jim Lux wrote:
>
> I like the whole part of the form where I had to certify that I wasn't
> doing nuclear weapons design, nor was I planning on using NEC4 for the
> design, development, production, stockpiling, or use of chemical or
> biological weapons.
>
> They apparently don't care if I do those things, I just might not be
> able to use NEC4 in the process.

The only important thing is that you *say* you're not doing those things. We all know that nuclear, chemical and biological weapons developers would never lie about what they're doing.

But this is a big step beyond how things used to be. Until a few years ago, NEC-4 could be sold only to people who said they were U.S. citizens for use in the U.S. So it was trivial for any potential enemy to get the program which could be carried anywhere in the world on a floppy disk in a shirt pocket, or even sent by email. In the meantime, users in friendly countries had to apply for an exemption via diplomatic channels. I know of at least one case where this was done, and approval took several years.

Roy Lewallen, W7EL

1237. Re: kelp

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-14 06:24:10 UTC
From: kb9rqz <mark@kb9rqz.com>
Message-ID: <b421d993-b80e-43d6-ae24-db9251086d28@32g2000yqj.googlegroups.com>
Source record: 14000
Cross-posted to: rec.radio.amateur.policy,rec.radio.amateur.antenna

On Aug 14, 3:02 am, "anon" <anon@anon> wrote:
> Goon

yes you are a goon
thank you for the admission

but you lied about not rading ym kelp threads too

1238. Re: an ontopic post about code

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-14 06:30:44 UTC
From: kb9rqz@yahoooo.com
Message-ID: <i41a85pa12f69e8rnmlemflefg4ln3r1h3@4ax.com>
Source record: 13851
Cross-posted to: alt.ham-radio.vhf-uhf,rec.radio.amateur.policy,rec.radio.amateur.antenna

On Fri, 01 Dec 2006 09:36:47 -0800, John Smith
<assemblywizard@gmail.com> wrote:

>K4YZ wrote:
>> Nope.
>>
>> The IP Address and servers are complete proof that I do NOT share
>> any annonymous character's "address".
>>
>> Sounds like Lennie, to me....
>>
>> Steve, K4YZ
>>
>
>To anyone with even an elementary understanding of anonymous proxies,
>anonymous remailers, zombie backdoors, etc., the ability to change ones
>IP address and header details is simplistic, indeed, with little time
>spent anyone can appear to be "coming" from anywhere in the world.
>
>You waste my time. Worse, you think us all idiots here. You remind me
>of the "street smart" prosecutors and defense attorneys who stack jurys
>with members of little or no technical knowledge and then call in
>"expert witnesses" and propose arguments of technical details to boggle
>their minds.
>
>You have only proven that you, yourself are either ignorant to such
>technical details, or else you are indeed street smart, I favor the
>latter in this case (however, if you in the dark about such things, 15
>minutes on google will enlighten you.)
>
>JS

"one useless man is disgrace 2 become a law firm 3 or more become a congress"
adams

woger you are a Congress all in your own head
"http://www.3ix.org/sys/aff.php?aff=7439" target="_blank"

altopia is never used by KB9RQZ
http://kb9rqz.cc.cc
http://kd8ctl.com
nor is Konstans@hotmail.com ever
btw i can be found at
17366 N River Rd

Chassel Mi

but the cowards asking lack the gut to act

1239. Re: kelp

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-14 07:02:56 UTC
From: anon <anon@anon>
Message-ID: <31vk59.k8j.19.1@news.alt.net>
Source record: 13999
Cross-posted to: rec.radio.amateur.policy,rec.radio.amateur.antenna

Goon

1240. Re: Quad multiband

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-14 10:09:28 UTC
From: "Larry Gauthier (K8UT)" <MyCallsign@ARRL.NET>
Message-ID: <EJahm.64975$DF1.28237@newsfe13.iad>
Source record: 13852

Daniel,

I agree with Gary - building and tuning a quad properly is a lot of work, and perhaps it is better to start with a smaller, 2 element quad and improve it later?

My antenna is made by Gem www.gemquad.com , which is a boomless design that offers optimal spacing on all bands. If you are good at welding and can build the center spider support, the rest of the antenna is easier. My antenna began as a 3 band (10, 15, 20) model, then added loops for the 12 and 17 meter WARC bands. Then I added a 2 element 30 meter "U" shaped dipole beam between the 20 and 17 meter loops. Then I added a D.E. and reflector for 6 meters. So, although it is only a 2 element quad, is it is now a 7 band antenna!

I use a remote antenna selector switch on the mast of my quad, and select the bands in 4 groups: 20 meters alone, 30 meters alone, 17 and 15 tied together, 12 and 10 meters tied together, and 6 meters. Because the base impedance of a loop calculates at 105 ohms, I use a 1/4 wavelength 75 ohm feedline in each group of wires to bring the SWR to 1:1 for each band. (The 15/17 group feedline is cut for 15 meters; the 10/12 meter group feedline is cut for 10 meters. SWR is still excellent on the 17 & 12 meter bands.)

My quad has been in the air for 9 years and gives me very good performance, but I must tell you that an antenna with this much wire at 70 feet requires a LOT of maintenance. This quad is mounted on a tilt-over tower which makes fixing the antenna easier -- I can drop the tower with a motorized winch and work on the antenna from the ground. I would not recommend that anyone install a quad on a stationary tower that requires adjusting/repairing at the top of the tower.

I hope you find my information helpful. Please feel free to email for more information.
--
-larry
K8UT
"Daniel Ferrato - IK2SGL" <dferrato@infinito.it> wrote in message news:4a847e66$0$700$5fc30a8@news.tiscali.it...
> Since I haven't gotten any reply I'm trying again.
> Thnak you in advance
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> Daniel
> IK2SGL
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> "Daniel Ferrato - IK2SGL" <dferrato@infinito.it> ha scritto nel messaggio

> news:...
>> Dear OM, I would like to build a Cubical Quad multiband and I've found
>> the site of EI7BA
>> http://www.iol.ie/~bravo/Cubical%20Quad.htm, I'd be interested in
>> building up something like that but with 3el. I was thinking about having
>> the director and reflector opened at pyramid-shape like the EI7BA project
>> but the radiator at normal crossing like the fixed spacing in the common
>> multiband version.
>> Do you have any projects or tips? I'm a newbe in building antennas.
>>
>> 73s
>> Daniel
>> IK2SGL
>> Como - JN45MT
>>
>> volevo chiedere se esisteva
>> qualcosa di simile per a 3 elementi. Pensavo a qualcosa del genere
>> riflettore e diretttore posti ad apertura conica e direttore a croce
>> normale.
>> Sapete illuminarmi su eventualli progetti?
>> Salutoni
>>
>> Daniel
>> IK2SGL
>

1241. Re: Quad multiband

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-14 10:23:06 UTC
From: Daniel Ferrato - IK2SGL <dferrato@infinito.it>
Message-ID: <4a853b0e$0$6834$5fc30a8@news.tiscali.it>
Source record: 13853

Thank you Larry and Gary for the precious information. I will turn into a 2 el. quad as I understand the difficulties for a beginner.
Your comments have been of great benefit.

Good DX

73
Daniel
IK2SGL

"Larry Gauthier (K8UT)" <MyCallsign@ARRL.NET> ha scritto nel messaggio news:EJahm.64975$DF1.28237@newsfe13.iad...
> Daniel,
>
> I agree with Gary - building and tuning a quad properly is a lot of work,
> and perhaps it is better to start with a smaller, 2 element quad and
> improve it later?
>
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> that offers optimal spacing on all bands. If you are good at welding and
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> antenna began as a 3 band (10, 15, 20) model, then added loops for the 12
> and 17 meter WARC bands. Then I added a 2 element 30 meter "U" shaped
> dipole beam between the 20 and 17 meter loops. Then I added a D.E. and
> reflector for 6 meters. So, although it is only a 2 element quad, is it is
> now a 7 band antenna!
>
> I use a remote antenna selector switch on the mast of my quad, and select
> the bands in 4 groups: 20 meters alone, 30 meters alone, 17 and 15 tied
> together, 12 and 10 meters tied together, and 6 meters. Because the base
> impedance of a loop calculates at 105 ohms, I use a 1/4 wavelength 75 ohm
> feedline in each group of wires to bring the SWR to 1:1 for each band.
> (The 15/17 group feedline is cut for 15 meters; the 10/12 meter group
> feedline is cut for 10 meters. SWR is still excellent on the 17 & 12 meter
> bands.)
>
> My quad has been in the air for 9 years and gives me very good
> performance, but I must tell you that an antenna with this much wire at 70
> feet requires a LOT of maintenance. This quad is mounted on a tilt-over
> tower which makes fixing the antenna easier -- I can drop the tower with a
> motorized winch and work on the antenna from the ground. I would not
> recommend that anyone install a quad on a stationary tower that requires
> adjusting/repairing at the top of the tower.
>
> I hope you find my information helpful. Please feel free to email for more

> information.
> --
> -larry
> K8UT
> "Daniel Ferrato - IK2SGL" <dferrato@infinito.it> wrote in message
> news:4a847e66$0$700$5fc30a8@news.tiscali.it...
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>> Daniel
>> IK2SGL
>>
>> "Daniel Ferrato - IK2SGL" <dferrato@infinito.it> ha scritto nel messaggio
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>>> the site of EI7BA
>>> http://www.iol.ie/~bravo/Cubical%20Quad.htm, I'd be interested in
>>> building up something like that but with 3el. I was thinking about
>>> having the director and reflector opened at pyramid-shape like the EI7BA
>>> project but the radiator at normal crossing like the fixed spacing in
>>> the common multiband version.
>>> Do you have any projects or tips? I'm a newbe in building antennas.
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>>> volevo chiedere se esisteva
>>> qualcosa di simile perï¿½ a 3 elementi. Pensavo a qualcosa del genere
>>> riflettore e diretttore posti ad apertura conica e direttore a croce
>>> normale.
>>> Sapete illuminarmi su eventualli progetti?
>>> Salutoni
>>>
>>> Daniel
>>> IK2SGL
>>
>
>

1242. Re: Home Depot antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-14 20:33:46 UTC
From: K7ITM <k7itm@msn.com>
Message-ID: <9978782f-2592-4311-90e4-f2189bcc30f7@x5g2000prf.googlegroups.com>
Source record: 13854

On Aug 13, 7:59 am, JIMMIE <JIMMIEDEE...@YAHOO.COM> wrote:
> On Aug 12, 7:54 pm, K7ITM <k7...@msn.com> wrote:
>
>
>
> > On Aug 9, 5:17 pm, JIMMIE <JIMMIEDEE...@YAHOO.COM> wrote:
>
> > > Ive been doing some house painting this week so I bought an extension
> > > handle at Home Depot. Its a colapsable aluminum handle that extends to
> > > 18 ft. It was on sale for $39.95. I dont think I could have bought the
> > > tubing that cheap. I only saw a couple of the metal poles left all the
> > > others were fiberglass.
>
> > > Jimmie
>
> > Another option at a similar price (and less when it's on sale) is
> > Harbor Freight's 3-section telescoping flagpole. It's three aluminum
> > sections, 16 feet (1/4 wave on 20 meters) when extended. Their stock
> > number is 92901-8VGA.
>
> > Cheers,
> > Tom
>
> Looks like the sections fit together better than what I found too. I
> was thinking of building a 5/8ths for 10M. This would certainly get me
> almost there.
>
> Jimmie

I have one, and to me it seems reasonably well made and more rugged
than the telescoping pole I have for window cleaning that's probably
similar to the Home Depot item you originally posted about. I would
recommend planning on some sort of strap between sections, to assure a
good RF path. They also have a 4 section, 20 foot one, though it's
over 50% more expensive.

Cheers,
Tom

1243. Re: Circular versus linear polarization

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-15 19:01:47 UTC
From: JIMMIE <JIMMIEDEE123@YAHOO.COM>
Message-ID: <25cfcbc6-d7a0-419b-b954-ff309ac82f99@c14g2000yqm.googlegroups.com>
Source record: 13855

On Aug 11, 4:24 pm, Art Unwin <ArthurUn...@gmail.com> wrote:
> different options to what we already have.
> All I ask of them is to share with the rest of us exactly what
> happens to CP when it collides with anything in transit to a receiver.

And the information was so shared.

Jimmie

1244. Aluminum spreader quad

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-15 19:11:49 UTC
From: JIMMIE <JIMMIEDEE123@YAHOO.COM>
Message-ID: <7d69e953-4bdc-4f3a-83ac-ac0ef8a8324b@f37g2000yqn.googlegroups.com>
Source record: 13856

I was talking with some guys this AM about building a quad antenna using aluminum spreaders. I know that it at least the tips of the spreaders would have to be made of insulating material such a fiberglass but the consensus seemed to be that most of the spreaders should be non-metalic. I was wondering if anyone here had built a quad with almost all of the spreaders made of metal and what was the results.

Jimmie

1245. Re: Aluminum spreader quad

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-15 20:30:09 UTC
From: Philo <philo@nospampse.be>
Message-ID: <EWEhm.213420$ay4.65753@newsfe27.ams2>
Source record: 13857

"JIMMIE" <JIMMIEDEE123@YAHOO.COM> wrote in message
news:7d69e953-4bdc-4f3a-83ac-ac0ef8a8324b@f37g2000yqn.googlegroups.com...
>I was talking with some guys this AM about building a quad antenna
> using aluminum spreaders. I know that it at least the tips of the
> spreaders would have to be made of insulating material such a
> fiberglass but the consensus seemed to be that most of the spreaders
> should be non-metalic. I was wondering if anyone here had built a quad
> with almost all of the spreaders made of metal and what was the
> results.
>
> Jimmie

A few years ago, I had a Hygain 3-band quad with aluminum spreaders.

"Strategically placed" insulating rods divided the spreaders into
non-resonant, neutral segments.

Philo

1246. Re: Circular versus linear polarization

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-15 23:27:37 UTC
From: tom <news4792@taring.org>
Message-ID: <4a874465$0$36006$8046368a@newsreader.iphouse.net>
Source record: 13858

JIMMIE wrote:
> On Aug 11, 4:24 pm, Art Unwin <ArthurUn...@gmail.com> wrote:
>> different options to what we already have.
>> All I ask of them is to share with the rest of us exactly what
>> happens to CP when it collides with anything in transit to a receiver.
>
> And the information was so shared.
>
> Jimmie

They split themselves from the conspiracy to keep Art un- and
misinformed. They will pay for that.

tom
K0TAR

1247. Re: Aluminum spreader quad

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-15 23:41:01 UTC
From: JIMMIE <JIMMIEDEE123@YAHOO.COM>
Message-ID: <928c8e4c-80a6-4f8a-9dee-d62a6f554f88@s15g2000yqs.googlegroups.com>
Source record: 13859

On Aug 15, 4:30 pm, "Philo" <ph...@nospampse.be> wrote:
> "JIMMIE" <JIMMIEDEE...@YAHOO.COM> wrote in message
>
> news:7d69e953-4bdc-4f3a-83ac-ac0ef8a8324b@f37g2000yqn.googlegroups.com...
>
> >I was talking with some guys this AM about building a quad antenna
> > using aluminum spreaders. I know that it at least the tips of the
> > spreaders would have to be made of insulating material such a
> > fiberglass but the consensus seemed to be that most of the spreaders
> > should be non-metalic. I was wondering if anyone here had built a quad
> > with almost all of the spreaders made of metal and what was the
> > results.
>
> > Jimmie
>
> A few years ago, I had a Hygain 3-band quad with aluminum spreaders.
>
> "Strategically placed" insulating rods divided the spreaders into
> non-resonant, neutral segments.
>
> Philo

I was thinking about a single band quad. I figured that on a single
band quad the length of the spreader would be either 1.414 or .707
(depending on how you see this) times the lenght of one side of the
quad. I dont think this would be close to being resonant.

Jimmie

1248. Re: Circular versus linear polarization

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-15 23:51:29 UTC
From: JIMMIE <JIMMIEDEE123@YAHOO.COM>
Message-ID: <b7a2c881-3cdd-4f90-ac5e-644058510d15@r38g2000yqn.googlegroups.com>
Source record: 13860

On Aug 15, 7:27 pm, tom <news4...@taring.org> wrote:
> JIMMIE wrote:
> > On Aug 11, 4:24 pm, Art Unwin <ArthurUn...@gmail.com> wrote:
> >> different options to what we already have.
> >> All I ask of them is to share with the rest of us exactly what
> >> happens to CP when it collides with anything in transit to a receiver.
>
> > And the information was so shared.
>
> > Jimmie
>
> They split themselves from the conspiracy to keep Art un- and
> misinformed. They will pay for that.
>
> tom
> K0TAR

I am just waiting for his new contraption that is going to produce
circular polarized waves on 160M and you could haul it in the trunk of
your car. I hope that when I am as old as he says he is that I will
have morre interesting things to do wiith my time than tilt at
antennas.

Jimmie

1249. MFJ-269 Antenna Analyzer experience

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-16 03:29:16 UTC
From: Peter <pm@hotmail.com>
Message-ID: <4ZGdnaPPPdSQ4BrXnZ2dnUVZ8tqdnZ2d@westnet.com.au>
Source record: 13861

Hi all

I'm looking at purchasing an MFJ269 antenna analyser and keen to hear
experience of others in this group regarding this or similar analysers.
Appears to be ideal if it is as good as MFJ claim.

--
Peter VK6YSF

http://members.optushome.com.au/vk6ysf/vk6ysf/main.htm

1250. Re: MFJ-269 Antenna Analyzer experience

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-16 03:55:05 UTC
From: Keith <kilowattradio@use-reply-to.invalid>
Message-ID: <uqLhm.548893$6p1.239897@en-nntp-02.dc1.easynews.com>
Source record: 13862

```
-----BEGIN PGP SIGNED MESSAGE-----
Hash: SHA1

Peter wrote:
> Hi all
>
> I'm looking at purchasing an MFJ269 antenna analyser and keen to hear
> experience of others in this group regarding this or similar analysers.
> Appears to be ideal if it is as good as MFJ claim.
>
>
A good place to check for reviews is at eham.net.

http://www.eham.net/reviews/
http://www.eham.net/reviews/detail/803

- --
Best Regards, Keith
http://home.comcast.net/~kilowattradio/
-----BEGIN PGP SIGNATURE-----
Version: GnuPG v1.4.9 (Darwin)

iEYEARECAAYFAkqHgxkACgkQgvlh1smTcVUcpwCgmFxYEYBk+kymOW1QRNXMcL49
AMUAoM72LohuNcyx/PMVC2oFFq5sZ52Y
=MH3C
-----END PGP SIGNATURE-----
```

1251. Re: MFJ-269 Antenna Analyzer experience

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-16 05:47:05 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <r42dnaoVpsHHABrXnZ2dnUVZ_vWdnZ2d@giganews.com>
Source record: 13863

Peter wrote:
> Hi all
>
> I'm looking at purchasing an MFJ269 antenna analyser and keen to hear
> experience of others in this group regarding this or similar analysers.
> Appears to be ideal if it is as good as MFJ claim.

I have one and find it extremely handy for a variety of tasks such as measuring the length or velocity factor of coax lines or the impedance of ferrite cores. But ironically, the one thing it's almost completely useless for, at my QTH, is analyzing antennas. Induced fields from TV, FM, and AM broadcast stations are so high that the MFJ isn't able to detect its own signal. This isn't unique to the MFJ -- I've had the same problem with a very expensive HP digital impedance meter, and revert to my old GR bridge with a tuned receiver for a detector when I want to actually measure an antenna's impedance. For me the MFJ is worthwhile just for the other functions it provides, but it might or might not be for you. Just keep in mind that, depending on your QTH, it might not be able to actually measure antenna impedances.

Roy Lewallen, W7EL

1252. Re: Aluminum spreader quad

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-16 13:54:05 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <5cUhm.54981$sC1.42502@newsfe17.iad>
Source record: 13864

JIMMIE wrote:
> I was thinking about a single band quad. I figured that on a single
> band quad the length of the spreader would be either 1.414 or .707
> (depending on how you see this) times the lenght of one side of the
> quad. I dont think this would be close to being resonant.

Are the two 0.35WL spreaders shorted together in the center
or are there four 0.175WL spreaders insulated in the center?
Seems to me, this could easily be modeled using EZNEC.
I've never done it but I'll bet others have.
--
73, Cecil, IEEE, OOTC, http://www.w5dxp.com

1253. Re: Aluminum spreader quad

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-16 14:12:39 UTC
From: JIMMIE <JIMMIEDEE123@YAHOO.COM>
Message-ID: <d6bdbbd0-1b83-4ae2-b274-e90934ce53ab@d32g2000yqh.googlegroups.com>
Source record: 13865

On Aug 16, 9:54 am, Cecil Moore <nos...@w5dxp.com> wrote:
> JIMMIE wrote:
> > I was thinking about a single band quad. I figured that on a single
> > band quad the length of the spreader would be either 1.414 or .707
> > (depending on how you see this) times the lenght of one side of the
> > quad. I dont think this would be close to being resonant.
>
> Are the two 0.35WL spreaders shorted together in the center
> or are there four 0.175WL spreaders insulated in the center?
> Seems to me, this could easily be modeled using EZNEC.
> I've never done it but I'll bet others have.
> --
> 73, Cecil, IEEE, OOTC, http://www.w5dxp.com

Haven't tried to build it yet, just kicking around the idea since I
have the aluminum and not the fiberglass.

Jimmie

1254. Re: MFJ-269 Antenna Analyzer experience

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-16 15:24:00 UTC
From: Peter <pm@hotmail.com>
Message-ID: <usmdnVaD6fAOuRXXnZ2dnUVZ8k-dnZ2d@westnet.com.au>
Source record: 13866

"Roy Lewallen" <w7el@eznec.com> wrote in message
news:r42dnaoVpsHHABrXnZ2dnUVZ_vWdnZ2d@giganews.com...
> Peter wrote:
>> Hi all
>>
>> I'm looking at purchasing an MFJ269 antenna analyser and keen to hear
>> experience of others in this group regarding this or similar analysers.
>> Appears to be ideal if it is as good as MFJ claim.
>
> I have one and find it extremely handy for a variety of tasks such as
> measuring the length or velocity factor of coax lines or the impedance of
> ferrite cores. But ironically, the one thing it's almost completely
> useless for, at my QTH, is analyzing antennas. Induced fields from TV, FM,
> and AM broadcast stations are so high that the MFJ isn't able to detect
> its own signal. This isn't unique to the MFJ -- I've had the same problem
> with a very expensive HP digital impedance meter, and revert to my old GR
> bridge with a tuned receiver for a detector when I want to actually
> measure an antenna's impedance. For me the MFJ is worthwhile just for the
> other functions it provides, but it might or might not be for you. Just
> keep in mind that, depending on your QTH, it might not be able to actually
> measure antenna impedances.
>
>
> Roy Lewallen, W7EL

Roy

All comments noted. I do in fact live within 2km of an AM transmitter
although I believe it's not that high powered and I also have an FM
transmitter within 5km, therefore I'm interested in the details of your
location in relation to the various transmitters.

Regards
--
Peter VK6YSF

http://members.optushome.com.au/vk6ysf/vk6ysf/main.htm

1255. Re: MFJ-269 Antenna Analyzer experience

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-16 15:26:07 UTC
From: Peter <pm@hotmail.com>
Message-ID: <IdCdnas3fsmNuBXXnZ2dnUVZ8qKdnZ2d@westnet.com.au>
Source record: 13868

"Keith" <kilowattradio@use-reply-to.invalid> wrote in message
news:uqLhm.548893$6p1.239897@en-nntp-02.dc1.easynews.com...
> -----BEGIN PGP SIGNED MESSAGE-----
> Hash: SHA1
>
> Peter wrote:
>> Hi all
>>
>> I'm looking at purchasing an MFJ269 antenna analyser and keen to hear
>> experience of others in this group regarding this or similar analysers.
>> Appears to be ideal if it is as good as MFJ claim.
>>
>>
> A good place to check for reviews is at eham.net.
>
> http://www.eham.net/reviews/
> http://www.eham.net/reviews/detail/803
>
>
> - --
> Best Regards, Keith
> http://home.comcast.net/~kilowattradio/
> -----BEGIN PGP SIGNATURE-----
> Version: GnuPG v1.4.9 (Darwin)

Thanks for the links Keith

Regards

--
Peter VK6YSF

http://members.optushome.com.au/vk6ysf/vk6ysf/main.htm

1256. Re: MFJ-269 Antenna Analyzer experience

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-16 15:29:05 UTC
From: John Ferrell <jferrell13@triad.rr.com>
Message-ID: <u69g8595v320t01osb9c0vip9820fool5g@4ax.com>
Source record: 13867

On Sat, 15 Aug 2009 22:47:05 -0700, Roy Lewallen <w7el@eznec.com>
wrote:

>Peter wrote:
>> Hi all
>>
>> I'm looking at purchasing an MFJ269 antenna analyser and keen to hear
>> experience of others in this group regarding this or similar analysers.
>> Appears to be ideal if it is as good as MFJ claim.
>
>I have one and find it extremely handy for a variety of tasks such as
>measuring the length or velocity factor of coax lines or the impedance
>of ferrite cores. But ironically, the one thing it's almost completely
>useless for, at my QTH, is analyzing antennas. Induced fields from TV,
>FM, and AM broadcast stations are so high that the MFJ isn't able to
>detect its own signal. This isn't unique to the MFJ -- I've had the same
>problem with a very expensive HP digital impedance meter, and revert to
>my old GR bridge with a tuned receiver for a detector when I want to
>actually measure an antenna's impedance. For me the MFJ is worthwhile
>just for the other functions it provides, but it might or might not be
>for you. Just keep in mind that, depending on your QTH, it might not be
>able to actually measure antenna impedances.
>
>
>Roy Lewallen, W7EL
I live in a very rural area and mine works as advertised.

I don't use it very much because it gives quick and complete answers.

1257. Re: MFJ-269 Antenna Analyzer experience

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-16 21:16:02 UTC
From: Owen Duffy <none@no.where>
Message-ID: <Xns9C6A49ED5D02Enonenowhere@61.9.191.5>
Source record: 13869

"Peter" <pm@hotmail.com> wrote in
news:4ZGdnaPPPdSQ4BrXnZ2dnUVZ8tqdnZ2d@westnet.com.au:

> Hi all
>
> I'm looking at purchasing an MFJ269 antenna analyser and keen to hear
> experience of others in this group regarding this or similar analysers.
> Appears to be ideal if it is as good as MFJ claim.
>
>

Peter,

Effective exploitation of the capability of this type of analyser depends on a sound understanding of transmission lines, and of the instrument's own limitation. The availability of these analysers at low cost, and the perception that they are a magic bullet has lead to a lot of pseudo technical nonsense being proposed. The magic is more in the user's capability than the box, and buying the box doesn't buy knowledge and understanding... but the device can help develop knowledge and understanding.

I have not used a '269 (though I have extensively used a '259B), but I suspect that it does not display the sign of X. Estimation of the sign of X in the '259 and similar instruments is an issue, and confuses many users. There are propositions that sign of X is easily determined from the slope of X with frequency at a point... but whilst that is true for an ideal passive component, it is not true in general.

These instruments are often used in pursuit of the questionable goal of resonance, and the instrument used to show resonance by observing X=0, or X approximately zero, or a local minimum for X at some frequency on the assumption that X changes sign at that point and that resonance of something is indicated.

I wrote some notes entitled "In pursuit of dipole resonance with an MFJ259B" at http://vk1od.net/blog/?p=680 that canvasses the behaviour of the instrument in such an application, and flags the issues in measurement. You may find them interesting.

Others have raised the issue that these instruments use a broadband detector, which works fine so long as the internal oscillator has low harmonic content and dominates the detector. If you let one of these things time out, the oscillator is shut down, and if you see indication on the meters, then energy from another source is of sufficient magnitude to be concerned about the accuracy of measurements.

Owen

1258. Re: Aluminum spreader quad

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-16 23:13:09 UTC
From: Bob Bob <bob3bob3@suddenlink.net>
Message-ID: <ocgml6-6e4.ln1@p400bob.personal.cox.net>
Source record: 13870

Hi Jimmie

Some years ago I made a 3 el 10M quad that was actually a bow tie arrangement. ie the spreaders were "driven" and the side "elements" were rope.

Probably not what you are thinking about but it did look like a 3 el 20m quad! I should have modeled it in later years but never got around to it. It worked okay at the time but I wasnt exactly doing any extensive testing.

Does modeling the metal spreaders give you any ideas?

Cheers Bob

JIMMIE wrote:
> I was talking with some guys this AM about building a quad antenna
> using aluminum spreaders. I know that it at least the tips of the
> spreaders would have to be made of insulating material such a
> fiberglass but the consensus seemed to be that most of the spreaders
> should be non-metalic. I was wondering if anyone here had built a quad
> with almost all of the spreaders made of metal and what was the
> results.
>
> Jimmie

1259. Re: Aluminum spreader quad

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-17 04:48:46 UTC
From: JIMMIE <JIMMIEDEE123@YAHOO.COM>
Message-ID: <b2ab46df-3c0c-44eb-8990-bb13b46ff972@w41g2000yqb.googlegroups.com>
Source record: 13871

On Aug 16, 7:13 pm, Bob Bob <bob3b...@suddenlink.net> wrote:
> Hi Jimmie
>
> Some years ago I made a 3 el 10M quad that was actually a bow tie
> arrangement. ie the spreaders were "driven" and the side "elements" were
> rope.
>
> Probably not what you are thinking about but it did look like a 3 el 20m
> quad! I should have modeled it in later years but never got around to
> it. It worked okay at the time but I wasnt exactly doing any extensive
> testing.
>
> Does modeling the metal spreaders give you any ideas?
>
> Cheers Bob
>
> JIMMIE wrote:
> > I was talking with some guys this AM about building a quad antenna
> > using aluminum spreaders. I know that it at least the tips of the
> > spreaders would have to be made of insulating material such a
> > fiberglass but the consensus seemed to be that most of the spreaders
> > should be non-metalic. I was wondering if anyone here had built a quad
> > with almost all of the spreaders made of metal and what was the
> > results.
>
> > Jimmie

Ive never really gotten in to modeling antennas that much. Ill
probably just build something and see what happens.

Jimmie

1260. Re: MFJ-269 Antenna Analyzer experience

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-17 10:09:15 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <qcKdnTwsEPjQsRTXnZ2dnUVZ_hOdnZ2d@giganews.com>
Source record: 13872

Peter wrote:
>
> Roy
>
> All comments noted. I do in fact live within 2km of an AM transmitter
> although I believe it's not that high powered and I also have an FM
> transmitter within 5km, therefore I'm interested in the details of your
> location in relation to the various transmitters.
>
> Regards

Roughly 10 - 15 miles from here is a ridge about 800 feet higher than my location. On top are virtually all the TV and FM, and a number of the AM, transmitters for the Portland Oregon metropolitan area. A single strong transmitter is likely to be enough to confuse an antenna analyzer, though. Filtering is possible, of course, but you have to take care to design filters to have minimal effect on measured impedances while still filtering effectively. This can sometimes be challenging depending on the strength of the interfering signal and how far it is from the measurement frequency.

I also have to be careful when working on audio circuitry -- on several occasions I've tracked down "hum" as demodulated TV video, and I end up having to include VHF decoupling and shielding to audio circuits. Don't know much about the nature of HDTV signals, but it might not be so bad if it doesn't have as much energy in the AF range when demodulated. It's bound to drive untuned antenna analyzers bonkers, though.

Roy Lewallen, W7EL

1261. Re:aluminum spreader quad

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-17 12:50:54 UTC
From: Cyclone651 <rollie@iowatelecom.net>
Message-ID: <h6bjnggoh1@news.netins.net>
Source record: 13873

I have put together a HyGain 2 element quad that used aluminum spreaders and it worked fine. Like you indicated you do have to keep the elements insulated from the spreaders. Spreaders made of fiberglass or plastic pipe work great too. Rollie

1262. Re: MFJ-269 Antenna Analyzer experience

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-17 12:54:32 UTC
From: Dale Parfitt <parinc1@verizon.net>
Message-ID: <cqcim.2426$nh2.40@nwrddc02.gnilink.net>
Source record: 13874

"Peter" <pm@hotmail.com> wrote in message
news:4ZGdnaPPPdSQ4BrXnZ2dnUVZ8tqdnZ2d@westnet.com.au...
> Hi all
>
> I'm looking at purchasing an MFJ269 antenna analyser and keen to hear
> experience of others in this group regarding this or similar analysers.
> Appears to be ideal if it is as good as MFJ claim.
>
>
Hi Peter,

I can highly recommend the Rigexpert AA-200A:
http://www.rigexpert.com/index?s=aa200

Unlike the MFJ unit, this is a full vector analyzer. You can also save plots and then transfer them to your computer for archiving. The lates firmware allows measurements at both 50 Ohms and 75 Ohms and I believe one can now also move the reference plane to the end of the coax. Batteries last forever, it's about 1/4th the weight, can display data in both graphical and tabular format.
I've owned the MFJ, Autek, AEA and Timewave- the AA-200A blows them all away. Oh yeah, the signal source is synthesized and can make a very nice signal generator that is rock stable.

Dale W4OP

1263. MFJ antenna analyzer

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-17 15:27:14 UTC
From: Cyclone651 <rollie@iowatelecom.net>
Message-ID: <h6bssljjs1@news.netins.net>
Source record: 13875

They're a little expensive, but well worth the money. It's easy to set up a factory made antenna with and a blessing when building homemade antennas. The analyzer leaves nothing to guess about as it's all read out. I haven't used it yet, but it also has a frequency counter input. That's just another use that make the MFJ-269 indispensable. Rollie

1264. Re: Underground antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-17 18:48:43 UTC
From: Dennis Whatley <dennis.whatley_NOSPAM@hotmail.com>
Message-ID: <fChim.10903$U5.139311@newsb.telia.net>
Source record: 13876

> Just for my personal information, wondering if someone played with buried
> or submersed antennas and (especially from 40 meters going lower in
> frequency) get some interesting result.

I once read an article in which it was stated that in a simple vertical, the element current it restricted by the ground current, and any attempt to increase the ground curent resulted in an increase in efficiency. The article went on to state that an antenna having maximum contact with the ground would be the most efficient, and in test a 1/2-wave dipole burried underground could have an efficiency approaching 98% that of a dummy load. The advantages are numerouse, such as the lack of an antenna support structure, but for VHF arrays there could be a huge problem with direction since the torque required to turn only a 2m 8-ele Yagi would be over a ton.

1265. Re: MFJ-269 Antenna Analyzer experience

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-17 19:16:55 UTC
From: Jim Lux <james.p.lux@jpl.nasa.gov>
Message-ID: <h6cab7ubg1@news.jpl.nasa.gov>
Source record: 13878

Dale Parfitt wrote:
> "Peter" <pm@hotmail.com> wrote in message
> news:4ZGdnaPPPdSQ4BrXnZ2dnUVZ8tqdnZ2d@westnet.com.au...
>> Hi all
>>
>> I'm looking at purchasing an MFJ269 antenna analyser and keen to hear
>> experience of others in this group regarding this or similar analysers.
>> Appears to be ideal if it is as good as MFJ claim.
>>
>>
> Hi Peter,
>
> I can highly recommend the Rigexpert AA-200A:
> http://www.rigexpert.com/index?s=aa200
>
> Unlike the MFJ unit, this is a full vector analyzer. You can also save plots
> and then transfer them to your computer for archiving. The lates firmware
> allows measurements at both 50 Ohms and 75 Ohms and I believe one can now
> also move the reference plane to the end of the coax. Batteries last
> forever, it's about 1/4th the weight, can display data in both graphical and
> tabular format.
> I've owned the MFJ, Autek, AEA and Timewave- the AA-200A blows them all
> away. Oh yeah, the signal source is synthesized and can make a very nice
> signal generator that is rock stable.
>
> Dale W4OP
>
>

Except that it looks like the RigExpert has an untuned detector, just
like the others. The schematic SUBVHF6.pdf shows a couple of RF
switches and a AD8307 log detector. The PLL synthesizers are up at 1+
GHz, so maybe there's a filter and mixer somewhere else. I couldn't
find a block diagram.

1266. Re: Underground antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-17 19:54:34 UTC
From: Gerard <pe1oud@amsat.org>
Message-ID: <4a89b588$1$78947$dbd45001@news.wanadoo.nl>
Source record: 13877

"Dennis Whatley" <dennis.whatley_NOSPAM@hotmail.com> schreef in
bericht news:fChim.10903$U5.139311@newsb.telia.net...
>
> The advantages are numerouse, such as the lack of an antenna
> support structure, but for VHF arrays there could be a huge
> problem with direction since the torque required to turn only a
> 2m 8-ele Yagi would be over a ton.
That's why farmers used horses and nowadays tractors to pull the
array through the ground. But you know farmers: they always
forget
to connect the feedline! That's why you never hear them on the
air.

73 - Gerard - PE1OUD

E-mail: pe1oud(NOTTHIS)@amsat.org

1267. Re: Underground antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-17 20:28:09 UTC
From: Dennis Whatley <dennis.whatley_NOSPAM@hotmail.com>
Message-ID: <t3jim.10905$U5.139232@newsb.telia.net>
Source record: 13879

>> The advantages are numerouse, such as the lack of an antenna support
>> structure, but for VHF arrays there could be a huge problem with
>> direction since the torque required to turn only a 2m 8-ele Yagi would be
>> over a ton.

> That's why farmers used horses and nowadays tractors to pull the
> array through the ground. But you know farmers: they always forget
> to connect the feedline! That's why you never hear them on the air.

Hi Gerard, and there I was, thinking it was because an
underground transmitting station needed an underground
receiver station. Thanks a million, now I know why
there are so few farmers on CB.

1268. Re: some teena pic from teh kosher ham techical blog tip and trick i hope u indeed find usefull

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-17 20:56:34 UTC
From: kb9rqz <kb9rqz@puncegotcha.com>
Message-ID: <4a89c410@x-privat.org>
Source record: 13880
Cross-posted to: rec.radio.amateur.policy,rec.radio.amateur.antenna

Very nice to see Kaddish here. Another kosher ham, though I only SWR at this point.
http://techkb9rqz.blogspot.com/2009/05/some-teena-pic.html

1269. Re: some teena pic from teh kosher ham techical blog tip and trick i hope u indeed find usefull

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-17 21:17:13 UTC
From: kb9rqz <mark@kb9rqz.com>
Message-ID: <f85494ca-4ebe-4e6c-ba81-7506c2a1d878@d4g2000vbm.googlegroups.com>
Source record: 13881
Cross-posted to: rec.radio.amateur.policy,rec.radio.amateur.antenna

On Aug 17, 4:56 pm, "kb9rqz" <kb9...@puncegotcha.com> wrote:
>
why not get a call of your own

1270. get kelp

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-17 21:21:01 UTC
From: steve the lying ham <stevenrobeson@yahoo.com>
Message-ID: <4dij85lgjncb6sgeqh5nc47jb05sv7r9au@4ax.com>
Source record: 13882
Cross-posted to: rec.radio.amateur.policy,rec.radio.amateur.antenna

On Mon, 17 Aug 2009 16:56:34 -0400, "kb9rqz" <kb9rqz@puncegotcha.com>
wrote:

>Very nice to see Kaddish here. Another kosher ham, though I only SWR at this
>point.
> http://techkb9rqz.blogspot.com/2009/05/some-eena-pic.html
>
>
why violate copyright

1271. Re: MFJ-269 Antenna Analyzer experience

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-18 01:50:14 UTC
From: Dale Parfitt <parinc1@verizon.net>
Message-ID: <qNnim.2528$nh2.1105@nwrddc02.gnilink.net>
Source record: 13883

>>> I'm looking at purchasing an MFJ269 antenna analyser and keen to hear
>>> experience of others in this group regarding this or similar analysers.
>>> Appears to be ideal if it is as good as MFJ claim.
>>>
>>>
>> Hi Peter,
>>
>> I can highly recommend the Rigexpert AA-200A:
>> http://www.rigexpert.com/index?s=aa200
>>
>> Unlike the MFJ unit, this is a full vector analyzer. You can also save
>> plots and then transfer them to your computer for archiving. The lates
>> firmware allows measurements at both 50 Ohms and 75 Ohms and I believe
>> one can now also move the reference plane to the end of the coax.
>> Batteries last forever, it's about 1/4th the weight, can display data in
>> both graphical and tabular format.
>> I've owned the MFJ, Autek, AEA and Timewave- the AA-200A blows them all
>> away. Oh yeah, the signal source is synthesized and can make a very nice
>> signal generator that is rock stable.
>>
>> Dale W4OP
>
>
> Except that it looks like the RigExpert has an untuned detector, just like
> the others. The schematic SUBVHF6.pdf shows a couple of RF switches and a
> AD8307 log detector. The PLL synthesizers are up at 1+ GHz, so maybe
> there's a filter and mixer somewhere else. I couldn't find a block
> diagram.

Hi Jim,
I'm way up in the NC mountains, so I cannot speak regarding the AA-200A
front end.
I know when I lived in West Palm FL, the MFJ was totally wiped out by a
nearby AM broadcast station.

73,
Dale W4OP

1272. Re: MFJ-269 Antenna Analyzer experience

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-18 12:50:21 UTC
From: Michael Coslo <mjc5@psu.edu>
Message-ID: <h6e82g$sg7q$1@tr22n12.aset.psu.edu>
Source record: 13884

Dale Parfitt wrote:
> >>> I'm looking at purchasing an MFJ269 antenna analyser and keen to hear
>>>> experience of others in this group regarding this or similar analysers.
>>>> Appears to be ideal if it is as good as MFJ claim.
>>>>
>>>>
>>> Hi Peter,
>>>
>>> I can highly recommend the Rigexpert AA-200A:
>>> http://www.rigexpert.com/index?s=aa200
>>>
>>> Unlike the MFJ unit, this is a full vector analyzer. You can also save
>>> plots and then transfer them to your computer for archiving. The lates
>>> firmware allows measurements at both 50 Ohms and 75 Ohms and I believe
>>> one can now also move the reference plane to the end of the coax.
>>> Batteries last forever, it's about 1/4th the weight, can display data in
>>> both graphical and tabular format.
>>> I've owned the MFJ, Autek, AEA and Timewave- the AA-200A blows them all
>>> away. Oh yeah, the signal source is synthesized and can make a very nice
>>> signal generator that is rock stable.
>>>
>>> Dale W4OP
>>
>> Except that it looks like the RigExpert has an untuned detector, just like
>> the others. The schematic SUBVHF6.pdf shows a couple of RF switches and a
>> AD8307 log detector. The PLL synthesizers are up at 1+ GHz, so maybe
>> there's a filter and mixer somewhere else. I couldn't find a block
>> diagram.
>
> Hi Jim,
> I'm way up in the NC mountains, so I cannot speak regarding the AA-200A
> front end.
> I know when I lived in West Palm FL, the MFJ was totally wiped out by a
> nearby AM broadcast station.

Yah, on the low bands I sometimes have problems with a local AM station.
It's probably endemic to most analyzers.

My thoughts on the MFJ line of analyzers is that within their
limitations, they are very good. I bought one and it just works fine for
me. The original one I bought had a problem at around 10-11 months. I
think that someone was messing with it in a high RF environment without
the dummy load on the RF connector. Somehow got a major dose of RF. Sent
it back to MFJ,and the replacement works just great. I don't loan it out
any more.

My biggest con is that it uses a lot of AA cells, no big deal. I'd buy another one in a minute if needed.

My new loaner is an older MFJ SWR bridge - since that is what most people are worried about anyhow.

- 73 de Mike N3LI -

1273. Re: MFJ antenna analyzer

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-18 12:59:29 UTC
From: Michael Coslo <mjc5@psu.edu>
Message-ID: <h6e8jh$sg7s$1@tr22n12.aset.psu.edu>
Source record: 13885

Cyclone651 wrote:
> They're a little expensive, but well worth the money. It's easy to set up a
> factory made antenna with and a blessing when building homemade antennas.
> The analyzer leaves nothing to guess about as it's all read out. I haven't
> used it yet, but it also has a frequency counter input. That's just another
> use that make the MFJ-269 indispensable. Rollie

Just make sure you keep a dummy load across the RF jack when not in use,
it protects the input, and makes a nice little reality check. Aside from
that, it's a great little tool.

- 73 de Mike N3LI -

1274. Re: Aluminum spreader quad

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-18 14:22:53 UTC
From: JIMMIE <JIMMIEDEE123@YAHOO.COM>
Message-ID: <54e5ac9f-55d2-45bc-aee1-d7067ecd9141@e27g2000yqm.googlegroups.com>
Source record: 13886

On Aug 17, 12:48 am, JIMMIE <JIMMIEDEE...@YAHOO.COM> wrote:
> On Aug 16, 7:13 pm, Bob Bob <bob3b...@suddenlink.net> wrote:
>
>
>
> > Hi Jimmie
>
> > Some years ago I made a 3 el 10M quad that was actually a bow tie
> > arrangement. ie the spreaders were "driven" and the side "elements" were
> > rope.
>
> > Probably not what you are thinking about but it did look like a 3 el 20m
> > quad! I should have modeled it in later years but never got around to
> > it. It worked okay at the time but I wasnt exactly doing any extensive
> > testing.
>
> > Does modeling the metal spreaders give you any ideas?
>
> > Cheers Bob
>
> > JIMMIE wrote:
> > > I was talking with some guys this AM about building a quad antenna
> > > using aluminum spreaders. I know that it at least the tips of the
> > > spreaders would have to be made of insulating material such a
> > > fiberglass but the consensus seemed to be that most of the spreaders
> > > should be non-metalic. I was wondering if anyone here had built a quad
> > > with almost all of the spreaders made of metal and what was the
> > > results.
>
> > > Jimmie
>
> Ive never really gotten in to modeling antennas that much. Ill
> probably just build something and see what happens.
>
> Jimmie

I slid Al tubing over the supports for my two meter quad except for
the last two inches toward the tip and I cant tell any difference in
operation VSWR is the same. AGC voltage on my receiver is the same as
usual for a local repeater. Whether or not the boom ends of the tubing
were connected together also had no discernible effect.

Jimmie

1275. Re: Underground antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-18 14:40:19 UTC
From: Allodoxaphobia <bit-bucket@config.com>
Message-ID: <slrnh8lfaj.mem.bit-bucket@shell.config.com>
Source record: 13887

On Mon, 17 Aug 2009 18:48:43 GMT, Dennis Whatley wrote:
>> Just for my personal information, wondering if someone played with buried
>> or submersed antennas and (especially from 40 meters going lower in
>> frequency) get some interesting result.
>
> I once read an article in which it was stated that in a simple vertical, the
> element current it restricted by the ground current, and any attempt to
> increase the ground curent resulted in an increase in efficiency. The
> article went on to state that an antenna having maximum contact with the
> ground would be the most efficient, and in test a 1/2-wave dipole burried
> underground could have an efficiency approaching 98% that of a dummy load.
> The advantages are numerouse, such as the lack of an antenna support
> structure, but for VHF arrays there could be a huge problem with direction
> since the torque required to turn only a 2m 8-ele Yagi would be over a ton.

I read that article, too. 'Twas in an April QST back some years ago.

Jonesy
--
Marvin L Jones | jonz | W3DHJ | linux
38.24N 104.55W | @ config.com | Jonesy | OS/2
* Killfiling google & XXXXbanter.com: jonz.net/ng.htm

1276. Re: MFJ antenna analyzer

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-18 15:00:01 UTC
From: JB <nospam@goofball.net>
Message-ID: <Rlzim.2672$Jg.1192@nwrddc01.gnilink.net>
Source record: 13888

"Michael Coslo" <mjc5@psu.edu> wrote in message
news:h6e8jh$sg7s$1@tr22n12.aset.psu.edu...
> Cyclone651 wrote:
> > They're a little expensive, but well worth the money. It's easy to set
up a
> > factory made antenna with and a blessing when building homemade
antennas.
> > The analyzer leaves nothing to guess about as it's all read out. I
haven't
> > used it yet, but it also has a frequency counter input. That's just
another
> > use that make the MFJ-269 indispensable. Rollie
>
>
> Just make sure you keep a dummy load across the RF jack when not in use,
> it protects the input, and makes a nice little reality check. Aside from
> that, it's a great little tool.
>
> - 73 de Mike N3LI -

It isn't precision lab gear but it will pay for itself by saving you from an
early roofing job.

An external rechargeable battery pack will keep you from wearing out the
screws or risk leakage while in storage. These things eat batteries. I use
a gel cell in a fanny pack to the external port. That way I never have to
take it out of the case.

1277. Re: MFJ-269 Antenna Analyzer experience

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-18 15:15:04 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <Xzzim.145004$FP2.40301@newsfe05.iad>
Source record: 13889

Michael Coslo wrote:
> My biggest con is that it uses a lot of AA cells, ...

I solved that problem with a Velcro'ed gel cell.
--
73, Cecil, IEEE, OOTC, http://www.w5dxp.com

1278. Re: MFJ antenna analyzer

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-18 17:26:57 UTC
From: "Helmut Wabnig"
Message-ID: <t0pl85pc4qmkceu05a48r6marhjuinbkif@4ax.com>
Source record: 13890

On Tue, 18 Aug 2009 15:00:01 GMT, "JB" <nospam@goofball.net> wrote:

>
>"Michael Coslo" <mjc5@psu.edu> wrote in message
>news:h6e8jh$sg7s$1@tr22n12.aset.psu.edu...
>> Cyclone651 wrote:
>> > They're a little expensive, but well worth the money. It's easy to set
>up a
>> > factory made antenna with and a blessing when building homemade
>antennas.
>> > The analyzer leaves nothing to guess about as it's all read out. I
>haven't
>> > used it yet, but it also has a frequency counter input. That's just
>another
>> > use that make the MFJ-269 indispensable. Rollie
>>
>>
>> Just make sure you keep a dummy load across the RF jack when not in use,
>> it protects the input, and makes a nice little reality check. Aside from
>> that, it's a great little tool.
>>
>> - 73 de Mike N3LI -
>
>It isn't precision lab gear but it will pay for itself by saving you from an
>early roofing job.
>
>An external rechargeable battery pack will keep you from wearing out the
>screws or risk leakage while in storage. These things eat batteries. I use
>a gel cell in a fanny pack to the external port. That way I never have to
>take it out of the case.

Put some grease on the case screws and use only 2 on each side.
After 10 years use the other 2.

w.

1279. CIA Panetta: Health IT ,who will control private data ? W.H. Emergency Powers to Chief of Staff ?,U.S. Attorney nominee won't ID customers, Lost Standards , AIG-FreddieMac-FannieMae for the "usual ones"?, Federal Reserve Audit , H.R.3200

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-18 17:50:20 UTC
From: financialtools1 <financialtools1@gmail.com>
Message-ID: <0aafb077-cfc4-4790-9774-0b9c2e53c1c5@18g2000yqa.googlegroups.com>
Source record: 13891

C.I.A. Director Panetta is absolutely right when he says he wants to move his Agency forward, America faces a lot of issues right now, but some are from the past and will affect the present and the future of the Intelligence Community and here are some and that can be linked :

1) The Neocon and Oil Lobby's are constantly pushing for a fight against Venezuela and Russia as well as Iran , because as long as they are the " enemy " and " terrorists linked " , America has only one solid source of oil and gas : Saudi Arabia-Qatar-UAE-Kuwait and only one strategic partner in that region :Israel, so they all get all our money, our weapons and attention, and when will the D.C. Politicians explain this to the American people ? when ? that it's all a fabricated dependency to keep us addicted to these 2 lobby's ? when ?

about the weapons in the Colombia-Venezuela affair , they are old bazooka-like single-use rocket launchers that Sweden sold to Venezuela in 1983-84, and now some seems to have been found in FARC's hands, so after 25 years the neocon press (the editorials in most newspapers are controlled by the Neocon-Oil Lobby's) demands that Washington DC declares Venezuela a terrorist country ?

Rebels Obtained Arms Sold to Venezuela, Colombia Says ,NYT, July,28,08
http://www.nytimes.com/2009/07/28/world/americas/28Colombia.html?

The US Policy in Latin America has been a disaster for 25 years, we should have a US-Latin America-Brazil Conference with all the countries in the continent to start a new dialog, a new era, but DC is so incompetent and corrupt, they will do only what the Neocon-Oil Lobby wants : to keep all divided and fighting, so no change here, what a criminal shame !

2) The next weeks are vital for Health Care Reform, for National Security and Rule of Law : the Obama-Biden team must make very clear to 140 million US workers and taxpayers , as well as the huge retiree and disabled group, that

a) IF THEY LIKE WHAT THEY GOT WITH MEDICARE OR ANY PRIVATE PLAN, THE WILL BE ABLE TO KEEP IT

b) AND THAT PRESCRIPTION DRUGS WILL COME DOWN IN PRICE FROM THE STRATOSPHERIC LEVELS THEY ARE NOW

c) and that the multi-billion dollar levels of profits of
Pharma ,Drugs, Insurance and their top executives , as well as the
Drug ads costs and its tax deductions as business expenses , will come
down to earth ...

of course, not included in all this are the Federal employees and
Congress members who get what they call a "Cadillac" Health
Insurance , like P.Obama has the honesty to say : these amazing super
deals like the one he got are excluded, the fact is that Congress
members get what no one else gets...
the next few weeks of "explaining" is the make or break of the
deal.....President Obama also wants to end the 177 billion dollar give-
away to Insurance Companies under the Medicare Advantage Plan, which
is what the Medicare plan offers already, but will he get the Congress
to go along on this ?

d) another little detail is the constant cases of Pharmaceuticals
(hello ! Baxter Pharma , how you all doing ?) releasing tainted
vaccines to the public, but hey ! if we don't get sick, they can't
sell us the medicines ,right?

http://www.healthreform.gov/
http://edlabor.house.gov/markups/2009/07/hr-3200-americas-affordable-he.shtml

and more about Health IT software security, below at 10)

3) about Rupert Murdoch and the Rule of Law :

a) In the 90's , when the Tobacco Lobby was under attack for
the costs of emphysema and cancer by then President Clinton and the
Democratic Party members in charge of Congress , the top executive
Board members of Philip Morris Tobacco, Rupert Murdoch and Carlos Slim
Helu among others , were trying to find ways to stop the Legal
Investigations going on (international labs were popping-up with
modified special tobacco seeds with huge nicotine concentrations, new
addictive toxic substances found in most cigarettes were killing
laboratory rats in hours ,etc.) so one "plan" was the one proposed
by then a gossip and scandal writer working for Murdoch in his New
York City publications called Goldberg, and she had a young daughter
called Monica Lewinsky ,and while the West Wing of the White House
was run at the time by Rahm Emanuel and his partners, Monica became an
intern , put right in the center of the White House and was left
alone with the president more and more time every day until she got to
the core : the President's "personal" attention , the scandal broke-up
and the Murdoch TV and newspapers machine started to make millions out
of it, all the way to the Impeachment Proceedings....a huge
business ,a wounded president under control of scandal and a Tobacco-
Nicotine Legislation distracted .....

And now with the same "special team" inside the White House, we all
know that it's a matter of time before P.Obama, VP Biden and their
teams gets stuck in another "fabricated scandal" and to keep them
against the wall and under their control, that's how they always

operate : lies, theft, abuse ,extortion and treason , the usual...but as they say : do it to me once shame on you, do it to me twice, shame on me ..... and that's why is so important also to break the circle of corruption and AUDIT the Federal Reserve, this and a new team at the Fed would give the Obama -Biden team power to keep these criminals at bay...

b) Already the way Murdoch got the USA Congress to make an exception so that he could buy assets from G.M. as a foreign national, how he got satellite technology and TV Networks like Fox while a foreign national and they had to change the Laws just for him , how he got away with the Tobacco nightmare, the Lewinsky fabricated criminal fraud, how he and his papers pushed for the Iraq war (with Senator Schumer and Rep.Emanuel , among others, every week on them pushing the lies about Iraq among others) , how Murdoch's papers and TV covered-up the news about the initial march to Baghdad leaving behind warehouses full of weapons and explosives unguarded, how the Baghdad Museum was looted with military precision (and it wasn't the USA or Iraqi Military), how the contractors were losing billions of dollars in trucks and hundreds of thousands of automatic weapons and rifles in transit , and on and on, without a hitch -- we must remember that without insurgency (and armed and with weapons) there was no justification for multi-billion dollar no-bid contracts ... it's a very simple business formula -- it all shows to the world how Washington D.C. has been hijacked by Murdoch and his goons, the Neocon and Oil Lobby's , and it's a criminal shame and a real terrorist act, but will anyone in DC stand up for the Rule of Law ? no one.

even how he avoided taxes on many of these issues in the late 90's and early 2000's should get the IRS going, right? .....not with his friend Shulman in charge of the IRS , won't happen.

c) Rupert Murdoch is a personal friend of Maurice Greenberg of AIG and Judge Rakoff , and the fact that Greenberg fraud case l was in Judge Rakoff chambers has many people wondering, since they all are friends of way back, was there any talks among jurors and Judge and Greenberg? is there anything that we don't know that they know ? how can such a clear double case go in Greenberg's favor ? will the Justice Dpt. investigate ? will Congress ? will the IRS ? will the A.G.'s ? will anyone care ? no.

and in the SEC case against M.Greenberg, he gets a 15 million dollar fine and walks away with 2 billion dollars in AIG and CV Starr stock, and what's the difference in the "cooking of the books for profit " that he did as CEO and chairman of AIG and the "cooking of the books for profit " that others did ? many got 20 or more years in jail, why some go to jail and others get just a fine ? and even others just walk away with a 300.000 dollar salary.... eh! Rahm , like you at Freddie Mac ?

d) In the 9/11/2001 Investigation, Murdoch's friends Zelikow ,Lehman and Ben-Veniste (all the Robert Rubin apparatus)

were in the 9/11 Committee, and no one could believe it, since all are friends and partners of the principals in the WTC case : Silverstein, Goldman, Pacific Investments, etc., etc., and specially when : 1) we think about WTC - 7 , the huge third building and that collapsed on its own footprint without being hit by any thing or anyone, in a perfect symmetric collapse ,and still is a mystery to engineers and architects , 2) and while Silverstein had called 23 Insurance companies just weeks before the attack (the leases were signed just 6 weeks before 9/11) to open dozens and dozens of policies over just about everything in the buildings, and about all these issues the Murdoch Tabloid media kept silence refusing to Investigate any of it, and always siding with the Silverstein-Goldman demands for billions and billions of dollars in Insurance payments : the whole thing smelled like rats on a sewer feast , and they were and are feasting on the dead....will anybody ask ? no .

http://www.nyccan.org/
http://www.ae911truth.org/
http://911dvdproject.com/

e) in the 2008 Financial and Derivatives Disaster, the Murdoch TV and Media machine defended many neocons in Wall Street (in many Military-Security and Intelligence Contractors the key stockholders are his Hedge-Fund / Equity / Investment Partners : the war profiteers)
and that's why he bought the W.S.J., to cut-off some of the most deep investigative reporting in that paper about the Federal Reserve ,the Treasury, AIG, Bear Stearns,Lehman,Merrill and Citi and their links (they all did their trading and investing in partnership) and the ex-vice-chairman of AIG, Frenkel , and the ex-chairman , Greenberg , know a lot about it, but will any one go to the bottom of this ? and will anyone check the massive high-speed trading they were doing among them at all hours? with the inside know-how of some at the Fed? and that the WSJ was reporting before Murdoch took the paper over ? no.

so all in all, Rupert Murdoch may be a sharp operator, but for the community as a whole, he has been and is a total disaster, a nightmare for America and the world, but ....he puts his foot and money down and in D.C. you can hear all the pants and garter belts dropping to the floor, the screams and cries....he knows how to keep the DC darlings on a leash , and they like it , the incompetent traitors.

Right now, and as many in the financial areas are saying, many " Wind and Solar Power Projects " are being delayed or cancel due to financing problems, and its the Neocon Lobby of Murdoch with Sen. Feinstein , Feinberg etal and the Oil Lobby the ones pushing to slow or kill these Energy Independence Projects with " No Finance" , this "problem" and that "little problem", they want to keep the USA stuck on imported oil and gas and depending on the Middle East for back-up sources (Saudi Arabia-Qatar-etc. and one strategic partner,Israel,

getting all our money and attention) , and so the National losses are staggering and the National Security implications huge, but will anyone in D.C. stand up for America? no.

Unless a new generation of politicians and Americans gets elected , we will always have this abuse, the war profiteering , the tax evasion, the corruption and the criminal activity while the " old class " politicians bend over for yet another campaign donation and yet another Murdoch "nice story" in his Media.

4) in the N.Y. Times, "Power Shifts in Plan for Capital Calamity" , July,28,2009 ,
http://www.nytimes.com/2009/07/28/us/politics/28continuity.html? , we learn that in case of total disaster, the Chief of Staff in the White House, takes control of the Military Office...why ? a political appointee in control? do the President and the Vice-President see where they put themselves in relation to the Emanuel,Summers, Axelrod,Furman, Orszag,Geithner,Shapiro,Gensler , Genachowsky, Feinberg group ? a political-military-financial organized group gets to control the Military Office of the White House in case of total disaster? this is totally Un -Constitutional , but will anyone in DC object ? no !

here is an excerpt ".....Power Shifts in Plan for Capital Calamity.....WASHINGTON — A shift in authority has given military officials at the White House a bigger operational role in creating a backup government if the nation’s capital were “decapitated” by a terrorist attack or other calamity, according to current and former officials involved in the decision.
The move, which was made in the closing weeks of the administration of President George W. Bush, came after months of heated internal debate about the balance of power and the role of the military in a time of crisis, participants said. Officials said the Obama administration had left the plan essentially intact.

Under the revamped structure, the White House Military Office, which reports to the office of the White House chief of staff, has assumed a more central role in setting up a temporary “shadow government” in a crisis.

And the office, a 2,300-person outfit best known for flying Air Force One, has taken on added responsibilities as the lead agent in shepherding government leaders to a secure site at Mount Weather in rural Virginia, keeping classified lists of successors and maintaining computer systems, among other operational duties. Many of these types of tasks were previously handled by civilians at other agencies, led by the Federal Emergency Management Agency........"

5) WASHINGTON TIMES, June,23,2009 :
EXCLUSIVE: U.S. attorney nominee won't ID all clients
http://www.washingtontimes.com/news/2009/jun/23/attorney-nominee-wont-id-all-clients/
where we learn that Paul Fishman , nominated by P.Obama to be

U.S.Attorney in New Jersey , won't ID 37 clients of him at his law partnership , amazing,eh ?

and what about the 44 indicted corrupt figures in New Jersey? why the National Media is silent on this when at least 5 were involved in a Money laundering ring ? why not install the guy who did that great job , Ralph Marra Jr., acting U.S. attorney for New Jersey , in the permanent job ?

How is it possible that we find out about a very well organized money laundering operation working between the USA, the EU and the Middle East and the media turns silent ? how is it possible that c-span, npr and PBS don't even mention any of it?

and these same spin outlets, when P.Clinton secures freedom to 2 journalists , Ling and Lee, and out of North Korea ,they spin these great news into a negative gossip,a negative event, and hoping to minimize the success they look for arguments and conflict , and when they fail they go back to their warmongering criminal nonsense and lies , and they talk about patriotism? who are the real terrorists ? who are the real criminals and enemies of America ? what a criminal shame the TV and cable Networks have become !

6) Financial Crisis Inquiry Commission ,
http://www.opencongress.org/bill/111-s386/show
http://www.politico.com/news/stories/0709/25001.html
The problem is that the neocons will insert a neocon like Zelikow , Feinberg or Porter Goss to steer the Commission into another absurd 9/11 Commission : a cover-up and a distraction : ADD INSULT TO INJURY...

7) Schools with no playgrounds but with lots of vending machines for junk foods and sugar sodas, and then the parents have to spend money buying medications, and my question to Education Secretary Duncan and which so many parents are asking : When are schools in the USA going to have simple "Solar-Wind and Batteries" demonstrators in every schools so that kids can see how these new vital technologies work and to make them part of their natural growth: the new generations must be the leaders in Solar,Wind, Wave, Batteries and Hybrid-Electric plug-ins , fuel-cells, insulation, synthetic fuels and fusion energies, and the best way to grow a leader is to start early, by watching how these natural sources charge-up their gadgets and toys, their laptops and mobile phones, make it a second nature to them, a natural process ..... why not a simple "demo" in every school?

8) In the Criminal Anthrax issue of 2001 , when medical worker Nguyen was killed by heavy-duty anthrax spores at the Manhattan Eye,Ear and Throat Hospital, http://www.nymeeth.org/ , many knew that Emergent BioSolutions (the old Bio-Port from Lansing Michigan) and their executives, like Kramer, had a lot of answers, and then ...silent ! all the key Congress members went silent, no one asked about Bio-Port, and then they presented the usual gentiles as suspects: Dr. Hatfill

and Ivins, and the rest is History....until today, how could these anthrax spores get to the Manhattan Hospital ?

9) In the Internet video standards issue , Flash is "no good" for Mac or Linux, that's why we need HTML 5 right now ! we need code, tools, applications , solutions.
http://arstechnica.com/open-source/news/2009/07/decoding-the-html-5-video-codec-debate.ars
http://en.wikipedia.org/wiki/List_of_open_source_software_packages
http://www.w3.org/

at the other hand, this story should bring some joy to many:
"Google Chrome gets skins and JavaScript performance boost.
Google has released a new Chrome beta that includes a theming engine, faster JavaScript performance, several usability improvements, and support for HTML5 video. "
http://arstechnica.com/open-source/news/2009/08/googles-chrome-gets-skins-and-javascript-performance-boost.ars

10) And dear Director Panetta,the key problem in the Health Care Reform INFORMATION TECHNOLOGY CHOICE OF SOFTWARE is WHO is in charge of the medical private data ? , and do they have their own agenda ? who is watching them ? as usual, most of Washington D.C. is clueless, so who will ?

The White House announced that David Blumenthal, MD, was going to be the new national coordinator for health information technology at HHS, and he is in favor of proprietary software while the other Harvard University group that presented the better option was in favor of open-source, and Blumenthal's partners Genachowsky at the FCC, Leibowitz at the FTC , and Summers , Emanuel ,Orszag and Axelrod among others in the White House are insisting on using proprietary Flash technology from Adobe AND OTHER PROPRIETARY SOFTWARE, instead of the free and open-source HTML 5 that the web is based on, why ? at Flash ,where some of the top executives are, what a coincidence! , friends and partners of the above, they are very happy that they will be part of the "control" of all the data of all the citizens in America, isn't wonderful? and of course they will use Oracle from Ellison as database, right ? and if anyone objects, the SEC ,under supreme general chairman Shapiro -- the SEC ex-Commissioner that was in charge while AIG ,Bear Stearns ,Merrill and Lehman were selling hundreds of billions of dollars of Credit-Default-Swaps and she never saw anything !!! -- will immediately correct EVERYONE , if you know what i mean.....it's a perfect plan , wonderful, eh ? and the gentiles in DC ? many of them looking for a belt to hold their pants and garter belts , poor darlings !

So if you put all the dots together, the same organized people that gave us the 2008 Financial Disaster, will now control not only all the private data from all the patients in the USA , they will control also the software that runs the whole national system,amazing ,eh ? and later, when the "dungaroo" hits the fan, they will blame the Democrats and the Obama-Biden Administration, perfect ,eh?

In mi opinion, the sooner the Obama -Biden ticket gets all these neocons out of the White House and their Administration, the better, just look at the "dungaroo" they did Sunday, Aug,2,2009, when Geithner and Summers had the nerve to say on the TV "spin and lie" programs that higher taxes for workers and middle class are not out of the question , so dear P.Obama : when are you going to get all these neocons out ? when are you going to put an honest gentile in the Federal Reserve and audit that "cave" ? when are you going to get Flash out and low-cost HTML 5 video in ? when are we going to get going ?

http://www.ama-assn.org/amednews/site/mobile/content/ga0803.htm

Health Care Reform is vital, let's make sure the neocons don't control our data and software , because their Health Care Financial Abuse and Disaster could make the 2008 Financial Meltdown look like a little joke, they could wreck the whole country, the greedy fools ! , let's get it right this time !

And if you want to see what some people can do with our private data, just read this :
New U.S.-Israeli Crime Ring Detailed
http://www.nytimes.com/2009/08/04/world/middleeast/04israel.html?

11) And the "Standards" issue is an old one :Until 1995, the Defense Dpt. and all its units were using a mix of wireless radios, and then Qualcomm and Jacobs went to "advice" the Military in San Diego ,Ca. , and a few years later, many of the key CDMA and wireless radios used by the U.S. military and U.S. private consumers were paying huge royalties to Qualcomm and Jacobs, they showed up with all the patents, and even when these people got some good technologies, where are the Military and consumers radios that everybody was using as open-source and free of charge in the U.S.A. ? where are they ? .... many consumers and some politicians asked the San Diego based U.S. Attorney Carol Lam about this , but then she got fired and later became the top Lawyer in Qualcomm !!! what happened ? how is that possible ? and about the wireless radios and patents investigations ? nothing.

http://en.wikipedia.org/wiki/Carol_Lam
http://www.signonsandiego.com/news/metro/20070112-9999-1n12lam.html

Right now, America needs a massive push in advanced batteries and hybrid-electric plug-in systems as well as solar and wind energy, we are number 5 and 3 in the world in these key technologies, and that's a total disaster, and how can we spend 2 trillion dollars in the Banks and Financial Institutions (700 billion from TARP plus at least 1.3 trillion dollars between Treasury, Fed, FDIC and others) and then invest only 60 billion for all alternative energies and technologies ? and just a few billions for batteries ? we gave 180 billion dollars to A.I.G., the main promoter of this 2008 Credit-Default-Swaps Disaster, and for our own future and Energy Independence just a third of that ?

That's why also vital to Audit the Federal Reserve ,
http://www.ronpaul.com/on-the-issues/audit-the-federal-reserve-hr-1207/
and investigate the Organic Program Federal Law, where Senator Leahy
has worked so hard all these years,
http://www.washingtonpost.com/wp-dyn/content/article/2009/08/07/AR2009080703650.html
http://leahy.senate.gov/NwsLtr/20090327news_letter.html
http://www.nal.usda.gov/afsic/pubs/ofp/ofp.shtml

.....and now for the latest part of the Big Trick , "they" are about
to install new "old operators" in A.I.G .,Freddie Mac and Fannie Mae,
etc., and split , cut , divide and fire-sell their assets and of
course, Goldman Sachs, BlackRock,Pacific Investments,etal, will be the
key players, so after taxpayers INVESTED hundreds of billions of
dollars bailing out these tricks, the same old operators get to make
the cut AGAIN ! , and a big one ! isn't wonderful ? a triple whammy !
and Washington D.C. still looking for a belt to hold their pants...and
that's also why their stock is going up and up every day, they can
smell the roses already ...while the taxpayers will smell the !
$#&*XZ@#*! again.

in any case http://www.ilfc.com/ must stay in USA and EU gentile
hands, it cannot end up in the Middle East with our own oil-gas
money !!!

At least we also got Senator Webb that worked so hard for the Post
9/11 G.I. Bill, effective August 1,2009 ... that's leadership, that's
the real deal.
http://www.gibill.va.gov/
http://en.wikipedia.org/wiki/G.I._Bill

So dear Director Panetta, you are right to want to move your great
Agency forward, a very difficult job indeed, but we need a total clean-
up, and who will make sure that the old garbage is out ?

1280. Re: get kelp

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-18 20:41:46 UTC
From: kb9rqz <kb9rqz@home.com>
Message-ID: <h6f3ml$3m0$1@adenine.netfront.net>
Source record: 13892
Cross-posted to: rec.radio.amateur.policy,rec.radio.amateur.antenna

"steve the lying ham" <stevenrobeson@yahoo.com> wrote in message
news:4dij85lgjncb6sgeqh5nc47jb05sv7r9au@4ax.com...
> On Mon, 17 Aug 2009 16:56:34 -0400, "kb9rqz" <kb9rqz@puncegotcha.com>
> wrote:
>
>>Very nice to see Kaddish here. Another kosher ham, though I only SWR at
>>this
>>point.
>> http://techkb9rqz.blogspot.com/2009/05/some-eena-pic.html
>>
>>
> why violate copyright

1281. Re: CIA Panetta: Health IT ,who will control private data ? W.H.Emergency Powers to Chief of Staff ?,U.S. Attorney nominee won't IDcustomers, Lost Standards , AIG-FreddieMac-FannieMae for the "usual ones"?,Federal Reserve Audit , H.R.3200

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-19 00:57:39 UTC
From: n9zas <n9zas.4d1314e@radiobanter.com>
Message-ID: <n9zas.4d1314e@radiobanter.com>
Source record: 13894

DO NOT QUOTE POLITICAL TRASH IN THE ANTENNA FORUMS!!! iF IT HAS NOTHING
TO DO WITH ANTENNAS,THEN FIND SOMEONE ELSE WHO WANTS TO SEE YOUR
GARBAGE!!!!!!

--
n9zas

1282. Re: MFJ-269 Antenna Analyzer experience

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-19 02:55:50 UTC
From: "Myron A. Calhoun" <mcalhoun@freeshell.org>
Message-ID: <h6fpjmiu1@chessie.cirr.com>
Source record: 13893

>> My biggest con is that it uses a lot of AA cells, ...
>I solved that problem with a Velcro'ed gel cell.

I don't know about the '269, but the '259 practically GOBBLED batteries!
I currently use an Autek VA-1 and have been reasonably happy with it.

--Myron A. Calhoun, W0PBV.
Five boxes preserve our freedoms: soap, ballot, witness, jury, and cartridge

1283. Re: MFJ-269 Antenna Analyzer experience

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-19 04:53:22 UTC
From: Peter <pm@hotmail.com>
Message-ID: <c_WdnSQoranZGBbXnZ2dnUVZ8nGdnZ2d@westnet.com.au>
Source record: 13895

"Owen Duffy" <none@no.where> wrote in message
news:Xns9C6A49ED5D02Enonenowhere@61.9.191.5...
> "Peter" <pm@hotmail.com> wrote in
> news:4ZGdnaPPPdSQ4BrXnZ2dnUVZ8tqdnZ2d@westnet.com.au:
>
>> Hi all
>>
>> I'm looking at purchasing an MFJ269 antenna analyser and keen to hear
>> experience of others in this group regarding this or similar analysers.
>> Appears to be ideal if it is as good as MFJ claim.
>>
>>
>
> Peter,
>
> Effective exploitation of the capability of this type of analyser depends
> on a sound understanding of transmission lines, and of the instrument's
> own limitation. The availability of these analysers at low cost, and the
> perception that they are a magic bullet has lead to a lot of pseudo
> technical nonsense being proposed. The magic is more in the user's
> capability than the box, and buying the box doesn't buy knowledge and
> understanding... but the device can help develop knowledge and
> understanding.
>
> I have not used a '269 (though I have extensively used a '259B), but I
> suspect that it does not display the sign of X. Estimation of the sign of
> X in the '259 and similar instruments is an issue, and confuses many
> users. There are propositions that sign of X is easily determined from
> the slope of X with frequency at a point... but whilst that is true for
> an ideal passive component, it is not true in general.
>
> These instruments are often used in pursuit of the questionable goal of
> resonance, and the instrument used to show resonance by observing X=0, or
> X approximately zero, or a local minimum for X at some frequency on the
> assumption that X changes sign at that point and that resonance of
> something is indicated.
>
> I wrote some notes entitled "In pursuit of dipole resonance with an
> MFJ259B" at http://vk1od.net/blog/?p=680 that canvasses the behaviour of
> the instrument in such an application, and flags the issues in
> measurement. You may find them interesting.
>
> Others have raised the issue that these instruments use a broadband
> detector, which works fine so long as the internal oscillator has low

> harmonic content and dominates the detector. If you let one of these
> things time out, the oscillator is shut down, and if you see indication
> on the meters, then energy from another source is of sufficient magnitude
> to be concerned about the accuracy of measurements.
>
> Owen

Thanks Owen for the information and your notes "In pursuit of dipole resonance with an MFJ259B"
My intended use for the device is to get a bit of view on what's going on with my various home brew antennas and matching devices and for my own curiosity to compare theory with real world.

I must admit I had assumed that the 269 analyzer display the sign of the reactance, I will have to reread the ad.

Regards

Peter VK6YSF

http://members.optushome.com.au/vk6ysf/vk6ysf/main.htm

1284. Re: MFJ-269 Antenna Analyzer experience

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-19 05:32:57 UTC
From: Owen Duffy <none@no.where>
Message-ID: <Xns9C6C9E2D16472nonenowhere@61.9.191.5>
Source record: 13896

"Peter" <pm@hotmail.com> wrote in
news:c_WdnSQoranZGBbXnZ2dnUVZ8nGdnZ2d@westnet.com.au:

...
> I must admit I had assumed that the 269 analyzer display the sign of
> the reactance, I will have to reread the ad.

Ah, you were looking for honesty in advertising!

The online guff on the MFJ259B says:
"Read Complex Impedance as series resistance and reactance (R+jX) or as
magnitude (Z) and phase (degrees)."

The MFJ259B definitely does *not* show phase angle or reactance as
negative for cases where X is actually negative.

The same words appear in the MFJ269 online page, so it may also be a
misrepresentation.

I see in the MFJ269 manual, the same pretence over the sign of phase and
reactance. It contains the words "Besides Z, an angle between zero and 90
degrees is shown. This angle represents the phase difference between
current and voltage at the terminals of the analyzer."

Of course, a phase angle between "zero and 90 degrees" does not represent
"phase difference between current and voltage at the terminals of the
analyzer" in the case of a capacitive impedance.

Honesty in advertising... think again.

Owen

1285. Re: MFJ-269 Antenna Analyzer experience

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-19 05:54:44 UTC
From: Peter <pm@hotmail.com>
Message-ID: <5qydnUcW_-81DhbXnZ2dnUVZ8tWdnZ2d@westnet.com.au>
Source record: 13897

"Owen Duffy" <none@no.where> wrote in message
news:Xns9C6C9E2D16472nonenowhere@61.9.191.5...
> "Peter" <pm@hotmail.com> wrote in
> news:c_WdnSQoranZGBbXnZ2dnUVZ8nGdnZ2d@westnet.com.au:
>
> ...
>> I must admit I had assumed that the 269 analyzer display the sign of
>> the reactance, I will have to reread the ad.
>
> Ah, you were looking for honesty in advertising!
>
> The online guff on the MFJ259B says:
> "Read Complex Impedance as series resistance and reactance (R+jX) or as
> magnitude (Z) and phase (degrees)."
>
> The MFJ259B definitely does *not* show phase angle or reactance as
> negative for cases where X is actually negative.
>
> The same words appear in the MFJ269 online page, so it may also be a
> misrepresentation.
>
> I see in the MFJ269 manual, the same pretence over the sign of phase and
> reactance. It contains the words "Besides Z, an angle between zero and 90
> degrees is shown. This angle represents the phase difference between
> current and voltage at the terminals of the analyzer."
>
> Of course, a phase angle between "zero and 90 degrees" does not represent
> "phase difference between current and voltage at the terminals of the
> analyzer" in the case of a capacitive impedance.
>
> Honesty in advertising... think again.
>
> Owen

What was I thinking! I was impressed with what was being claimed.

I will continue with my product research and you can expect me to float some
other manufactures device on this group soon for comments.

Peter VK6YSF

http://members.optushome.com.au/vk6ysf/vk6ysf/main.htm

1286. Re: MFJ-269 Antenna Analyzer experience

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-19 06:03:23 UTC
From: Dale Parfitt <parinc1@verizon.net>
Message-ID: <LAMim.2746$nh2.2122@nwrddc02.gnilink.net>
Source record: 13898

"Peter" <pm@hotmail.com> wrote in message
news:5qydnUcW_-81DhbXnZ2dnUVZ8tWdnZ2d@westnet.com.au...
>
> "Owen Duffy" <none@no.where> wrote in message
> news:Xns9C6C9E2D16472nonenowhere@61.9.191.5...
>> "Peter" <pm@hotmail.com> wrote in
>> news:c_WdnSQoranZGBbXnZ2dnUVZ8nGdnZ2d@westnet.com.au:
>>
>> ...
>>> I must admit I had assumed that the 269 analyzer display the sign of
>>> the reactance, I will have to reread the ad.
>>
>> Ah, you were looking for honesty in advertising!
>>
>> The online guff on the MFJ259B says:
>> "Read Complex Impedance as series resistance and reactance (R+jX) or as
>> magnitude (Z) and phase (degrees)."
>>
>> The MFJ259B definitely does *not* show phase angle or reactance as
>> negative for cases where X is actually negative.
>>
>> The same words appear in the MFJ269 online page, so it may also be a
>> misrepresentation.
>>
>> I see in the MFJ269 manual, the same pretence over the sign of phase and
>> reactance. It contains the words "Besides Z, an angle between zero and 90
>> degrees is shown. This angle represents the phase difference between
>> current and voltage at the terminals of the analyzer."
>>
>> Of course, a phase angle between "zero and 90 degrees" does not represent
>> "phase difference between current and voltage at the terminals of the
>> analyzer" in the case of a capacitive impedance.
>>
>> Honesty in advertising... think again.
>>
>> Owen
>
> What was I thinking! I was impressed with what was being claimed.
>
> I will continue with my product research and you can expect me to float
> some other manufactures device on this group soon for comments.
>
> Peter VK6YSF
>

Again- look at the RigExpert A-200A. Batteries seem to last forever, it's USB upgradable and it DOES resolve the sign of R +/-JX.

Dale W4OP

1287. Re: Aluminum spreader quad

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-19 06:11:00 UTC
From: Howard K0ACF <howardk0acf@knology.net>
Message-ID: <bfc13$4a8b9777$d8feea72$31344@KNOLOGY.NET>
Source record: 13899

There is an article in QST april 1992 about building a 5 band 2 element quad
with aluminum tubing KC6T is the one who built it. It also is in 2007 ARRL
Handbook. Shows & describes how the spreders are built with dinensions....
"JIMMIE" <JIMMIEDEE123@YAHOO.COM> wrote in message
news:7d69e953-4bdc-4f3a-83ac-ac0ef8a8324b@f37g2000yqn.googlegroups.com...
>I was talking with some guys this AM about building a quad antenna
> using aluminum spreaders. I know that it at least the tips of the
> spreaders would have to be made of insulating material such a
> fiberglass but the consensus seemed to be that most of the spreaders
> should be non-metalic. I was wondering if anyone here had built a quad
> with almost all of the spreaders made of metal and what was the
> results.
>
> Jimmie

1288. Re: MFJ-269 Antenna Analyzer experience

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-19 12:33:51 UTC
From: Peter <pm@hotmail.com>
Message-ID: <3OmdnfXvSbCvbBbXnZ2dnUVZ8j2dnZ2d@westnet.com.au>
Source record: 13900

```
"Dale Parfitt" <parinc1@verizon.net> wrote in message
news:LAMim.2746$nh2.2122@nwrddc02.gnilink.net...
>
> "Peter" <pm@hotmail.com> wrote in message
> news:5qydnUcW_-81DhbXnZ2dnUVZ8tWdnZ2d@westnet.com.au...
>>
>> "Owen Duffy" <none@no.where> wrote in message
>> news:Xns9C6C9E2D16472nonenowhere@61.9.191.5...
>>> "Peter" <pm@hotmail.com> wrote in
>>> news:c_WdnSQoranZGBbXnZ2dnUVZ8nGdnZ2d@westnet.com.au:
>>>
>>> ...
>>>> I must admit I had assumed that the 269 analyzer display the sign of
>>>> the reactance, I will have to reread the ad.
>>>
>>> Ah, you were looking for honesty in advertising!
>>>
>>> The online guff on the MFJ259B says:
>>> "Read Complex Impedance as series resistance and reactance (R+jX) or as
>>> magnitude (Z) and phase (degrees)."
>>>
>>> The MFJ259B definitely does *not* show phase angle or reactance as
>>> negative for cases where X is actually negative.
>>>
>>> The same words appear in the MFJ269 online page, so it may also be a
>>> misrepresentation.
>>>
>>> I see in the MFJ269 manual, the same pretence over the sign of phase and
>>> reactance. It contains the words "Besides Z, an angle between zero and
>>> 90
>>> degrees is shown. This angle represents the phase difference between
>>> current and voltage at the terminals of the analyzer."
>>>
>>> Of course, a phase angle between "zero and 90 degrees" does not
>>> represent
>>> "phase difference between current and voltage at the terminals of the
>>> analyzer" in the case of a capacitive impedance.
>>>
>>> Honesty in advertising... think again.
>>>
>>> Owen
>>
>> What was I thinking! I was impressed with what was being claimed.
>>
```

>> I will continue with my product research and you can expect me to float
>> some other manufactures device on this group soon for comments.
>>
>> Peter VK6YSF
>>
> Again- look at the RigExpert A-200A. Batteries seem to last forever, it's
> USB upgradable and it DOES resolve the sign of R +/-JX.
>
> Dale W4OP
Thanks Dale

I have just had a look at the RigExpert site. Look impressive, but the
MFJ269 at about $400US was about my limit.
I think I will take a step back and conduct a more scientific review of all
of the antenna analyzers on offer, there for you should get sick of my
postings over the next couple of weeks/months.
I must say that the ability to save and analyze data on the lap top is an
appealing feature.

Regards

Peter VK6YSF

http://members.optushome.com.au/vk6ysf/vk6ysf/main.htm

1289. Re: CIA Panetta: Health IT ,who will control private data ? W.H.Emergency Powers to Chief of Staff ?,U.S. Attorney nominee won't IDcustomers, Lost Standards , AIG-FreddieMac-FannieMae for the "usual ones"?,Federal Reserve Audit , H.R.3200

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-19 14:37:54 UTC
From: JB <nospam@goofball.net>
Message-ID: <67Uim.2844$Jg.2132@nwrddc01.gnilink.net>
Source record: 13801

"n9zas" <n9zas.4d1314e@radiobanter.com> wrote in message
news:n9zas.4d1314e@radiobanter.com...
>
> DO NOT QUOTE POLITICAL TRASH IN THE ANTENNA FORUMS!!! iF IT HAS NOTHING
> TO DO WITH ANTENNAS,THEN FIND SOMEONE ELSE WHO WANTS TO SEE YOUR
> GARBAGE!!!!!!
>
Some peoples need an enemy in order to justify their aggression. Neocon
exist only because of leftist propaganda.

1290. Re: MFJ-269 Antenna Analyzer experience

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-19 15:45:00 UTC
From: jimp@specsol.spam.sux.com
Message-ID: <rjitl6-dpq.ln1@mail.specsol.com>
Source record: 13802

Peter <pm@hotmail.com> wrote:

> I have just had a look at the RigExpert site. Look impressive, but the
> MFJ269 at about $400US was about my limit.
> I think I will take a step back and conduct a more scientific review of all
> of the antenna analyzers on offer, there for you should get sick of my
> postings over the next couple of weeks/months.
> I must say that the ability to save and analyze data on the lap top is an
> appealing feature.
>
> Regards
>
> Peter VK6YSF
>
> http://members.optushome.com.au/vk6ysf/vk6ysf/main.htm

Have a look at the AIM 4170 at http://www.arraysolutions.com/

I have that and a MFJ analyzer.

For a quick antenna adjustment, the MFJ is easier to use.

For in depth analysis, the AIM can't be beat.

If I had only one, I would prefer to have the AIM.

--
Jim Pennino

Remove .spam.sux to reply.

1291. Re: MFJ-269 Antenna Analyzer experience

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-19 18:06:56 UTC
From: Jim Lux <james.p.lux@jpl.nasa.gov>
Message-ID: <h6hevv$3as$1@news.jpl.nasa.gov>
Source record: 13804

Dale Parfitt wrote:
> "Peter" <pm@hotmail.com> wrote in message

>> Peter VK6YSF
>>
> Again- look at the RigExpert A-200A. Batteries seem to last forever, it's
> USB upgradable and it DOES resolve the sign of R +/-JX.
>
> Dale W4OP
>
>

Or, for a non-handheld device, the TenTec TAPR VNA (Vector Network Analyzer) works quite well (albeit it, too, has a broadband detector). I've used it with both the PC software and CocoaVNA on a Mac.

The N2PK VNA has a more narrow band detector, but isn't available as a off-the-shelf box.

Kind of depends on what you want to do with it. I have a MFJ-269 (and a 259, as it happens), and it's a really handy tool when standing under the antenna or doing "pruning" and those sorts of things, where you basically are "spin the frequency knob and look for the dip". I don't know that I'd use it as a precision measurement instrument to measure inductors and capacitors. .. BTW, the whole "doesn't show the sign of X" isn't a big deal in practice. A small bump of the frequency dial shows that X is either getting bigger or smaller as frequency goes up or down. If your impedance is varying so fast with frequency that you can't figure it out, the MFJ isn't for you anyway, since it's a fairly imprecise oscillator anyway. If you are looking to do precision measurements of impedance at a bunch of points, as you write them down or plot them, it's obvious, and, in any case, it's not a great tool for that.

If you're looking to do something like adjust a phased array, you need one of the network analyzers. It's a lot better than trying to use this thing and opens/shorts, etc.

1292. Re: Aluminum spreader quad

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-19 18:26:42 UTC
From: JIMMIE <JIMMIEDEE123@YAHOO.COM>
Message-ID: <13867a6c-a6de-45c4-8a22-d19edb8fd928@o36g2000vbl.googlegroups.com>
Source record: 13803

On Aug 19, 2:11 am, "Howard K0ACF" <howardk0...@knology.net> wrote:
> There is an article in QST april 1992 about building a 5 band 2 element quad
> with aluminum tubing KC6T is the one who built it. It also is in 2007 ARRL
> Handbook. Shows & describes how the spreders are built with dinensions...."JIMMIE"
<JIMMIEDEE...@YAHOO.COM> wrote in message
>
> news:7d69e953-4bdc-4f3a-83ac-ac0ef8a8324b@f37g2000yqn.googlegroups.com...
>
>
>
> >I was talking with some guys this AM about building a quad antenna
> > using aluminum spreaders. I know that it at least the tips of the
> > spreaders would have to be made of insulating material such a
> > fiberglass but the consensus seemed to be that most of the spreaders
> > should be non-metalic. I was wondering if anyone here had built a quad
> > with almost all of the spreaders made of metal and what was the
> > results.
>
> > Jimmie- Hide quoted text -
>
> - Show quoted text -

Thanks, I ll see if I can pull that up in the QST archives. I may even
have that handbook.

Jimmie

1293. Re: CIA Panetta: Health IT ,who will control private data ? W.H.Emergency Powers to Chief of Staff ?,U.S. Attorney nominee won't IDcustomers, Lost Standards , AIG-FreddieMac-FannieMae for the "usual ones"?,Federal Reserve Audit , H.R.3200

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-19 19:11:17 UTC
From: n9zas <n9zas.4d22e65@radiobanter.com>
Message-ID: <n9zas.4d22e65@radiobanter.com>
Source record: 13806

'JB[_3_ Wrote:
> ;686249']"n9zas" n9zas.4d1314e@radiobanter.com wrote in message
> news:n9zas.4d1314e@radiobanter.com...-
>
> DO NOT QUOTE POLITICAL TRASH IN THE ANTENNA FORUMS!!! iF IT HAS
> NOTHING
> TO DO WITH ANTENNAS,THEN FIND SOMEONE ELSE WHO WANTS TO SEE YOUR
> GARBAGE!!!!!!
> -
> Some peoples need an enemy in order to justify their aggression.
> Neocon
> exist only because of leftist propaganda.

JB[_3_] You are the enemy if you cannot read the previous thread!!!
This a NOT a political forum,THIS IS THE ANTENNA FORUM!!!

--
n9zas

1294. Re: MFJ-269 Antenna Analyzer experience

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-19 21:13:09 UTC
From: Owen Duffy <none@no.where>
Message-ID: <Xns9C6D49707F4C4nonenowhere@61.9.191.5>
Source record: 13805

```
"Peter" <pm@hotmail.com> wrote in
news:3OmdnfXvSbCvbBbXnZ2dnUVZ8j2dnZ2d@westnet.com.au:

>
> "Dale Parfitt" <parinc1@verizon.net> wrote in message
> news:LAMim.2746$nh2.2122@nwrddc02.gnilink.net...
>>
>> "Peter" <pm@hotmail.com> wrote in message
>> news:5qydnUcW_-81DhbXnZ2dnUVZ8tWdnZ2d@westnet.com.au...
>>>
>>> "Owen Duffy" <none@no.where> wrote in message
>>> news:Xns9C6C9E2D16472nonenowhere@61.9.191.5...
>>>> "Peter" <pm@hotmail.com> wrote in
>>>> news:c_WdnSQoranZGBbXnZ2dnUVZ8nGdnZ2d@westnet.com.au:
>>>>
>>>> ...
>>>>> I must admit I had assumed that the 269 analyzer display the sign
>>>>> of the reactance, I will have to reread the ad.
>>>>
>>>> Ah, you were looking for honesty in advertising!
>>>>
>>>> The online guff on the MFJ259B says:
>>>> "Read Complex Impedance as series resistance and reactance (R+jX)
>>>> or as magnitude (Z) and phase (degrees)."
>>>>
>>>> The MFJ259B definitely does *not* show phase angle or reactance as
>>>> negative for cases where X is actually negative.
>>>>
>>>> The same words appear in the MFJ269 online page, so it may also be
>>>> a misrepresentation.
>>>>
>>>> I see in the MFJ269 manual, the same pretence over the sign of
>>>> phase and reactance. It contains the words "Besides Z, an angle
>>>> between zero and 90
>>>> degrees is shown. This angle represents the phase difference
>>>> between current and voltage at the terminals of the analyzer."
>>>>
>>>> Of course, a phase angle between "zero and 90 degrees" does not
>>>> represent
>>>> "phase difference between current and voltage at the terminals of
>>>> the analyzer" in the case of a capacitive impedance.
>>>>
>>>> Honesty in advertising... think again.
>>>>
```

>>>> Owen
>>>
>>> What was I thinking! I was impressed with what was being claimed.
>>>
>>> I will continue with my product research and you can expect me to
>>> float some other manufactures device on this group soon for
>>> comments.
>>>
>>> Peter VK6YSF
>>>
>> Again- look at the RigExpert A-200A. Batteries seem to last forever,
>> it's USB upgradable and it DOES resolve the sign of R +/-JX.
>>
>> Dale W4OP
> Thanks Dale
>
> I have just had a look at the RigExpert site. Look impressive, but the
> MFJ269 at about $400US was about my limit.
> I think I will take a step back and conduct a more scientific review
> of all of the antenna analyzers on offer, there for you should get
> sick of my postings over the next couple of weeks/months.
> I must say that the ability to save and analyze data on the lap top is
> an appealing feature.

Peter,

It helps to identify what you really need from the instrument. The difficulty in doing that is foreseeing where an unstructured learning journey might take you.

You will tend to arrive a points where you want to measure something just beyond your existing capability. If the quest is for pure learning, then just concentrate on the things that are within scope, and enjoy the learning.

I admit that it is a bit of an old world view of ham radio, that it is quintessentially a technical learning activity... but call me a dinasour.

The resolution of sign with the '259B is not a show stopper, but it is a convenience issue and in the hands of a person with inadequate knowledge, it is potentially misleading.

TLLC (http://www.vk1od.net/calc/tl/tllc.php) can refer impedance made at one point on a known transmission line (eg the tx end) to another point (eg the load end). Of course, uncertainty of the TL parameters contributes to measurement uncertainty. This technique is ok for one off measurements, but would be very labour intensive for a sweep with hundreds of observations.

The ability to calibrate the feedline 'fixture' as part of a VNA measurement system provides the convenience of measurement referred to your preferred reference plan. The AIM4170 is (as I understand it) half

of a VNA, but that should be enough to do the same thing.

So, for the advantages of the ham grade VNA over the MFJ259B, you pay more money, get better measurement resolution (the AD converters have better resolution than the MFJ259B), have capability for automation of measurement referred to a convenient reference plane, but... you lose portability... though there is no reason why a ham grade VNA with a basic display system couldn't be portable.

Owen

1295. Re: MFJ-269 Antenna Analyzer experience

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-19 23:04:54 UTC
From: Jim Lux <james.p.lux@jpl.nasa.gov>
Message-ID: <h6i0em$h73$1@news.jpl.nasa.gov>
Source record: 13808

> The ability to calibrate the feedline 'fixture' as part of a VNA
> measurement system provides the convenience of measurement referred to
> your preferred reference plan. The AIM4170 is (as I understand it) half
> of a VNA, but that should be enough to do the same thing.
>
> So, for the advantages of the ham grade VNA over the MFJ259B, you pay
> more money, get better measurement resolution (the AD converters have
> better resolution than the MFJ259B), have capability for automation of
> measurement referred to a convenient reference plane, but... you lose
> portability... though there is no reason why a ham grade VNA with a basic
> display system couldn't be portable.
>
> Owen

The fixture cal is a pretty standard feature of all the ham VNAs (AIM 4170, TAPR VNA, N2PK) whether one or two port devices.

Making it portable is something I've been toying with.. The software is not that complex (at least for the TAPR VNA), so running it on a PDA velcroed to the top of the box isn't out of the question. One problem is that the TAPR VNA is a USB slave, and most PDAs can't be a USB master.

Maybe a small touchscreen netbook? Granted, you're now talking $1000 for the complete setup, but you'll have a real portable powerhouse, much like the Anritsu SiteMaster at 1/10th the cost.

http://www.us.anritsu.com/products/S331E_Site-Master-Compact-Handheld-Cable-and-Antenna-Analyzer_ARSPG_ARQQSidZ1016.aspx

I've also contemplated making something like a S-parameter test set for the TAPR VNA (so you can do both directions) with a built in eCal. Basically just high quality relays and terminations is what's needed.

Another useful add-on would be something that turns the VNA into a spectrum analyzer (e.g. use the output as the LO to a mixer followed by a BPF).. There's a lot of other problems with this, though.

1296. Re: CIA Panetta: Health IT ,who will control private data ? W.H.Emergency Powers to Chief of Staff ?,U.S. Attorney nominee won't IDcustomers, Lost Standards , AIG-FreddieMac-FannieMae for the "usual ones"?,Federal Reserve Audit , H.R.3200

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-19 23:29:46 UTC
From: Spamm Trappe <bit-bucket@config.com>
Message-ID: <slrnh8p2na.1hla.bit-bucket@shell.config.com>
Source record: 13807

```
On Wed, 19 Aug 2009 20:11:17 +0100, n9zas wrote:
> 'JB[_3_ Wrote:
>> ;686249']"n9zas" n9zas.4d1314e@radiobanter.com wrote in message
>> news:n9zas.4d1314e@radiobanter.com...-
>>
>> DO NOT QUOTE POLITICAL TRASH IN THE ANTENNA FORUMS!!! iF IT HAS
>> NOTHING
>> TO DO WITH ANTENNAS,THEN FIND SOMEONE ELSE WHO WANTS TO SEE YOUR
>> GARBAGE!!!!!!
>> -
>> Some peoples need an enemy in order to justify their aggression.
>> Neocon exist only because of leftist propaganda.
>
> JB[_3_] You are the enemy if you cannot read the previous thread!!!
> This a NOT a political forum,THIS IS THE ANTENNA FORUM!!!

And, _you_ are klewless, too.
The spam was a usenet post to the rec.radio.amateur.antenna newsgroup
from a google grooper spammer -- *NOT* not a posting on your sheltered
little "radiobanter" `forum`. The knowledgeable folk on usenet are
killfiling google grooper posts because of the spew of spam from there.
Obviously radiobanter.com does not care what sewage it sucks up off
usenet to feed to you folks.

As for the klewless on radiobanter.com... I've been selectively
killfiling the XXXXXbanter.com crap that get posted in other usenet ng's
for some time now -- photobanter.com, and some others. It looks like
it's time to killfile the idiocy issuing from radiobanter.com, too.

It would be nice if the sloppy-assed portal between radiobanter.com and
usenet was severed.

Hell, it would be nice if the sloppy-assed, spam-tolerant portal
between _groups.google.com_ and usenet was severed, as well.

And, replying to a drive-by, write-only spam post on usenet is a
useless, idiotic thing to do and only angers the rest of use that
have the good sense to use a good usenet service and employ a good
filtering system. We never see the original spam, but we have to
suffer through all the juvenile, (un)clever retorts.
```

1297. Re: MFJ antenna analyzer

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-20 01:13:00 UTC
From: Dave Oldridge <doldridg@leavethisoutshaw.ca>
Message-ID: <Xns9C6CB94D04493doldridganywhere@69.16.185.247>
Source record: 13809

"Cyclone651" <rollie@iowatelecom.net> wrote in
news:h6bssljjs1@news.netins.net:

>They're a little expensive, but well worth the money. It's easy to set
>up a factory made antenna with and a blessing when building homemade
>antennas. The analyzer leaves nothing to guess about as it's all read
>out. I haven't used it yet, but it also has a frequency counter input.
>That's just another use that make the MFJ-269 indispensable. Rollie

I have successfully used my 259B to build small transmitting loops for 80
and 160m as well as setting up mobile whips and many other antennas.

--
Dave Oldridge+
ICQ 454777283

1298. Re: MFJ-269 Antenna Analyzer experience

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-20 01:26:34 UTC
From: Chuck <nospam@nospam.at.all>
Message-ID: <9r0p859vhpv55i6bhqjtabl3igr5u72r52@4ax.com>
Source record: 13810

On Sun, 16 Aug 2009 11:29:16 +0800, "Peter" <pm@hotmail.com> wrote:

>Hi all
>
>I'm looking at purchasing an MFJ269 antenna analyser and keen to hear
>experience of others in this group regarding this or similar analysers.
>Appears to be ideal if it is as good as MFJ claim.

I can't provide any info on the MFJ269, but I wonder whether the
MFJ993B automatic antenna tuner might serve a similar purpose, with
two big advantages over the 269. One is that it relies on your
transmitter rather than on an internal RF source so it is less likely
to be overwhelmed by nearby broadcast transmitters; and the other is
that it is also a decent antenna tuner.

The 993B uses some of the same circuits found in the 259. Of course,
there are some things the 269 will do that the 993B won't help with.

73,

Chuck
NT3G

1299. removing guy wires on tower

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-20 02:28:28 UTC
From: Ralph Mowery <rmowery28146@earthlink.net>
Message-ID: <BbednW2z_9jDKRHXnZ2dnUVZ_oCdnZ2d@earthlink.com>
Source record: 13811

I have 6 sections of Rohn 25 set in a yard of cement. It is guyed at about 30 feet and about 5 feet under the top of the tower with 3 wires at each place. I need to remove the wires on one side so I can cut a tree to keep it from falling on the guy wires.

On top of the tower is about 15 feet of pipe sticking out. About a foot over the tower is a 3 element triband, and at about 5 feet spacing is a 5 element 6 meter antenna, two meter,and 432 antenna all on 15 feet long booms.

Will it be safe to remove the two guy wires on one side of the tower for about an hour to cut the trees, or should I let the tension off all the guy wires ?
This would be done when the wind is not blowing.

1300. Re: MFJ-269 Antenna Analyzer experience

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-20 03:36:27 UTC
From: curraveha <curraveha@hotmail.com>
Message-ID: <%w3jm.2995$Jg.481@nwrddc01.gnilink.net>
Source record: 13812

I have an earlier version, the MFJ249 and it works very well.

"Peter" <pm@hotmail.com> wrote in message
news:4ZGdnaPPPdSQ4BrXnZ2dnUVZ8tqdnZ2d@westnet.com.au...
> Hi all
>
> I'm looking at purchasing an MFJ269 antenna analyser and keen to hear
> experience of others in this group regarding this or similar analysers.
> Appears to be ideal if it is as good as MFJ claim.
>
>
> --
> Peter VK6YSF
>
> http://members.optushome.com.au/vk6ysf/vk6ysf/main.htm
>
>
>
>

1301. Re: removing guy wires on tower

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-20 07:55:55 UTC
From: Owen Duffy <none@no.where>
Message-ID: <Xns9C6DB669D72B7nonenowhere@61.9.191.5>
Source record: 13813

"Ralph Mowery" <rmowery28146@earthlink.net> wrote in
news:BbednW2z_9jDKRHXnZ2dnUVZ_oCdnZ2d@earthlink.com:

> I have 6 sections of Rohn 25 set in a yard of cement. It is guyed at
> about 30 feet and about 5 feet under the top of the tower with 3 wires
> at each place. I need to remove the wires on one side so I can cut a
> tree to keep it from falling on the guy wires.
>
> On top of the tower is about 15 feet of pipe sticking out. About a
> foot over the tower is a 3 element triband, and at about 5 feet
> spacing is a 5 element 6 meter antenna, two meter,and 432 antenna all
> on 15 feet long booms.
>
> Will it be safe to remove the two guy wires on one side of the tower
> for about an hour to cut the trees, or should I let the tension off
> all the guy wires ?
> This would be done when the wind is not blowing.
>
>

As you have probably guessed, guy maintenance on towers is a high risk activity. Lots of seriously large towers have failed because a single guy was slackened. The taller the tower, the greater the risk.

In any circumstance, slackening (or removing) one guy of a set will introduce a lateral force that bends the tower. With sufficient weight, that may lead to buckling and structural failure.

If you remove all guys in a set by progressively slackening each them, that may not introduce the lateral force describe above, but the greater length between existing supports may allow buckling and structural failure.

Can you remove all guys? Is the tower installation designed to be free standing at reasonable wind velocity?

The safe answer is to consult a structural engineer.

Can you remove the tree without slackening guys and without risking dropping parts of the tree on the guys? Perhaps cutting the tree into smaller lengths that are lowered to the ground on ropes to guide and slow the descent? I have watched tree climbers take huge trees down, lowering all the pieces in a very limited space against the trunk.

Have you asked your arborist about the removal and the risk to the tower?

Owen

1302. Maldol VT-120D

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-20 08:23:20 UTC
From: VK2KC <vk2kcjohn@gmail.com>
Message-ID: <YJ7jm.12945$ze1.3352@news-server.bigpond.net.au>
Source record: 13814

I am looking for an English instruction sheet for a Maldol/Vertex VT-120D
2m/70cm antenna.

My Japanese isn't up to speed!

Many thanks,
John
VK2KC

1303. Re: Aluminum spreader quad

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-20 10:04:58 UTC
From: Bob Bob <bob3bob3@suddenlink.net>
Message-ID: <gnjvl6-u55.ln1@p400bob.personal.cox.net>
Source record: 13815

Hi Jimmie

IME the most critical part of quad tuning is F/B so you might like to use that as a go/nogo test for your spreader experiments.

My thinking on metal spreaders would be about their length with respect to wavelength. ie if they started approaching resonance of the operating frequency (incl coupling to boom etc) I would expect pattern/gain & feed Z to be affected. I wouldnt try real hard mind you, just plug the think into a NEC engine.

Good news though..

Cheers Bob

>>
>> Jimmie
>
> I slid Al tubing over the supports for my two meter quad except for
> the last two inches toward the tip and I cant tell any difference in
> operation VSWR is the same. AGC voltage on my receiver is the same as
> usual for a local repeater. Whether or not the boom ends of the tubing
> were connected together also had no discernible effect.
>
> Jimmie

1304. HighPower Silicon?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-20 11:16:31 UTC
From: ml <m@di.net>
Message-ID: <m-6BA95C.07163120082009@news.optonline.net>
Source record: 13816

hi

Was going to make a center fed dipole, and wanted to put some (non vinigar/acetic acid) Silicon goo on the center to waterproof.

Just wondering if this is typically 'ok' for full legal limit?

wasn't really sure if there would be arc over/breakdown or other issues

thanks

1305. Re: HighPower Silicon?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-20 11:26:42 UTC
From: Gerard <pe1oud@amsat.org>
Message-ID: <4a8d3317$1$13802$dbd4d001@news.wanadoo.nl>
Source record: 13817

"ml" <m@di.net> schreef in bericht
news:m-6BA95C.07163120082009@news.optonline.net...
> hi
>
> Was going to make a center fed dipole, and wanted to put some
> (non
> vinigar/acetic acid) Silicon goo on the center to
> waterproof.
>
Over time any viscous substance will rinse off.

Whatever happened to self-vulcanising tape?

73 - Gerard - PE1OUD

1306. Re: removing guy wires on tower

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-20 11:33:58 UTC
From: 'Doc <ltdoc@yahoo.com>
Message-ID: <08c9052d-60e0-4895-a5fa-c29a2c8eafe5@r33g2000vbp.googlegroups.com>
Source record: 13818

Just from what you've posted, your tower sounds sort of 'marginal' to
start with. I would be very careful in loosening any of those guys.
- 'Doc

1307. Re: HighPower Silicon?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-20 12:37:53 UTC
From: What me worry? <danXinpasco@gmail.com>
Message-ID: <ijgq85tf2qcg3e3hp3472jicnkkh1sjaq8@4ax.com>
Source record: 13819

On Thu, 20 Aug 2009 07:16:31 -0400, ml <m@di.net> backed into a tree
whilst ridin inna park then wrote:

>hi
>
>Was going to make a center fed dipole, and wanted to put some (non
>vinigar/acetic acid) Silicon goo on the center to waterproof.
>
>
>
>Just wondering if this is typically 'ok' for full legal limit?
>
>
>wasn't really sure if there would be arc over/breakdown or other
>issues
>
>
>
>
>
>
>
>
>thanks

Several things...There are silicones that have a non-acidic curing
process. They take longer to set and stay soft for their life.
That said, unless you have metal that is about the same thickness as
aluminum foil there is no way standard silicone is going to damage it
in 20 years or so. Yes I have been working with GE silicones for, oh
35 years or so.

Dan N9JBF

1308. Re: HighPower Silicon?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-20 13:40:03 UTC
From: Allodoxaphobia <bit-bucket@config.com>
Message-ID: <slrnh8qkhj.dfe.bit-bucket@shell.config.com>
Source record: 13820

On Thu, 20 Aug 2009 07:16:31 -0400, ml wrote:
>
> Was going to make a center fed dipole, and wanted to put some (non
> vinigar/acetic acid) Silicon goo on the center to waterproof.
>
> Just wondering if this is typically 'ok' for full legal limit?
>
> wasn't really sure if there would be arc over/breakdown or other
> issues

Unless there's something you're not telling us about your operating,
there will be little or no risk of "arc over/breakdown" at the center
feedpoint.

Locate some 'aquarium grade', non-acidic _silicone_ "goo".

Jonesy
--
Marvin L Jones | jonz | W3DHJ | linux
38.24N 104.55W | @ config.com | Jonesy | OS/2
* Killfiling google & XXXXbanter.com: jonz.net/ng.htm

1309. Re: removing guy wires on tower

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-20 14:33:07 UTC
From: Ralph Mowery <rmowery28146@earthlink.net>
Message-ID: <X-ydnUIso--rwxDXnZ2dnUVZ_qidnZ2d@earthlink.com>
Source record: 13821

"'Doc" <ltdoc@yahoo.com> wrote in message
news:08c9052d-60e0-4895-a5fa-c29a2c8eafe5@r33g2000vbp.googlegroups.com...
> Just from what you've posted, your tower sounds sort of 'marginal' to
> start with. I would be very careful in loosening any of those guys.
> - 'Doc
>

Unless I missed something when I described the tower, what is marginal ?
The first section of tower is set in a yard of cement as described in the
Rohn booklet. Also they only require two sets of guy wires up to 70 feet.
I live in the middle of North Carolina so a large build up of ice or very
high winds (say over 90 mph) would be unusual.

1310. Re: removing guy wires on tower

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-20 14:41:37 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <02oq85hi4evmkqg9du3s6smfb4tujl8rl8@4ax.com>
Source record: 13822

On Thu, 20 Aug 2009 07:55:55 GMT, Owen Duffy <none@no.where> wrote:

> Perhaps cutting the tree into
>smaller lengths that are lowered to the ground on ropes to guide and slow
>the descent? I have watched tree climbers take huge trees down, lowering
>all the pieces in a very limited space against the trunk.

Here in the Pacific Northwest, tree country, I have never seen any
other way except for when trees are layed over indiscriminately as
part of a clearing operation.

73's
Richard Clark, KB7QHC

1311. Re: MFJ-269 Antenna Analyzer experience

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-20 15:09:29 UTC
From: Ian Wade G3NRW <g3nrw@yahoo.co.uk>
Message-ID: <Y4KZMCCpcWjKFwqa@ntlworld.com>
Source record: 13823

From: jimp@specsol.spam.sux.com
Date: Wed, 19 Aug 2009 Time: 15:45:00
>
>Have a look at the AIM 4170 at http://www.arraysolutions.com/
>
>I have that and a MFJ analyzer.
>
>For a quick antenna adjustment, the MFJ is easier to use.
>
>For in depth analysis, the AIM can't be beat.
>
>If I had only one, I would prefer to have the AIM.
>

I'll second that. The AIM4170 *is* expensive, especially when you add on 15% UK sales tax (and it took me 18 months to take the plunge), but it does so much more than the MFJ units.

Instant computer readout, in nice graphical form, of all the antenna system parameters over any selected frequency range up to 170MHz. They claim to have interference reduction capability to minimize the effects of close AM MW signals, but I don't live close enough to an AM transmitter to test this.

The other nice thing about the 4170 is the ability to control it remotely. With the 4170 connected to the antenna system in the shack and controlled by a local PC, it's then possible to remotely access the PC from a cheapy notebook in the backyard. You can make antenna adjustments out in the yard and see the effects of the changes immediately, without having to repeatedly walk back indoors to look at the 4170 PC. This feature alone has saved me a *lot* of time:

<http://homepage.ntlworld.com/wadei/AIM4170/Remote%20AIM%20Control%20HOWTO%20-%20090106.pdf>

Well worth a look.

--
73
Ian, G3NRW

1312. Cable and mobile antenna on MKZ

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-20 15:45:23 UTC
From: Jim <jimmken@yahoo.com>
Message-ID: <nbudnVQmx-IH8hDXnZ2dnUVZ_uadnZ2d@giganews.com>
Source record: 13824

Folks,
Trying to find an optimum way of mounting an HF mobile... probably 20 meters... antenna on a Lincoln 2009 or 2010 MKZ. If you have mounted one I would appreciate info on how it was mounted and how you ran the cable into the car.
thanks,
JFK K4NAV

1313. Using A "Combiner" For A SDR

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-20 15:46:25 UTC
From: Robert11 <rgsros@xnotme.invalid>
Message-ID: <h6jr4m$e8h$1@news.eternal-september.org>
Source record: 13825

Hi,

Just an elderly sw listener from the old days.
Not very sharp with antenna theory, frankly.

Anyway, would be most grateful for any thoughts on the following, please:

Have 2 scanners working off of a single Scantenna antenna.
I now switch the Scanners via a good quality pushbutton switch which
supposedly is suited for the vhf/uhf range.
Seems to work fine.

Also have a hardware hf receiver, with its own antenna.

Thinking of getting a new "toy," perhaps a WinRadio SDR receiver.

Here's where the fun starts:

It only has a single antenna input, even though it has vhf/uhf capabilities.

They want you, apparently, to buy one of their Combiners for $ 200.
Ugh.

Take a look at: http://www.winradio.com/home/acd-1800.htm

Question 1:
Anything "better," or cheaper ?

I guess I will be forced to set up some kind of switch matrix, even if I do
use their Combiner.

Question 2:
But, the following problem arises, no matter how I do it.

The HF input, as well as the UHF/VHF input will at all times be "seeing" the
turned off hardware HF receiver (when using the SDR PC receiver) as well as
the turned off hardware scanner input (when using the SDR PC receiver)

In other words, each input to the combiner would be fed by a "T" where the
run to the hardware HF Receiver is tapped off to the Combiner. And the run
to the hardware Scanner is also tapped off via a "T" to the vhf/uhf input
of the Combiner.

From looking at the link above for the Combiner, and its specs, do you think
there will be any "meaningful" loss at the SDR PC receiver if I use it, and
it sees these not-in-use inputs also ?

And the other way around, I guess. If I am not using the PC SDR, will my
regular Scanner or hardware HF receiver suffer any from having the Combiner

in place ?

Tried to explain this as clearly as I could, but if confusing, will try harder if you ask for any clarifications.

Any other way(s) of doing all of this, that would be too complicated or expensive, perhaps ?

Thanks,
Bob

1314. Re: HighPower Silicon?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-20 15:50:55 UTC
From: Tim Shoppa <shoppa@trailing-edge.com>
Message-ID: <56b3658a-0ec1-49e3-ac46-d5f937ea74d4@l34g2000vba.googlegroups.com>
Source record: 13826

On Aug 20, 7:16 am, ml <m...@di.net> wrote:
> hi
>
> Was going to make a center fed dipole, and wanted to put some (non
> vinigar/acetic acid) Silicon goo   on the center to waterproof.
>
> Just wondering if this is typically 'ok' for full legal limit?
>
> wasn't really sure if there would be arc over/breakdown   or other
> issues

If you're worried about moisture getting into a coaxial feedline, I wouldn't settle for anything less than Coax-Seal (mastic tape) for a long-term hi-power installation. Proper installation of the coax-seal is very important, randomly gooping gunk around won't help much.

Don't worry about exposed connections to/from antenna wire. Just keep the moisture out of the coax.

If you're feeding with ladder line, I don't think there's anything that has to be waterproofed at all.

Some people like to spray with clear acrylic to keep things shiny but I don't think this will hold up forever in the sun, and it does nothing electrically, and might become a minor pain that you have to scrape off in case of modification/repair.

Tim N3QE

1315. Re: Using A "Combiner" For A SDR

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-20 18:06:24 UTC
From: Jerry <jerrymartes@verizon.net>
Message-ID: <Aggjm.37$FV4.33@nwrddc01.gnilink.net>
Source record: 13827

Hi Robert

As I see it, you are considering a very complex "radio listening system".
Aparently you are considering two or more receivers and two or more
antennas. That will involve lots and lots of compromises.
Is it reasonable for you to insert DC blocks in the antenna connections to
each receiver? If so, connect all the antennas and receivers any way you
want. If you get adequate performance, there will be nothing additional
required. As you experience performance inadequate performance, then, you
can investigate automatic (computer controlled) switching or "combiners".

Jerry KD6JDJ

"Robert11" <rgsros@xnotme.invalid> wrote in message
news:h6jr4m$e8h$1@news.eternal-september.org...
> Hi,
>
> Just an elderly sw listener from the old days.
> Not very sharp with antenna theory, frankly.
>
> Anyway, would be most grateful for any thoughts on the following, please:
>
> Have 2 scanners working off of a single Scantenna antenna.
> I now switch the Scanners via a good quality pushbutton switch which
> supposedly is suited for the vhf/uhf range.
> Seems to work fine.
>
> Also have a hardware hf receiver, with its own antenna.
>
> Thinking of getting a new "toy," perhaps a WinRadio SDR receiver.
>
> Here's where the fun starts:
>
> It only has a single antenna input, even though it has vhf/uhf
> capabilities.
>
> They want you, apparently, to buy one of their Combiners for $ 200.
> Ugh.
>
> Take a look at: http://www.winradio.com/home/acd-1800.htm
>
> Question 1:
> Anything "better," or cheaper ?
>
> I guess I will be forced to set up some kind of switch matrix, even if I

> do use their Combiner.
>
> Question 2:
> But, the following problem arises, no matter how I do it.
>
> The HF input, as well as the UHF/VHF input will at all times be "seeing"
> the turned off hardware HF receiver (when using the SDR PC receiver) as
> well as the turned off hardware scanner input (when using the SDR PC
> receiver)
>
> In other words, each input to the combiner would be fed by a "T" where the
> run to the hardware HF Receiver is tapped off to the Combiner. And the
> run to the hardware Scanner is also tapped off via a "T" to the vhf/uhf
> input of the Combiner.
>
> From looking at the link above for the Combiner, and its specs, do you
> think there will be any "meaningful" loss at the SDR PC receiver if I use
> it, and it sees these not-in-use inputs also ?
>
> And the other way around, I guess. If I am not using the PC SDR, will my
> regular Scanner or hardware HF receiver suffer any from having the
> Combiner in place ?
>
> Tried to explain this as clearly as I could, but if confusing, will try
> harder if you ask for any clarifications.
>
> Any other way(s) of doing all of this, that would be too complicated or
> expensive, perhaps ?
>
> Thanks,
> Bob
>

1316. Re: Maldol VT-120D

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-20 20:35:21 UTC
From: n9zas <n9zas.4d37fe7@radiobanter.com>
Message-ID: <n9zas.4d37fe7@radiobanter.com>
Source record: 13828

VK2KC;686329 Wrote:
> I am looking for an English instruction sheet for a Maldol/Vertex
> VT-120D
> 2m/70cm antenna.
>
> My Japanese isn't up to speed!
>
> Many thanks,
> John
> VK2KC

Try checking with www.aesham.com in milwaukee,wis.
They sell them new.
73's!
n9zas

--
n9zas

1317. Re: HighPower Silicon?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-20 21:36:26 UTC
From: Ian White GM3SEK <gm3sek@ifwtech.co.uk>
Message-ID: <Hrp6BuEaHcjKFAZi@ifwtech.co.uk>
Source record: 13834

ml wrote:
>hi
>
>Was going to make a center fed dipole, and wanted to put some (non
>vinigar/acetic acid) Silicon goo on the center to waterproof.
>
>
>
>Just wondering if this is typically 'ok' for full legal limit?
>
>
>wasn't really sure if there would be arc over/breakdown or other
>issues
>

Probably not, but hot melt glue is a better sealant and a better RF insulator. Regular translucent hmg is amorphous polypropeylene, a largely non-polar polymer which is a close relative to polyethylene. It is free-flowing and very, very sticky while it's hot.

Tapes are excellent for waterproofing simple shapes like inline connectors, because the tape can be applied evenly and under constant tension. But the tails on the end of coax make a difficult shape to wrap. The same applies even if you connect a plug to the socket on a dipole center insulator. These more complex shapes make it difficult to keep self-amalgamating tapes under the tension that is needed to make them seal effectively.

Coax-Seal is good for waterproofing complex shapes because it is moldable... but what are its RF insulating properties? I've never seen a product data sheet that deals with this issue.

I've had cables and connections sealed with hot melt glue outside for 10 years. Some applications involve high RF voltages where the hmg is the only insulation, and some involve very unfavorable combinations of dissimilar metals. In all that time I have never had a single failure involving either RF breakdown, water leakage or corrosion. Contrast that with silicone or epoxy sealants which begin to deteriorate after 2-3 years in the rain and UV.

--

73 from Ian GM3SEK 'In Practice' columnist for RadCom (RSGB)
http://www.ifwtech.co.uk/g3sek

1318. Re: Maldol VT-120D

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-20 23:01:16 UTC
From: VK2KC <vk2kcjohn@gmail.com>
Message-ID: <0Bkjm.13070$ze1.1465@news-server.bigpond.net.au>
Source record: 13829

Thank you for the tip, I have emailed them with my request!
73
John
VK2KC

"n9zas" <n9zas.4d37fe7@radiobanter.com> wrote in message
news:n9zas.4d37fe7@radiobanter.com...
>
> VK2KC;686329 Wrote:
>> I am looking for an English instruction sheet for a Maldol/Vertex
>> VT-120D
>> 2m/70cm antenna.
>>
>> My Japanese isn't up to speed!
>>
>> Many thanks,
>> John
>> VK2KC
>
> Try checking with www.aesham.com in milwaukee,wis.
> They sell them new.
> 73's!
> n9zas
>
>
>
>
> --
> n9zas
>

1319. Re: HighPower Silicon?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-21 00:43:28 UTC
From: ml <m@di.net>
Message-ID: <m-459EFC.20432820082009@news.optonline.net>
Source record: 13830

thanks to those that replyed from the few that responded it would
seem that the silicon would be RF safe at full legal limit

great

thanks

to those that asked if i was concerned with mositure not
specifically no, the silicon will take care of that

nor was I concerned with the silicon by itself causing damage
the non acidic stuff has treated me well.

thanks much

In article <ijgq85tf2qcg3e3hp3472jicnkkh1sjaq8@4ax.com>,
What me worry? <danXinpasco@gmail.com> wrote:

> On
> >
> >
> >
> >
> >
> >
> >thanks
>
> Several things...There are silicones that have a non-acidic curing
> process. They take longer to set and stay soft for their life.
> That said, unless you have metal that is about the same thickness as
> aluminum foil there is no way standard silicone is going to damage it
> in 20 years or so. Yes I have been working with GE silicones for, oh
> 35 years or so.
>
> Dan N9JBF

1320. Re: Using A "Combiner" For A SDR

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-21 01:07:10 UTC
From: Bob Bob <bob3bob3@suddenlink.net>
Message-ID: <8j81m6-gfa.ln1@p400bob.personal.cox.net>
Source record: 13832

Hi Robert

Good to see you on again! Yes quite a lot of endless possibilities!

It all pretty well boils down to how much loss you can "stand". Any unswitched configuration will lose at least half the signal in a 2 way split. This probably isnt a big deal at HF (since received noise is always much greater than the receiver noise floor), but may be "just enough" to cause problems at VHF+. Physical switches also introduce loss that varies with quality and operating frequency. One day too you'll want to have two receivers going concurrently and if you have a switched config will curse having it that way!

My suggestion? Check that there isnt any DC present on the antenna terminal of all your radios (that might be used for external preamps etc) and just hard connect the two scanners to the one antenna. Do some signal checks on a few known stations and see if you are losing enough to be troubled.

Do a few diferent evolutions to check the HF radio/antenna in tandam with the VHF/UHF system and standalone. I would expect problems here as some VHF/UHF antennas will look like dead shorts at HF.

If you have a signal generator set that up as a beacon in your yard. You may also be able to hear harmonic content to check up higher. (I often use the 5th harmonic of my HF radio to freq check my VHF radio, after having calibrated my HF radio to WWV)

Combiners are often transformers on toroids of varying sizes per frequency range. VHF+UHF combiners can be made of etched PCB's. You'll find quite a few designs in Ap Notes by the likes of Motorola if you look around. This may of course not be an option for you. Single frequency (+ odd multiple) splitters are much easier to build. All you need is coax!

In the end I would hope you can get away with low pass filter on the HF antenna (an old CB TX filter will do) and a high pass filter on the Scantenna (maybe a TVI filter meant for 75 ohm TV installs), a broadband combiner/splitter and 4 outputs, one to each RX.. You may even be able to use a CATV splitter. They supposedly work down to 5MHz nowadays (for cable internet upload) Thats about the cheapest I can think of, but of course there will be some loss. I dont think CATV splitters go past about 1GHz for example.

As to your off vs on Q2. In a theroetical world your splitter device would have a specfic Z and for max power transfer your receivers would have the same. It never happens that way in real life though. In your

case too you are receiving only so the problems become a lot simpler!
Yes you would lsoe a proportion of the signal. Only you can determine if
that is significant.

And to "meaningful" loss? Try it! Changing your antenna height may even
negate all the loss you are concerned about. Thicker coax may be an
option too if you are interested in a lot of distance UHF work. Then
again if you are that interested a preamp may also be in order!

Apologies for not being specific!

Cheers Bob W5/VK2YQA

Robert11 wrote:
> Hi,
>
> Just an elderly sw listener from the old days.
> Not very sharp with antenna theory, frankly.

1321. Re: Using A "Combiner" For A SDR

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-21 01:12:44 UTC
From: JIMMIE <JIMMIEDEE123@YAHOO.COM>
Message-ID: <d857b6ed-8b94-457f-acbf-f1fa321216ff@t13g2000yqt.googlegroups.com>
Source record: 13831

On Aug 20, 11:46 am, "Robert11" <rgs...@xnotme.invalid> wrote:
> Hi,
>
> Just an elderly sw listener from the old days.
> Not very sharp with antenna theory, frankly.
>
> Anyway, would be most grateful for any thoughts on the following, please:
>
> Have 2 scanners working off of a single Scantenna antenna.
> I now switch the Scanners via a good quality pushbutton switch which
> supposedly is suited for the vhf/uhf range.
> Seems to work fine.
>
> Also have a hardware hf receiver, with its own antenna.
>
> Thinking of getting a new "toy," perhaps a WinRadio SDR receiver.
>
> Here's where the fun starts:
>
> It only has a single antenna input, even though it has vhf/uhf capabilities.
>
> They want you, apparently, to buy one of their Combiners for $ 200.
> Ugh.
>
> Take a look at: http://www.winradio.com/home/acd-1800.htm
>
> Question 1:
>   Anything "better," or cheaper ?
>
> I guess I will be forced to set up some kind of switch matrix, even if I do
> use their Combiner.
>
> Question 2:
>   But, the following problem arises, no matter how I do it.
>
> The HF input, as well as the UHF/VHF input will at all times be "seeing" the
> turned off hardware HF receiver (when using the SDR PC receiver) as well as
> the turned off hardware scanner input (when using the SDR PC receiver)
>
> In other words, each input to the combiner would be fed by a "T" where the
> run to the hardware HF Receiver is tapped off to the Combiner. And the run
> to the hardware Scanner is also tapped off via a "T" to the vhf/uhf input
> of the Combiner.
>

> From looking at the link above for the Combiner, and its specs, do you think
> there will be any "meaningful" loss at the SDR PC receiver if I use it, and
> it sees these not-in-use inputs also ?
>
> And the other way around, I guess. If I am not using the PC SDR, will my
> regular Scanner or hardware HF receiver suffer any from having the Combiner
> in place ?
>
> Tried to explain this as clearly as I could, but if confusing, will try
> harder if you ask for any clarifications.
>
> Any other way(s) of doing all of this, that would be too complicated or
> expensive, perhaps ?
>
> Thanks,
> Bob

Have you ever thought of using a patch panel. Use TV F female
conectors on the panel and and push on F connectors on the patch
cables. This will allow yo to connect any rx to any ant.

Jimmie

1322. Re: Using A "Combiner" For A SDR

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-21 04:56:02 UTC
From: JB <nospam@goofball.net>
Message-ID: <CNpjm.134$FV4.75@nwrddc01.gnilink.net>
Source record: 13833

"JIMMIE" <JIMMIEDEE123@YAHOO.COM> wrote in message
news:d857b6ed-8b94-457f-acbf-f1fa321216ff@t13g2000yqt.googlegroups.com...
On Aug 20, 11:46 am, "Robert11" <rgs...@xnotme.invalid> wrote:
> Hi,
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> Just an elderly sw listener from the old days.
> Not very sharp with antenna theory, frankly.
>
> Anyway, would be most grateful for any thoughts on the following, please:
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> Thinking of getting a new "toy," perhaps a WinRadio SDR receiver.
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>
> It only has a single antenna input, even though it has vhf/uhf
capabilities.
>
> They want you, apparently, to buy one of their Combiners for $ 200.
> Ugh.
>
> Take a look at: http://www.winradio.com/home/acd-1800.htm
>
> Question 1:
> Anything "better," or cheaper ?
>
> I guess I will be forced to set up some kind of switch matrix, even if I
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> use their Combiner.
>
> Question 2:
> But, the following problem arises, no matter how I do it.
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> turned off hardware HF receiver (when using the SDR PC receiver) as well
as
> the turned off hardware scanner input (when using the SDR PC receiver)

>
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and
> it sees these not-in-use inputs also ?
>
> And the other way around, I guess. If I am not using the PC SDR, will my
> regular Scanner or hardware HF receiver suffer any from having the
Combiner
> in place ?
>
> Tried to explain this as clearly as I could, but if confusing, will try
> harder if you ask for any clarifications.
>
> Any other way(s) of doing all of this, that would be too complicated or
> expensive, perhaps ?
>
> Thanks,
> Bob

>Have you ever thought of using a patch panel. Use TV F female
conectors on the panel and and push on F connectors on the patch
cables. This will allow yo to connect any rx to any ant.

>Jimmie

A vhf/uhf TV splitter would do fine for the VHF/UHF energy. I wouldn't be
too concerned about signal loss on HF as much and wouldn't worry about T
connectors. The noise is usually high enough not to worry about losing
some. The TV splitter won't pass the HF but it may load it so you may need a
combiner. The ones made for ham radios would be less than half the cost for
better than 40 db of isolation. Plenty enough for what you are doing.
Check the specs for your use.

1323. My Portable-Zero Ops

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-21 06:01:31 UTC
From: "Sal M. Onella" <salmonella@food.poisoning.org>
Message-ID: <1Lqjm.178202$ZN.170326@newsfe23.iad>
Source record: 13835

Hi group,

I just returned from my two weeks in the mountains near Gunnison, Colorado. My best antenna was a 40m wire dipole strung between two trees, about 20 feet up. Yes, that's too low for optimum take-off-angle (TOA) but the mountains on each side were high, so I think I benefited from what would have been a deficiency on flat land. On Tuesday night, I surprised the local club by checking into our 40m proficiency net from up there on 7183. Good comms.

I had many other QSO's on 40, especially with the west coast, but very little action on 20, even when using a dipole cut for 20. I think the TOA was theoretically more nearly optimum for 20 but I was banging all my RF straight into the mountainsides.

I had precut the antennas and had a good match on both of them. I also brought precut element pairs for 15 and 10, but I never heard a whisper on either band, so I didn't install those antennas.

On the way home (San Diego) we stopped in Las Vegas and I tried another Tuesday night 7183 checkin from the hotel parking structure. Should have worked but I made a stupid mistake by hanging the 40m antenna off the west side of the parking structure. Should have been the south side. I proved that not much comes off the ends of a dipole.

Did that antenna really work hanging from the parking structure? Yes, absolutely. I heard a lot of other people on 40. Then, when I inserted my little tuner and checked 20m, I heard a VK about 5-7. Naturally, I tried him a few times but he was answering other people and I was sweating like a pig in the setting Las Vegas sun.

Finis.

Sal
(KD6VKW)

1324. Re: HighPower Silicon?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-21 06:13:12 UTC
From: Owen Duffy <none@no.where>
Message-ID: <Xns9C6EA4FFED7DDnonenowhere@61.9.191.5>
Source record: 13836

ml <m@di.net> wrote in news:m-6BA95C.07163120082009@news.optonline.net:

> hi
>
> Was going to make a center fed dipole, and wanted to put some (non
> vinigar/acetic acid) Silicon goo on the center to waterproof.
>
>
>
> Just wondering if this is typically 'ok' for full legal limit?
>
>
> wasn't really sure if there would be arc over/breakdown or other
> issues

Some of the non-acetic cure silcones are water based, and do not make good insulators for some days after application... so in that case, apply them well before you intend using them, and don't adjust the antenna until the sealant has cured.

In my experience, those sealants have not degraded when they become wet in service, so it appears a temporary issue until they cure.

Owen

1325. Re: Using A "Combiner" For A SDR

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-21 08:03:07 UTC
From: Ian Jackson <ianREMOVETHISjackson@g3ohx.demon.co.uk>
Message-ID: <RC6$hmN7SljKFwZF@g3ohx.demon.co.uk>
Source record: 13837

In message <CNpjm.134$FV4.75@nwrddc01.gnilink.net>, JB
<nospam@goofball.net> writes
>
>"JIMMIE" <JIMMIEDEE123@YAHOO.COM> wrote in message
>news:d857b6ed-8b94-457f-acbf-f1fa321216ff@t13g2000yqt.googlegroups.com...
>On Aug 20, 11:46 am, "Robert11" <rgs...@xnotme.invalid> wrote:
>> Hi,
>>
>> Just an elderly sw listener from the old days.
>> Not very sharp with antenna theory, frankly.
>>
>> Anyway, would be most grateful for any thoughts on the following, please:
>>
>> Have 2 scanners working off of a single Scantenna antenna.
>> I now switch the Scanners via a good quality pushbutton switch which
>> supposedly is suited for the vhf/uhf range.
>> Seems to work fine.
>>
>> Also have a hardware hf receiver, with its own antenna.
>>
>> Thinking of getting a new "toy," perhaps a WinRadio SDR receiver.
>>
>> Here's where the fun starts:
>>
>> It only has a single antenna input, even though it has vhf/uhf
>capabilities.
>>
>> They want you, apparently, to buy one of their Combiners for $ 200.
>> Ugh.
>>
>> Take a look at: http://www.winradio.com/home/acd-1800.htm
>>
>> Question 1:
>> Anything "better," or cheaper ?
>>
>> I guess I will be forced to set up some kind of switch matrix, even if I
>do
>> use their Combiner.
>>
>> Question 2:
>> But, the following problem arises, no matter how I do it.
>>
>> The HF input, as well as the UHF/VHF input will at all times be "seeing"
>the

>> turned off hardware HF receiver (when using the SDR PC receiver) as well
>as
>> the turned off hardware scanner input (when using the SDR PC receiver)
>>
>> In other words, each input to the combiner would be fed by a "T" where the
>> run to the hardware HF Receiver is tapped off to the Combiner. And the run
>> to the hardware Scanner is also tapped off via a "T" to the vhf/uhf input
>> of the Combiner.
>>
>> From looking at the link above for the Combiner, and its specs, do you
>think
>> there will be any "meaningful" loss at the SDR PC receiver if I use it,
>and
>> it sees these not-in-use inputs also ?
>>
>> And the other way around, I guess. If I am not using the PC SDR, will my
>> regular Scanner or hardware HF receiver suffer any from having the
>Combiner
>> in place ?
>>
>> Tried to explain this as clearly as I could, but if confusing, will try
>> harder if you ask for any clarifications.
>>
>> Any other way(s) of doing all of this, that would be too complicated or
>> expensive, perhaps ?
>>
>> Thanks,
>> Bob
>
>>Have you ever thought of using a patch panel. Use TV F female
>conectors on the panel and and push on F connectors on the patch
>cables. This will allow yo to connect any rx to any ant.
>
>>Jimmie
>
>A vhf/uhf TV splitter would do fine for the VHF/UHF energy. I wouldn't be
>too concerned about signal loss on HF as much and wouldn't worry about T
>connectors. The noise is usually high enough not to worry about losing
>some. The TV splitter won't pass the HF but it may load it so you may need a
>combiner. The ones made for ham radios would be less than half the cost for
>better than 40 db of isolation. Plenty enough for what you are doing.
>Check the specs for your use.
>
Most TV splitters (those used for cable TV) are specced between 5 to
1000MHz. [They need to pass the return path signals between 5 and
30/40/50MHz.] They obviously provide full throughput down to 5MHz, and
are probably OK to around 2MHz.

Although they are 75 ohm devices, they should work OK where the
impedance is 50 ohms (which, in the case of SW receivers, is very, very

nominal). At HF, their insertion loss is around 3.3dB for a 2-way, 6.5dB for 4-way, and 10dB for an 8-way.
--
Ian

1326. Re: MFJ-269 Antenna Analyzer experience

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-21 12:49:19 UTC
From: Peter <pm@hotmail.com>
Message-ID: <FeydnbcBbv5MChPXnZ2dnUVZ8uKdnZ2d@westnet.com.au>
Source record: 13838

>>
>> I have just had a look at the RigExpert site. Look impressive, but the
>> MFJ269 at about $400US was about my limit.
>> I think I will take a step back and conduct a more scientific review
>> of all of the antenna analyzers on offer, there for you should get
>> sick of my postings over the next couple of weeks/months.
>> I must say that the ability to save and analyze data on the lap top is
>> an appealing feature.
>
> Peter,
>
> It helps to identify what you really need from the instrument. The
> difficulty in doing that is foreseeing where an unstructured learning
> journey might take you.
>
> You will tend to arrive a points where you want to measure something just
> beyond your existing capability. If the quest is for pure learning, then
> just concentrate on the things that are within scope, and enjoy the
> learning.
>
> I admit that it is a bit of an old world view of ham radio, that it is
> quintessentially a technical learning activity... but call me a dinasour.
>
> The resolution of sign with the '259B is not a show stopper, but it is a
> convenience issue and in the hands of a person with inadequate knowledge,
> it is potentially misleading.
>
> TLLC (http://www.vk1od.net/calc/tl/tllc.php) can refer impedance made at
> one point on a known transmission line (eg the tx end) to another point
> (eg the load end). Of course, uncertainty of the TL parameters
> contributes to measurement uncertainty. This technique is ok for one off
> measurements, but would be very labour intensive for a sweep with
> hundreds of observations.
>
> The ability to calibrate the feedline 'fixture' as part of a VNA
> measurement system provides the convenience of measurement referred to
> your preferred reference plan. The AIM4170 is (as I understand it) half
> of a VNA, but that should be enough to do the same thing.
>
> So, for the advantages of the ham grade VNA over the MFJ259B, you pay
> more money, get better measurement resolution (the AD converters have
> better resolution than the MFJ259B), have capability for automation of
> measurement referred to a convenient reference plane, but... you lose
> portability... though there is no reason why a ham grade VNA with a basic

> display system couldn't be portable.
>
> Owen

Owen I would never call you a dinasour or should I say from one dinasour to another! I agree with your sentiments entirely of ham radio being a technical learning activity.

For me the outlay for any antenna analyzer is significant, but I'm prepared to pay a bit for the instrument that covers foreseeable needs, but that will be as you say will cater for measurements just beyond my current capability.

Let the evaluation continue.

Regards

Peter

1327. Re: MFJ-269 Antenna Analyzer experience

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-21 13:51:05 UTC
From: Michael Coslo <mjc5@psu.edu>
Message-ID: <h6m8o9$jo2s$1@tr22n12.aset.psu.edu>
Source record: 13839

Ian Wade G3NRW wrote:

> The other nice thing about the 4170 is the ability to control it
> remotely. With the 4170 connected to the antenna system in the shack and
> controlled by a local PC, it's then possible to remotely access the PC
> from a cheapy notebook in the backyard. You can make antenna adjustments
> out in the yard and see the effects of the changes immediately, without
> having to repeatedly walk back indoors to look at the 4170 PC. This
> feature alone has saved me a *lot* of time:

I tend to make my SWR readings right at the antenna, whenever possible.
That length of coax to the xceiver will only make it look better in most
cases.

- 73 de Mike N3LI -

1328. Re: removing guy wires on tower

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-21 14:05:00 UTC
From: Michael Coslo <mjc5@psu.edu>
Message-ID: <h6m9if$jo2u$1@tr22n12.aset.psu.edu>
Source record: 13840

Ralph Mowery wrote:
> "'Doc" <ltdoc@yahoo.com> wrote in message
> news:08c9052d-60e0-4895-a5fa-c29a2c8eafe5@r33g2000vbp.googlegroups.com...
>> Just from what you've posted, your tower sounds sort of 'marginal' to
>> start with. I would be very careful in loosening any of those guys.
>> - 'Doc
>>
>
> Unless I missed something when I described the tower, what is marginal ?
> The first section of tower is set in a yard of cement as described in the
> Rohn booklet. Also they only require two sets of guy wires up to 70 feet.
> I live in the middle of North Carolina so a large build up of ice or very
> high winds (say over 90 mph) would be unusual.

On the "internets", there is always someone for whom your tower setup is
not acceptable. Doesn't matter how well made and installed, there's
something wrong with it, and it will come crashing down, causing you
great liability problems.

Anyhow, being that the tower and guys are part of a system, I'd either
have the loppers take the tree down in stages with sections roped down,
or install temporary guys. Th/e first method is much easier and cheaper.

- 73 d eMike N3LI -

1329. Re: MFJ-269 Antenna Analyzer experience

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-21 15:30:00 UTC
From: jimp@specsol.spam.sux.com
Message-ID: <usq2m6-9th.ln1@mail.specsol.com>
Source record: 13841

Michael Coslo <mjc5@psu.edu> wrote:
> Ian Wade G3NRW wrote:
>
>> The other nice thing about the 4170 is the ability to control it
>> remotely. With the 4170 connected to the antenna system in the shack and
>> controlled by a local PC, it's then possible to remotely access the PC
>> from a cheapy notebook in the backyard. You can make antenna adjustments
>> out in the yard and see the effects of the changes immediately, without
>> having to repeatedly walk back indoors to look at the 4170 PC. This
>> feature alone has saved me a *lot* of time:
>
>
> I tend to make my SWR readings right at the antenna, whenever possible.
> That length of coax to the xceiver will only make it look better in most
> cases.
>
> - 73 de Mike N3LI -

One of the advantages of the 4170 is the ability to calibrate out the
effects of the feedline.

--
Jim Pennino

Remove .spam.sux to reply.

1330. Re: removing guy wires on tower

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-21 15:34:41 UTC
From: Ralph Mowery <rmowery28146@earthlink.net>
Message-ID: <B6ydnTf8_YW-IxPXnZ2dnUVZ_oSdnZ2d@earthlink.com>
Source record: 13842

"Michael Coslo" <mjc5@psu.edu> wrote in message
news:h6m9if$jo2u$1@tr22n12.aset.psu.edu...
> Ralph Mowery wrote:

>> Unless I missed something when I described the tower, what is marginal ?
>> The first section of tower is set in a yard of cement as described in the
>> Rohn booklet. Also they only require two sets of guy wires up to 70
>> feet. I live in the middle of North Carolina so a large build up of ice
>> or very high winds (say over 90 mph) would be unusual.
>
>
> On the "internets", there is always someone for whom your tower setup is
> not acceptable. Doesn't matter how well made and installed, there's
> something wrong with it, and it will come crashing down, causing you great
> liability problems.
>
>
> Anyhow, being that the tower and guys are part of a system, I'd either
> have the loppers take the tree down in stages with sections roped down, or
> install temporary guys. Th/e first method is much easier and cheaper.
>
> - 73 d eMike N3LI -

I have noticed that. No mater what you have someone usually chimes in that
it is not the best. I bet I could have said I put one section in 10 yards
of cement and had it guyed with a 2 meter ground plane on it and someone
would do the same. I was waiting on a comeback as to why it needed
improving.

Pix here:
http://home.earthlink.net/~ku4pt/images/Beams%20on%20tower/

I can not put the temporay guy wires on as they would still be where the
tree may fall. There are only 2 trees about a foot or so in diameter and
about 50 to 60 feet tall. Poplar trees without limbs for about the first 30
or so feet.It will only take a short to just cut them. I have seen towers
that don't look near as good stand up long times. I don't think it would be
any problem for the tower to stay up without guys if there was no wind. I
was hoping that someone on here had done something similar over the years
and could say the best way. Drop all wires , or just one side.

1331. Re: MFJ-269 Antenna Analyzer experience

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-21 15:34:56 UTC
From: Bob <rmiller47@satx.rr.com>
Message-ID: <7tet85duuulh9c9d0cpoe0a36rkgmekkak@4ax.com>
Source record: 13843

On Sun, 16 Aug 2009 11:29:16 +0800, "Peter" <pm@hotmail.com> wrote:

>Hi all
>
>I'm looking at purchasing an MFJ269 antenna analyser and keen to hear
>experience of others in this group regarding this or similar analysers.
>Appears to be ideal if it is as good as MFJ claim.

My only complaint is the little switch on the face of the unit that is depressed to enable measuring UHF SWR. It must be depressed ONLY if the unit is already powered up. If it is depressed before you power up, as I understand, some of the solid state parts may burn out when you power up. The 259 model does not have this problem, as it only measures up through the VHF range.

Operation is limited in the UHF range of about 415-470 MHz -- you can only take SWR measurements.

Bob
k5qwg

1332. Re: Using A "Combiner" For A SDR

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-21 16:01:51 UTC
From: JB <nospam@goofball.net>
Message-ID: <Pxzjm.196$FV4.72@nwrddc01.gnilink.net>
Source record: 13844

"Ian Jackson" <ianREMOVETHISjackson@g3ohx.demon.co.uk> wrote in message
news:RC6$hmN7SljKFwZF@g3ohx.demon.co.uk...
> In message <CNpjm.134$FV4.75@nwrddc01.gnilink.net>, JB
> <nospam@goofball.net> writes
> >
> >"JIMMIE" <JIMMIEDEE123@YAHOO.COM> wrote in message
> >news:d857b6ed-8b94-457f-acbf-f1fa321216ff@t13g2000yqt.googlegroups.com...
> >On Aug 20, 11:46 am, "Robert11" <rgs...@xnotme.invalid> wrote:
> >> Hi,
> >>
> >> Just an elderly sw listener from the old days.
> >> Not very sharp with antenna theory, frankly.
> >>
> >> Anyway, would be most grateful for any thoughts on the following,
please:
> >>
> >> Have 2 scanners working off of a single Scantenna antenna.
> >> I now switch the Scanners via a good quality pushbutton switch which
> >> supposedly is suited for the vhf/uhf range.
> >> Seems to work fine.
> >>
> >> Also have a hardware hf receiver, with its own antenna.
> >>
> >> Thinking of getting a new "toy," perhaps a WinRadio SDR receiver.
> >>
> >> Here's where the fun starts:
> >>
> >> It only has a single antenna input, even though it has vhf/uhf
> >capabilities.
> >>
> >> They want you, apparently, to buy one of their Combiners for $ 200.
> >> Ugh.
> >>
> >> Take a look at: http://www.winradio.com/home/acd-1800.htm
> >>
> >> Question 1:
> >> Anything "better," or cheaper ?
> >>
> >> I guess I will be forced to set up some kind of switch matrix, even if
I
> >do
> >> use their Combiner.
> >>
> >> Question 2:

> >> But, the following problem arises, no matter how I do it.
> >>
> >> The HF input, as well as the UHF/VHF input will at all times be
"seeing"
> >the
> >> turned off hardware HF receiver (when using the SDR PC receiver) as
well
> >as
> >> the turned off hardware scanner input (when using the SDR PC receiver)
> >>
> >> In other words, each input to the combiner would be fed by a "T" where
the
> >> run to the hardware HF Receiver is tapped off to the Combiner. And the
run
> >> to the hardware Scanner is also tapped off via a "T" to the vhf/uhf
input
> >> of the Combiner.
> >>
> >> From looking at the link above for the Combiner, and its specs, do you
> >think
> >> there will be any "meaningful" loss at the SDR PC receiver if I use it,
> >and
> >> it sees these not-in-use inputs also ?
> >>
> >> And the other way around, I guess. If I am not using the PC SDR, will
my
> >> regular Scanner or hardware HF receiver suffer any from having the
> >Combiner
> >> in place ?
> >>
> >> Tried to explain this as clearly as I could, but if confusing, will try
> >> harder if you ask for any clarifications.
> >>
> >> Any other way(s) of doing all of this, that would be too complicated or
> >> expensive, perhaps ?
> >>
> >> Thanks,
> >> Bob
> >
> >>Have you ever thought of using a patch panel. Use TV F female
> >conectors on the panel and and push on F connectors on the patch
> >cables. This will allow yo to connect any rx to any ant.
> >
> >>Jimmie
> >
> >A vhf/uhf TV splitter would do fine for the VHF/UHF energy. I wouldn't
be
> >too concerned about signal loss on HF as much and wouldn't worry about T
> >connectors. The noise is usually high enough not to worry about losing
> >some. The TV splitter won't pass the HF but it may load it so you may

need a
> >combiner. The ones made for ham radios would be less than half the cost
for
> >better than 40 db of isolation. Plenty enough for what you are doing.
> >Check the specs for your use.
> >
> Most TV splitters (those used for cable TV) are specced between 5 to
> 1000MHz. [They need to pass the return path signals between 5 and
> 30/40/50MHz.] They obviously provide full throughput down to 5MHz, and
> are probably OK to around 2MHz.
>
> Although they are 75 ohm devices, they should work OK where the
> impedance is 50 ohms (which, in the case of SW receivers, is very, very
> nominal). At HF, their insertion loss is around 3.3dB for a 2-way, 6.5dB
> for 4-way, and 10dB for an 8-way.
> --
> Ian

There is no penalty for going 75 ohm to receivers. In fact, the TV antenna might do better than a lower placed scanner antenna. Even though the polarization is wrong, the height makes up for it.

Extra plumbing adds up to loss though. You might find the switches better to your liking after all.

Another way is BNC connectors and swap things around at will. This eliminates all unnecessary losses in the system. We always seem to wind up looking for a better signal without leaving the chair and climbing the roof.

1333. Re: HighPower Silicon?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-21 18:08:25 UTC
From: ml <m@di.net>
Message-ID: <m-D6C2FF.14082521082009@news.optonline.net>
Source record: 13845

thanks Ian, that was very interesting never knew that about hot melt
and i have a some 'pro' hot melt guns really cool

In article <Hrp6BuEaHcjKFAZi@ifwtech.co.uk>,
Ian White GM3SEK <gm3sek@ifwtech.co.uk> wrote:

> ml wrote:
> >hi
> >
> >Was going to make a center fed dipole, and wanted to put some (non
> >vinigar/acetic acid) Silicon goo on the center to waterproof.
> >
> >
> >
> >Just wondering if this is typically 'ok' for full legal limit?
> >
> >
> >wasn't really sure if there would be arc over/breakdown or other
> >issues
> >
>
> Probably not, but hot melt glue is a better sealant and a better RF
> insulator. Regular translucent hmg is amorphous polypropeylene, a
> largely non-polar polymer which is a close relative to polyethylene. It
> is free-flowing and very, very sticky while it's hot.
>
> Tapes are excellent for waterproofing simple shapes like inline
> connectors, because the tape can be applied evenly and under constant
> tension. But the tails on the end of coax make a difficult shape to
> wrap. The same applies even if you connect a plug to the socket on a
> dipole center insulator. These more complex shapes make it difficult to
> keep self-amalgamating tapes under the tension that is needed to make
> them seal effectively.
>
> Coax-Seal is good for waterproofing complex shapes because it is
> moldable... but what are its RF insulating properties? I've never seen a
> product data sheet that deals with this issue.
>
> I've had cables and connections sealed with hot melt glue outside for 10
> years. Some applications involve high RF voltages where the hmg is the
> only insulation, and some involve very unfavorable combinations of
> dissimilar metals. In all that time I have never had a single failure
> involving either RF breakdown, water leakage or corrosion. Contrast that
> with silicone or epoxy sealants which begin to deteriorate after 2-3
> years in the rain and UV.

1334. Re: MFJ-269 Antenna Analyzer experience

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-21 18:27:52 UTC
From: Ian Wade G3NRW <g3nrw@yahoo.co.uk>
Message-ID: <ISK9GCLocujKFwqX@ntlworld.com>
Source record: 13846

From: Michael Coslo <mjc5@psu.edu>
Date: Fri, 21 Aug 2009 Time: 09:51:05

>I tend to make my SWR readings right at the antenna, whenever possible.
>That length of coax to the xceiver will only make it look better in
>most cases.
>
>- 73 de Mike N3LI -

Mike,

With the 4170 I can calibrate the instrument to compensate for the feeder impedance. After calibration, the indicated impedance at the TX end of the feeder is actually the antenna feedpoint impedance. This makes life a *lot* easier.

--
73
Ian, G3NRW

1335. Re: MFJ-269 Antenna Analyzer experience

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-21 19:05:13 UTC
From: Michael Coslo <mjc5@psu.edu>
Message-ID: <h6mr5b$jo38$1@tr22n12.aset.psu.edu>
Source record: 13847

Ian Wade G3NRW wrote:
> From: Michael Coslo <mjc5@psu.edu>
> Date: Fri, 21 Aug 2009 Time: 09:51:05
>
>> I tend to make my SWR readings right at the antenna, whenever
>> possible. That length of coax to the xceiver will only make it look
>> better in most cases.
>>
>> - 73 de Mike N3LI -
>
> Mike,
>
> With the 4170 I can calibrate the instrument to compensate for the
> feeder impedance. After calibration, the indicated impedance at the TX
> end of the feeder is actually the antenna feedpoint impedance. This
> makes life a *lot* easier.

Oaky, well good enough. My vertical uses a stub on the feedline, so I have to be out there anyhow.with a connector in the line. Seems like 6 of one, half dozen of the other situation.

- 73 De Mike N3LI -

1336. Re: removing guy wires on tower

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-21 19:15:59 UTC
From: Michael Coslo <mjc5@psu.edu>
Message-ID: <h6mrpj$jo3c$1@tr22n12.aset.psu.edu>
Source record: 13848

Ralph Mowery wrote:

>
> I have noticed that. No mater what you have someone usually chimes in that
> it is not the best. I bet I could have said I put one section in 10 yards
> of cement and had it guyed with a 2 meter ground plane on it and someone
> would do the same. I was waiting on a comeback as to why it needed
> improving.

The concrete might not be of good quality - Has a complte workup been
done on the composition? I thought not. Hell, that thing is likely to
fall, and completely obliterate a 10 block area! 8^)

> Pix here:
> http://home.earthlink.net/~ku4pt/images/Beams%20on%20tower/
>
> I can not put the temporay guy wires on as they would still be where the
> tree may fall. There are only 2 trees about a foot or so in diameter and
> about 50 to 60 feet tall. Poplar trees without limbs for about the first 30
> or so feet.It will only take a short to just cut them. I have seen towers
> that don't look near as good stand up long times. I don't think it would be
> any problem for the tower to stay up without guys if there was no wind. I
> was hoping that someone on here had done something similar over the years
> and could say the best way. Drop all wires , or just one side.

That part I couldn't tell ya. Can you guy the trees so to speak? Get a
rope around them somewhere far up and cut to fall in the direction you
want? Pulling on the attached rope via come-along might send them where
you need them to go.

- 73 de Mike N3LI -

1337. Re: removing guy wires on tower

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-21 20:34:09 UTC
From: Ed <Huckleberry_REMOVE_@bigvalley.net>
Message-ID: <Xns9C6E8A05213BCHuckleberrybigvalley@198.186.192.196>
Source record: 13849

>
> I can not put the temporay guy wires on as they would still be where
> the tree may fall. There are only 2 trees about a foot or so in
> diameter and about 50 to 60 feet tall. Poplar trees without limbs for
> about the first 30 or so feet.It will only take a short to just cut
> them. I have seen towers that don't look near as good stand up long
> times. I don't think it would be any problem for the tower to stay up
> without guys if there was no wind. I was hoping that someone on
> here had done something similar over the years and could say the best
> way. Drop all wires , or just one side.

While I must disagree with my own offering below, I realize your situation and will offer a suggestion, anyway. I would loosen, slightly, the remaining two guy wires so as to not have them pulling tightly on the tower when the third one is removed.

However, I would be concerned with no guy at all in that side of the tower.... could you remove the guy in question and move it to a temporary anchor point still on the 180 degree side of the tower where it might still offer a minimal amount of support?... and could you use a temporty rope as far to the other side of the 180 degree side in question and set up a temporary guy there? Without ANY minimal support, should the tree bump the tower when it is falling, you could have a disaster without some kind of minimal insurance guys. Heck, even a 20 foot 2 x 4 braced against the opposite side of the tower might be better than nothing.

Ed K7AAT

.

1338. Re: removing guy wires on tower

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-21 21:20:40 UTC
From: Ralph Mowery <rmowery28146@earthlink.net>
Message-ID: <YYqdnXPKvYmkkhLXnZ2dnUVZ_sOdnZ2d@earthlink.com>
Source record: 13850

"Ed" <Huckleberry_REMOVE_@bigvalley.net> wrote in message
news:Xns9C6E8A05213BCHuckleberrybigvalley@198.186.192.196...
>
> While I must disagree with my own offering below, I realize your
> situation and will offer a suggestion, anyway. I would loosen,
> slightly, the remaining two guy wires so as to not have them pulling
> tightly on the tower when the third one is removed.
>
> However, I would be concerned with no guy at all in that side of the
> tower.... could you remove the guy in question and move it to a
> temporary anchor point still on the 180 degree side of the tower where it
> might still offer a minimal amount of support?... and could you use a
> temporty rope as far to the other side of the 180 degree side in question
> and set up a temporary guy there? Without ANY minimal support, should
> the tree bump the tower when it is falling, you could have a disaster
> without some kind of minimal insurance guys. Heck, even a 20 foot 2 x
> 4 braced against the opposite side of the tower might be better than
> nothing.
>
> Ed K7AAT
>

Ed the trees I want to remove are not close enough to hit the tower. The guy wires are almost 50 feet out from the tower and some other trees in between. My problem is there is a gap between some other trees and it is almost a funnel effect that will put the tree I want to cut almost on top of one set of guys. Something like the last 20 or 30 feet of tree could hit that set of guys.

I don't think I can move the guys that I want to take loose. They might still be in the line of fire..I will probably wait to cool weather gets here. Too hot for now when I can be inside playing with the radio.

1339. Re: removing guy wires on tower

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-21 21:56:37 UTC
From: Owen Duffy <none@no.where>
Message-ID: <Xns9C6F50CEDC991nonenowhere@61.9.191.5>
Source record: 13751

"Ralph Mowery" <rmowery28146@earthlink.net> wrote in
news:B6ydnTf8_YW-IxPXnZ2dnUVZ_oSdnZ2d@earthlink.com:

...
> I have noticed that. No mater what you have someone usually chimes
> in that it is not the best.

That begs the question of why you asked.

You cannot convey all of the relevant information in your short posting. One of the things about hazard identification is the skill of a competent person looking throught their own eyes will see things that a less competent person will not recognise. Why do people drive cranes, cherry pickers etc into power lines, trees etc... most often because they didn't *see* them.

If I was responsible for an operation that involved loosening one guy, or one set of guys, or more, and there was an adverse outcome, a court of law would probably find that I was negligent as I ought to have been aware that loosening one or more guys was a potentially hazardous operation (I am a qualified Advanced Rigger in VK).

I doubt that claiming that I or others had done it before without accident would be an adequate defence.

That is not to say that loosening one or more guys guarantees failure... but lots of tower accidents are *caused* by loosening guy wires.

Dropping a tree or part of it onto a guy wire is also a dangerous thing to do.

Owen

1340. Re: MFJ-269 Antenna Analyzer experience

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-21 22:44:12 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <StCdnV9hXKuivhLXnZ2dnUVZ_uadnZ2d@giganews.com>
Source record: 13752

Ian Wade G3NRW wrote:
>
> Mike,
>
> With the 4170 I can calibrate the instrument to compensate for the
> feeder impedance. After calibration, the indicated impedance at the TX
> end of the feeder is actually the antenna feedpoint impedance. This
> makes life a *lot* easier.

Easy, yes. But If you're not careful, this can be a great example of garbage in, garbage out.

I frequently calculate out the feedline transformation when making antenna measurements. But it's essential that you realize a small error in estimating the feedline loss(*) or length can sometimes result in a very large error in calculated impedance. This is particularly true if there's a large impedance mismatch between the line and antenna. Transmission line impedance, which can vary a lot from the specified nominal value (I've seen +/-20% with coax, more with ladder line), also has an effect on the result. So whenever I need accurate results or whenever the line Z0 is quite different from the antenna impedance, I start by carefully measuring the properties of the actual transmission line I'll be using.

If you're not convinced, spend a few minutes playing with something like N6BV's TLW calculator that comes with the ARRL Antenna Book.

(*) Some simplified techniques ignore transmission line loss altogether. This can lead to very inaccurate results in some situations. And loss is often quite different than the specified value, so it really has to be measured if it makes a significant difference.

Roy Lewallen, W7EL

1341. Re: removing guy wires on tower

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-21 22:55:33 UTC
From: dplatt@radagast.org
Message-ID: <58l3m6-8lt.ln1@radagast.org>
Source record: 13754

In article <Xns9C6F50CEDC991nonenowhere@61.9.191.5>,
Owen Duffy <none@no.where> wrote:

>That is not to say that loosening one or more guys guarantees failure...
>but lots of tower accidents are *caused* by loosening guy wires.
>
>Dropping a tree or part of it onto a guy wire is also a dangerous thing
>to do.

At this point, I'd be tempted to suggest tackling the problem from the other direction.

Don't just drop the tree in question!

Instead, do what's normally done if a tree needs to be removed from an area with nearby stuff-you-don't-want-to-have-a-tree-fall-on. Have a competent tree-removal service take the tree down, from the top on down... remove and lower the limbs and upper trunk in sections.

It may be possible to remove the upper portion, and shorten the remaining trunk enough that it will be physically impossible for that part of the trunk to strike the tower or guys when it's felled no matter how its fall happens to be channeled and no matter how badly it bounces.

Or, it may be easier and safer to just take it all the way down to ground level in pieces.

Yeah, this will take longer and cost more than just chainsawing through the base of the trunk and yelling "Timmmbbbbbeeeeerrrrrrrrr!", but it may cost less and be safer than trying to de-guy the tower. It'll certainly cost less than the consequences of having the tower fall down, as a result of deliberate guy removal/loosening or having the tree fall on it.

--
Dave Platt <dplatt@radagast.org> AE6EO
Friends of Jade Warrior home page: http://www.radagast.org/jade-warrior
I do _not_ wish to receive unsolicited commercial email, and I will
boycott any company which has the gall to send me such ads!

1342. Re: MFJ-269 Antenna Analyzer experience

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-21 23:00:02 UTC
From: jimp@specsol.spam.sux.com
Message-ID: <p1l3m6-5lk.ln1@mail.specsol.com>
Source record: 13753

Roy Lewallen <w7el@eznec.com> wrote:
> Ian Wade G3NRW wrote:
>>
>> Mike,
>>
>> With the 4170 I can calibrate the instrument to compensate for the
>> feeder impedance. After calibration, the indicated impedance at the TX
>> end of the feeder is actually the antenna feedpoint impedance. This
>> makes life a *lot* easier.
>
> Easy, yes. But If you're not careful, this can be a great example of
> garbage in, garbage out.
>
> I frequently calculate out the feedline transformation when making
> antenna measurements. But it's essential that you realize a small error
> in estimating the feedline loss(*) or length can sometimes result in a
> very large error in calculated impedance. This is particularly true if
> there's a large impedance mismatch between the line and antenna.
> Transmission line impedance, which can vary a lot from the specified
> nominal value (I've seen +/-20% with coax, more with ladder line), also
> has an effect on the result. So whenever I need accurate results or
> whenever the line Z0 is quite different from the antenna impedance, I
> start by carefully measuring the properties of the actual transmission
> line I'll be using.
>
> If you're not convinced, spend a few minutes playing with something like
> N6BV's TLW calculator that comes with the ARRL Antenna Book.
>
> (*) Some simplified techniques ignore transmission line loss altogether.
> This can lead to very inaccurate results in some situations. And loss is
> often quite different than the specified value, so it really has to be
> measured if it makes a significant difference.
>
> Roy Lewallen, W7EL

The 4170 makes this a lot easier as you can measure the feedline actual
parameters as well as calibrate out their effects.

--
Jim Pennino

Remove .spam.sux to reply.

1343. Re: removing guy wires on tower

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-21 23:23:21 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <c1bu85th6370mt6v6rl9653m3rlpf23blo@4ax.com>
Source record: 13755

On Fri, 21 Aug 2009 17:20:40 -0400, "Ralph Mowery"
<rmowery28146@earthlink.net> wrote:

>Ed the trees I want to remove are not close enough to hit the tower.

Based on this statement, and the concerns expressed, I would ask if
these trees are being taken out by professionals?

73's
Richard Clark, KB7QHC

1344. Re: MFJ-269 Antenna Analyzer experience

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-21 23:48:31 UTC
From: Jim Lux <james.p.lux@jpl.nasa.gov>
Message-ID: <h6nboe$q05$1@news.jpl.nasa.gov>
Source record: 13757

Roy Lewallen wrote:
> Ian Wade G3NRW wrote:
>>
>> Mike,
>>
>> With the 4170 I can calibrate the instrument to compensate for the
>> feeder impedance. After calibration, the indicated impedance at the TX
>> end of the feeder is actually the antenna feedpoint impedance. This
>> makes life a *lot* easier.
>
> Easy, yes. But If you're not careful, this can be a great example of
> garbage in, garbage out.
>
> I frequently calculate out the feedline transformation when making
> antenna measurements. But it's essential that you realize a small error
> in estimating the feedline loss(*) or length can sometimes result in a
> very large error in calculated impedance.

Most of the new analyzers that do "fixture cal" actually measure the line, so you're not doing any estimating.

Somewhere in the future, as hams get more familiar with this kind of thing, I see folks installing a little relay box at the feedpoint of the antenna that has a short, open, and load, as well as the antenna.

I've done this with an RCS-8V, modifying it to add a noninductive 50 ohm load and to short one of the relays. I then use my VNA to calibrate the relay box (or, more accurately, to just confirm that the load and short is good enough) with a short test cable.

After I went through the hassle of modifying, I realized that I would have actually been better off to just get 50 ohm loads with PL-259s on them and PL-259 shorts. oh well, it's done now.

So anyway, the RCS-8V has 5 ports and a common. I hook the the feedline on port 1, the antenna on port 5, the short on port 2 and the load on port 3. (Sometime in the future, I'm going to hook a phase reversing transformer on port 4). By turning on and off the various ports, I can connect loads and shorts to antennas and/or feedlines or leave them open.

In a real fancy application, I'd put a remote controlled antenna tuner with a few extra relays in it at the feedpoint. Hmm.. another project to languish half completed in my garage for years.

1345. Re: removing guy wires on tower

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-21 23:57:56 UTC
From: Jim Lux <james.p.lux@jpl.nasa.gov>
Message-ID: <h6nca4$v85$1@news.jpl.nasa.gov>
Source record: 13756

Dave Platt wrote:
> In article <Xns9C6F50CEDC991nonenowhere@61.9.191.5>,
> Owen Duffy <none@no.where> wrote:
>
>> That is not to say that loosening one or more guys guarantees failure...
>> but lots of tower accidents are *caused* by loosening guy wires.
>>
>> Dropping a tree or part of it onto a guy wire is also a dangerous thing
>> to do.
>
> At this point, I'd be tempted to suggest tackling the problem from the
> other direction.
>
> Don't just drop the tree in question!
>
> Instead, do what's normally done if a tree needs to be removed from an
> area with nearby stuff-you-don't-want-to-have-a-tree-fall-on. Have a
> competent tree-removal service take the tree down, from the top on
> down... remove and lower the limbs and upper trunk in sections.
>
> It may be possible to remove the upper portion, and shorten the
> remaining trunk enough that it will be physically impossible for that
> part of the trunk to strike the tower or guys when it's felled no
> matter how its fall happens to be channeled and no matter how badly it
> bounces.
>
> Or, it may be easier and safer to just take it all the way down to
> ground level in pieces.
>
> Yeah, this will take longer and cost more than just chainsawing
> through the base of the trunk and yelling "Timmmbbbbbeeeeerrrrrrrrr!",
> but it may cost less and be safer than trying to de-guy the tower.
> It'll certainly cost less than the consequences of having the tower
> fall down, as a result of deliberate guy removal/loosening or having
> the tree fall on it.
>

Or, you leave the whole job to the tree removal company. Let them
decide how to do it, and their liability insurance covers the effects of
dropping a tree on the tower. They get to make the call about temporary
guys or not or chopping up the tree into chips from the top down or
having a 100 ton crane hold your tower up while the work is being done, etc.

(For that matter, I saw a very large pine tree being dismantled
yesterday, with a 100 foot crane reaching over a couple of houses to

pick up the pieces as the workers cut sections from the top down, rather than the lowering chunks down strategy.)

Recognizing, however, that the tree removal company is going to charge more, but maybe, they're confident. Or perhaps, one is hiring "Bob the guy down the street with a chain saw" to do the work, and YOU are accepting the liability and risk, so guy removal may be a prudent thing to do.

Overall, I think the take home message from all these posts is that

a) dropping a single guy (or multiple guys) is non-trivial, and requires some thought and planning
b) the odds of a strong wind coming up while you're unguyed is low, so a temporary guying system could be acceptable
c) there's a wide variety in risk acceptance strategies among hams

1346. Re: MFJ-269 Antenna Analyzer experience

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-22 05:58:46 UTC
From: Ian Wade G3NRW <g3nrw@yahoo.co.uk>
Message-ID: <ZmV57IBWk4jKFwLw@ntlworld.com>
Source record: 13758

From: Michael Coslo <mjc5@psu.edu>
Date: Fri, 21 Aug 2009 Time: 15:05:13

>
>Oaky, well good enough. My vertical uses a stub on the feedline, so I
>have to be out there anyhow.with a connector in the line. Seems like 6
>of one, half dozen of the other situation.
>
>- 73 De Mike N3LI -

Agreed. But I guess your antenna feedpoint is more-or-less at ground
level. That's a little different from peering through binoculars at an
MFJ suspended at the feedpoint 50ft above ground .... <grin>

--
73
Ian, G3NRW

1347. Do I Insulate the yagi boom from the mast

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-22 08:13:10 UTC
From: barett <barett@blueyounder.co.uk>
Message-ID: <dMNjm.257432$bA.39186@newsfe16.ams2>
Source record: 13759

When mounting any yagi beam to a metal mast, is it best to insulate the boom from the metal mast?

Are there any benefits in insulating the boom from the mast or not when mounting?

Thanks

1348. Re: Do I Insulate the yagi boom from the mast

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-22 10:42:35 UTC
From: nm5k@wt.net
Message-ID: <2497a1e9-1481-4496-b822-52ddc31980cf@13g2000prl.googlegroups.com>
Source record: 13760

On Aug 22, 3:13 am, "barett" <bar...@blueyounder.co.uk> wrote:
> When mounting any yagi beam to a metal mast, is it best to insulate the boom
> from the metal mast?

No. At least from a lightning point of view. I never insulate the boom
from the mast.
>
> Are there any benefits in insulating the boom from the mast or not when
> mounting?

Not that I can think of.

1349. Re: Do I Insulate the yagi boom from the mast

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-22 11:49:08 UTC
From: Gerard <pe1oud@amsat.org>
Message-ID: <4a8fdec7$0$94795$dbd41001@news.wanadoo.nl>
Source record: 13761

"barett" <barett@blueyounder.co.uk> schreef in bericht
news:dMNjm.257432$bA.39186@newsfe16.ams2...
> When mounting any yagi beam to a metal mast, is it best to
> insulate the boom from the metal mast?
No, yagi beams are electrically '0' in the middle of the
elements, so there is no need to insulate the boom
from the mast.

> Are there any benefits in insulating the boom from the mast or
> not when mounting?
I can think of no benefits to insulate. NOT insulating has the
benefit that static can run to ground if the mast is grounded.

Log-per antennas should be insulated from their masts as the
booms are part of the feed, and should not contact each other
or ground.

73 - Gerard - PE1OUD

E-mail: pe1oud(NOTTHIS)@amsat.org

1350. From OP: Re my previous Post On Using a "Combiner"

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-22 12:38:09 UTC
From: Robert11 <rgsros@xnotme.invalid>
Message-ID: <h6oorn$2d4$1@news.eternal-september.org>
Source record: 13762

Hello All,

Just a quick thanks for all the suggestions and help re my using a Combiner question.

Really appreciate it.
Great Forum.

Regards,
Bob (Mass.)

1351. Re: Do I Insulate the yagi boom from the mast

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-22 14:49:14 UTC
From: barett <barett@blueyounder.co.uk>
Message-ID: <xzTjm.137864$zh1.120890@newsfe04.ams2>
Source record: 13763

I am causing TVI at the moment and I was told that if I insulated the beam from the mast and choked the coax just below the beam it would guarantee to solve my TVI problem and improve the efficiency of the antenna. What do you think?

It's a lot of work to drop the beam back down to ground level to do this.

"barett" <barett@blueyounder.co.uk> wrote in message news:dMNjm.257432$bA.39186@newsfe16.ams2...
> When mounting any yagi beam to a metal mast, is it best to insulate the
> boom from the metal mast?
>
> Are there any benefits in insulating the boom from the mast or not when
> mounting?
>
> Thanks
>
>
>

1352. Re: Do I Insulate the yagi boom from the mast

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-22 15:00:48 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <zKTjm.135314$qx1.77001@newsfe04.iad>
Source record: 13764

barett wrote:
> When mounting any yagi beam to a metal mast, is it best to insulate the boom
> from the metal mast?

The voltage at the center of the elements is supposed
to be zero. Therefore, the boom is supposed to have
zero potential and thus can be mounted to a metal mast.
--
73, Cecil, IEEE, OOTC, http://www.w5dxp.com

1353. Re: Do I Insulate the yagi boom from the mast

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-22 15:03:17 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <TMTjm.135315$qx1.36203@newsfe04.iad>
Source record: 13765

barett wrote:
> I am causing TVI at the moment and I was told that if I insulated the beam
> from the mast and choked the coax just below the beam it would guarantee to
> solve my TVI problem and improve the efficiency of the antenna. What do you
> think?
>
> It's a lot of work to drop the beam back down to ground level to do this.

Get the guy who made the guarantee to do the work.
Don't pay him if it doesn't work.
--
73, Cecil, IEEE, OOTC, http://www.w5dxp.com

1354. Re: removing guy wires on tower

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-22 16:12:12 UTC
From: Ralph E Lindberg <n7bsn@callsign.net>
Message-ID: <n7bsn-023CD5.09114222082009@news.individual.net>
Source record: 13766

In article <02oq85hi4evmkqg9du3s6smfb4tujl8rl8@4ax.com>,
Richard Clark <kb7qhc@comcast.net> wrote:

> On Thu, 20 Aug 2009 07:55:55 GMT, Owen Duffy <none@no.where> wrote:
>
> > Perhaps cutting the tree into
> >smaller lengths that are lowered to the ground on ropes to guide and slow
> >the descent? I have watched tree climbers take huge trees down, lowering
> >all the pieces in a very limited space against the trunk.
>
> Here in the Pacific Northwest, tree country, I have never seen any
> other way except for when trees are layed over indiscriminately as
> part of a clearing operation.
>
> 73's
> Richard Clark, KB7QHC

Depends on the quality of the crew.... But I always use a good tree
service and don't do it myself, If the tree could hit anything other
then the ground (I've done enough that I've seen them land every
direction, including the direction I wanted)

--

Personal e-mail is the n7bsn but at amsat.org
This posting address is a spam-trap and seldom read
RV and Camping FAQ can be found at
http://www.ralphandellen.us/rv

1355. Re: From OP: Re my previous Post On Using a "Combiner"

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-22 16:14:28 UTC
From: Allodoxaphobia <bit-bucket@config.com>
Message-ID: <slrnh906b4.1h8j.bit-bucket@shell.config.com>
Source record: 13767

On Sat, 22 Aug 2009 08:38:09 -0400, Robert11 wrote:

> Great Forum.

This is _not_ a forum.
This is usenet, and rec.radio.amateur.antenna is
just one of thousands of *newsgroups* on usenet.

But, yes, rraa is one of The Great Ones.

Jonesy
--
Marvin L Jones | jonz | W3DHJ | linux
38.24N 104.55W | @ config.com | Jonesy | OS/2
* Killfiling google & XXXXbanter.com: jonz.net/ng.htm

1356. Re: Do I Insulate the yagi boom from the mast

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-22 16:22:49 UTC
From: JB <nospam@goofball.net>
Message-ID: <tXUjm.321$FV4.105@nwrddc01.gnilink.net>
Source record: 13768

"barett" <barett@blueyounder.co.uk> wrote in message
news:xzTjm.137864$zh1.120890@newsfe04.ams2...
> I am causing TVI at the moment and I was told that if I insulated the
beam
> from the mast and choked the coax just below the beam it would guarantee
to
> solve my TVI problem and improve the efficiency of the antenna. What do
you
> think?
>
> It's a lot of work to drop the beam back down to ground level to do this.
>
>
> "barett" <barett@blueyounder.co.uk> wrote in message
> news:dMNjm.257432$bA.39186@newsfe16.ams2...
> > When mounting any yagi beam to a metal mast, is it best to insulate the
> > boom from the metal mast?
> >
> > Are there any benefits in insulating the boom from the mast or not when
> > mounting?
> >
> > Thanks
> >
It might be a good idea to drop the whole thing and make sure there is no
corrosion anywhere, even at the cost of replacing hardware and any rusty
masts. rust and corrosion can actually cause broadband noise and harmonics
that doesn't come out of the transmitter. Perhaps there is an issue with
your rotor?

1357. Re: Do I Insulate the yagi boom from the mast

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-22 16:50:12 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <1t7095htn0nr3joj6tmkaii62coejdh4aq@4ax.com>
Source record: 13769

On Sat, 22 Aug 2009 15:49:14 +0100, "barett"
<barett@blueyounder.co.uk> wrote:

>I am causing TVI at the moment and I was told that if I insulated the beam
>from the mast and choked the coax just below the beam it would guarantee to
>solve my TVI problem and improve the efficiency of the antenna.

Stop listening to those people who "told" you this and "guarantee"
(whatever that means) it as a solution.

TVI is most frequently caused by your feedline's proximity to RF
sensitive devices AND the presence of Common Mode currents on the
feedline. Put a choke on the transmission line at the feed point and
another choke one quarter wavelength away from the feed point towards
the transmitter.

This is a very common topic here and if you were to Google the group's
combined postings about it, you would find a world of education that
goes beyond this simple prescription. (Google the terms TVI and
Common Mode and Choke.)

73's
Richard Clark, KB7QHC

1358. Re: Do I Insulate the yagi boom from the mast

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-22 18:35:48 UTC
From: barett <barett@blueyounder.co.uk>
Message-ID: <WTWjm.116945$Cj1.84902@newsfe30.ams2>
Source record: 13770

"barett" <barett@blueyounder.co.uk> wrote in message
news:dMNjm.257432$bA.39186@newsfe16.ams2...
> When mounting any yagi beam to a metal mast, is it best to insulate the
> boom from the metal mast?
>
> Are there any benefits in insulating the boom from the mast or not when
> mounting?
>
> Thanks
>
>
>

Thanks all for your help. The search I did on Goole has given me loads to
read up on, so I should be fine now.
Thanks again

1359. Re: Do I Insulate the yagi boom from the mast

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-22 18:39:03 UTC
From: Bob Bob <bob3bob3@suddenlink.net>
Message-ID: <qjq5m6-too.ln1@p400bob.personal.cox.net>
Source record: 13771

Kind of off topic but maybe interesting.

In Sydney in I guess the late 70's two broadcast FM stations came online
on 105 and 106MHz (Approx). Their antennas were both mounted on one of
the big TV towers in the northern suburbs.

Individual tests proved positive, good range etc etc. When they were
both turned on however they caused severe interference to the AM BC band
(1MHz or so) and also the CH10 TV (212MHz or so). As I remember hearing
the fault was a rusty rivet holding some tower sections together.

This information is anecdotal. I havent verified it!

Cheers Bob VK2YQA

JB wrote:

>>>
> It might be a good idea to drop the whole thing and make sure there is no
> corrosion anywhere, even at the cost of replacing hardware and any rusty
> masts. rust and corrosion can actually cause broadband noise and harmonics
> that doesn't come out of the transmitter. Perhaps there is an issue with
> your rotor?
>

1360. Re: MFJ-269 Antenna Analyzer experience

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-24 13:12:17 UTC
From: Michael Coslo <mjc5@psu.edu>
Message-ID: <h6u3jk$dk1i$1@tr22n12.aset.psu.edu>
Source record: 13772

jimp@specsol.spam.sux.com wrote:

> The 4170 makes this a lot easier as you can measure the feedline actual
> parameters as well as calibrate out their effects.

This is a dumb question on my part, but what you are saying is that the mitigating effects that the cable has on the VSWR, making it look better in general, can not only be calculated and "calibrated out", but that the actual SWR of your antenna at the feedpoint is then given?

As you get closer to 1.1:1 at the actual antenna, would accuracy then suffer? If feedline loss can bring an antenna that is not near that to a level approaching that, wouldn't it mean that teh calibration is somewhere in the noise?

Like I say, this could be a really stoopid question.

- 73 de Mike N3LI -

1361. Re: MFJ-269 Antenna Analyzer experience

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-24 15:45:00 UTC
From: jimp@specsol.spam.sux.com
Message-ID: <quoam6-api.ln1@mail.specsol.com>
Source record: 13773

Michael Coslo <mjc5@psu.edu> wrote:
> jimp@specsol.spam.sux.com wrote:
>
>
>> The 4170 makes this a lot easier as you can measure the feedline actual
>> parameters as well as calibrate out their effects.
>
>
> This is a dumb question on my part, but what you are saying is that the
> mitigating effects that the cable has on the VSWR, making it look better
> in general, can not only be calculated and "calibrated out", but that
> the actual SWR of your antenna at the feedpoint is then given?
>
> As you get closer to 1.1:1 at the actual antenna, would accuracy then
> suffer? If feedline loss can bring an antenna that is not near that to a
> level approaching that, wouldn't it mean that teh calibration is
> somewhere in the noise?
>
> Like I say, this could be a really stoopid question.
>
> - 73 de Mike N3LI -

Basically what you do is calibrate the instrument at the measurement
point, whether that point is the instrument connector or at the end of
a length of coax.

You attach an open, a short and a known resistance; 50 ohms by default
but it is user definable.

The instrument than frequency sweeps and stores the results in a user
definable calibration file.

When you make a measurement of an unknown, you define which calibration
file to use and the instrument corrects the readings to display the
characteristics at the measurement point.

Given that this is a $500 insturment and not a $20,000 labratory instrument
there are going to be limits to how accurate all this is.

After having used the AIM for a while, my opinion is that it far exceeds
what is required for practical amateur usage.

If you want to see some actual numbers, you can find a comparison of the
results of an AIM 4170 compared to HP lab equiment at:

http://www.bnk.com/w0qe/AIM4170_page1.html

--
Jim Pennino

Remove .spam.sux to reply.

1362. BRS Media Inc. Named As One Of The 5,000 Fastest Growing Companies By Inc. Magazine

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-24 16:52:58 UTC
From: nicholasg980 <nicholasguida@gmail.com>
Message-ID: <94634380-abcd-4e82-87f6-7524bf137d42@c34g2000yqi.googlegroups.com>
Source record: 13774

San Francisco, CA. August 18, 2009 - BRS Media Inc., a diverse and growing media e-commerce firm that helps traditional and interactive media companies build and brand on the power of the Web, announced today that the company has been included in Inc. Magazine's 2009 "Inc. 5000" list of fastest-growing private companies in the USA.

With a tremendous increase in revenue of 88.7% over the past three years, BRS Media has the honor of being named to the annual ranking of fastest-growing private companies for a second year in row. In addition, BRS Media ranked No. 35 in the Top 50 Media Companies, that featured prominent companies like: FriendFinder Networks, 944 Media and Pinnacle Publishing Group.

"It is truly an honor to be named to the Inc. 5000 list for the second consecutive year, we're elated to be recognized among the top of U.S. privately held businesses," remarked George T. Bundy, Chairman & CEO of BRS Media Inc. "This prestigious distinction is a testament to our dedication to building a successful Online company that provides innovative, cutting edge services to our first class clients and prosperous partners worldwide. We look forward to even more success and growth in the coming years."

BRS Media has pioneered the 'multimedia' domain space since launching the .FM & .AM Top Level Domains in 1998. Since that time, BRS Media has been actively and successfully promoting and marketing dotFM and dotAM to radio and media companies around the world. Online Radio is among the fastest growing segments of the Internet, According to Arbitron and Edison Media Research, reaching 42 million Americans age 12 or older during an average week.

In April 2009, BRS Media announced plans to secure, operate and market the .Radio TLD. dotRadio will be positioned as the New Multimedia Domain for the On Air and Online Community. The plan to launch ".Radio" follows ICANN's (Internet Corporation for Assigned Names and Numbers) decision to expand the domain space beyond the standard .com, .net, and .org. Being called the "Biggest Domain Name Expansion" in the history of the Internet, the move is expected to open the top level domain space to an unlimited number of extensions.

About Inc. 5000:
Inc. 5000, an extension of Inc. magazine's annual Inc. 500 list, catches many businesses that are too big to grow at the pace required to make the Inc. 500, as well as a host of smaller firms. Taken as a whole, these companies represent the backbone of the U.S. economy. The

2009 Inc. 5000 list measures revenue growth from 2005 through 2008. Complete information on this years Inc. 5000 can be found at http://inc.com/inc5000 Inc. 5000 is a registered trademark of Mansueto Ventures LLC.

About BRS Media Inc:
Based in the South of Market district (SoMa) of San Francisco CA, BRS Media (www.brsmedia.fm) is a member of the National Association of Broadcasters, the International Webcasting Association and the Webcaster Alliance. Listed as one of the fastest growing privately held companies by the SF Business Times and Inc. Magazine, its portfolio of Online properties includes: dotFM® & dotAM®, domain registrar of premium multimedia .FM and .AM domains; dotRadio™, the new .RADIO top level domain for the On Air and Online Community; iDotz.Net domain registrar of all gTLD domains (.com, .net, .org), as well as, boutique domains (.tv .la, .im, .vc & .mn); @Radio.FM & @Radio.AM, free Web based email services and the ever-popular Web-Radio, the leading portal for "tuning in" Radio on the Internet. dotFM, dotAM and dotRadio are either registered trademarks or trademarks of BRS Media, Inc.
http://www.brsmedia.fm

1363. Latest ICOM model, the IC-9100 all round transceiver.

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-24 20:09:48 UTC
From: "RigReference.com" <noreply@nospam.com>
Message-ID: <4a92f386$0$24697$703f8584@news.kpn.nl>
Source record: 13775

Latest ICOM model, the IC-9100 all round transceiver.
Images and specifications:

http://rigreference.com/rigs/view/4519

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1364. Re: MFJ-269 Antenna Analyzer experience

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-24 20:12:40 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <Xr2dnfOwEcynaQ_XnZ2dnUVZ_hSdnZ2d@giganews.com>
Source record: 13776

Michael Coslo wrote:
> jimp@specsol.spam.sux.com wrote:
>
>
>> The 4170 makes this a lot easier as you can measure the feedline actual
>> parameters as well as calibrate out their effects.
>
>
> This is a dumb question on my part, but what you are saying is that the
> mitigating effects that the cable has on the VSWR, making it look better
> in general, can not only be calculated and "calibrated out", but that
> the actual SWR of your antenna at the feedpoint is then given?
>
> As you get closer to 1.1:1 at the actual antenna, would accuracy then
> suffer? If feedline loss can bring an antenna that is not near that to a
> level approaching that, wouldn't it mean that teh calibration is
> somewhere in the noise?
>
> Like I say, this could be a really stoopid question.
>
> - 73 de Mike N3LI -

Not at all. Imagine that you have a very lossy line. You'll read very nearly the cable Z0 regardless of what's at the other end. Extreme changes in far-end impedance will make very little difference at the input end, so it's impossible to tell with any accuracy what's at the far end by looking at the near-end impedance. Another case to consider is one where the Z0 of the cable is very different than the Z of the load. In that case, a tiny change in line Z0, length, or loss changes the input Z for a given load Z. It can be impossible to measure the line length, impedance, or loss with sufficient accuracy to find the far end impedance with decent accuracy.

This doesn't mean you can't get measurements good enough for amateur or even professional use. But on the other hand, your measurements can be total garbage in spite of your cable measurements if you fail to realize just how sensitive the result can be to small errors. A careful experimenter will do a sensitivity analysis which tells how large an error in results is caused by an error in measuring the feedline or in the input impedance measurement, then the probable measurement errors are estimated to determine the probable error in the calculated result. While a mathematical sensitivity analysis is the rigorous way to do this, something like N6BV's TLW program is just fine for most amateur purposes. Or, if you're using one of the instruments that does the calculation for you, try telling it the line is a few percent longer or

shorter, or has a Z0 or loss a few percent different from what it said or you measured. See how much it changes the result. If the change is small, no problem. But if it's large, it means that extreme care and maybe some other techniques have to be used to get a good measurement.

Let me give an example, done with TLW. Suppose we're measuring the impedance of an antenna at 30 MHz through 100 feet of RG-8x. TLW gives these nominal values for RG-8x:

Z0 - 50.2 - j0.47
Velocity factor - 0.8
Loss - 1.926 dB/100'

And suppose that these are exactly what our measurement of the cable said. We measure 21 + j20 at the input end, and conclude that the impedance of the antenna is 374 - j84 ohms.

But suppose the measurement at the input end was inaccurate by about 5%, and that the actual input end Z was 21 + j20. Then the load Z is 322 - j105, about 15% off in R, 25% in Z. Or maybe the cable measurement was off by just 1%, and the cable is really 101 and not 100 feet long. In that case, the antenna Z is really 129 + j166 ohms. We're even on the other side of resonance from where we thought. Or maybe the velocity factor was rounded a bit and it's really closer to 0.81 than 0.8. How much difference would that small error make? Well, the antenna Z would be 53 - j120 ohms with our input measurement of 21 + j20!

So, what's the real antenna impedance? 374 - j84, 322 - j105, 129 + j166, or 53 - j120? You're fooling yourself if you think you really know.

It's easy to get lulled into believing that just because we read a value to six decimal places, it's accurate. But you're usually doing very well to get within a few percent in spite of all those digits. And when that few percent results in a much bigger error in calculated results, it's even more important to realize the limitations of your accuracy.

Roy Lewallen, W7EL

1365. Re: MFJ-269 Antenna Analyzer experience

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-24 22:52:21 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <SKSdnWIXp8Y6hA7XnZ2dnUVZ_hCdnZ2d@giganews.com>
Source record: 13777

Corrections:

I apologize, and misinterpreted my scribbled notes. The conclusion is the same, but some of the quoted numbers are a little off. Here are the correct ones.

And suppose that these are exactly what our measurement of the cable said. We measure 21 + j20 at the input end, and conclude that the impedance of the antenna is 322 - j105 ohms.

But suppose the measurement at the input end was inaccurate by about 5%, and that the actual input end Z was 22 + j21. Then the load Z is 273 - j125, about 15% off in R, 20% in X. . .

Roy Lewallen wrote:
>
> And suppose that these are exactly what our measurement of the cable
> said. We measure 21 + j20 at the input end, and conclude that the
> impedance of the antenna is 374 - j84 ohms.
>
> But suppose the measurement at the input end was inaccurate by about 5%,
> and that the actual input end Z was 21 + j20. Then the load Z is 322 -
> j105, about 15% off in R, 25% in Z. . .

1366. Re: MFJ-269 Antenna Analyzer experience

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-25 03:51:12 UTC
From: "Sal M. Onella" <salmonella@food.poisoning.org>
Message-ID: <QcJkm.183757$vp.101984@newsfe12.iad>
Source record: 13778

.
< snip >
>
> Basically what you do is calibrate the instrument at the measurement
> point, whether that point is the instrument connector or at the end of
> a length of coax.
>
> You attach an open, a short and a known resistance; 50 ohms by default
> but it is user definable.
>
> The instrument than frequency sweeps and stores the results in a user
> definable calibration file.
>
> When you make a measurement of an unknown, you define which calibration
> file to use and the instrument corrects the readings to display the
> characteristics at the measurement point.
>
> Given that this is a $500 insturment and not a $20,000 labratory
instrument
> there are going to be limits to how accurate all this is.

When I inspected antennas, we had two multi-kilobuck "Site Master"
instruments from Anritsu, mentioned here, that had a set of calibrated
terminations. IIRC, to calibrate the unit(s), we had to connect the
terminations, a short, a 50-ohm resistor and a shielded open circuit, one at
a time, to the instrument and tell it which one was connected. It swept the
frequencies of interest and stored its own baseline behavior over that band
of interest. Then, anything connected to it was referenced to that
baseline. We could also store a range of sweep frequencies (usually by the
name or type of antenna we intended to sweep) and it would recall all the
parameters. Automated, repeatable sweep testing is not available (yet) in
lower cost instruments.

I presume we could have calibrated any given cable, too. (Never required by
our test memos.)

Sal

1367. New mobile VHF/UHF from Yaesu: FTM-350

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-25 09:42:26 UTC
From: noreply@nospam.com
Message-ID: <4a93b202$2$23467$703f8584@news.kpn.nl>
Source record: 13779

[No readable article body recovered]

1368. New mobile VHF/UHF from Yaesu: FTM-350 (fixed)

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-25 09:59:22 UTC
From: noreply@nospam.com
Message-ID: <4a93b5f9$3$3271$703f8584@news.kpn.nl>
Source record: 13780

Yaesu released a new mobile VHF/UHF radio at the Tokyo Ham Fair last weekend, the FTM-350. The FTM-350 is a 2m/70cm rig, capable of putting out 50W max. GPS and APRS are included in the box.

More info and images can be found on
http://rigreference.com/rigs/view/4522/Yaesu-FTM_350

RigReference.com - Reference guide for ham radio equipment
http://rigreference.com/

1369. Re: Source for Isolators ?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-25 16:16:25 UTC
From: Norm VE3CZI <ve3czi@arrl.net>
Message-ID: <y7Ukm.151936$FP2.96551@newsfe05.iad>
Source record: 13781

Hi Ed:
Try Bob Morton VE3BFM at Maple Leaf Communications.. info@mapleleafcom.com
He is an Antenna Engineer, used to work for Cushcraft and Sinclair
Radio..now doing his own thing in Canada.
He is presently designing and Manufacturing Duplexers...
He might be able to help.

73...Norm VE3CZI

"Ed" <Huckleberry_REMOVE_@bigvalley.net> wrote in message
news:Xns9C65A21A47CDCHuckleberrybigvalley@198.186.192.196...
>
> Perhaps a bit out of norm for this group, but I am trying to find a
> source for VHF and UHF isolators that are somewhat less than the normal
> exhorbitant price of many public safety communications equipment
> providers.
>
> Any leads appreciated.
>
> Ed K7AAT
>
>
>
>

1370. Line noise

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-25 19:09:58 UTC
From: Rick <ricknj10@hotmail.com>
Message-ID: <aGWkm.802$5c6.485@nwrddc02.gnilink.net>
Source record: 13782

A few months ago we had a discussion going here about my line noise problem here in NJ.
I am happy to report the problem got fixed today, and K2XT is one happy Dude ! I further want to
warn 80 meter and 160 meter DX ops that I am back on the lower bands this winter, have QRO,
and so look out Baby, I'm going to be able to hear that DX!

In great summary what we found a couple months ago was, driving from my house along the roads near here,
we could locate line noise by using my FT-100 transceiver on different bands, in AM mode. Although the
noise causes me the most problems on 80/160 my attempts at DF'ing it on those bands were useless. On ten and
six meters the noise can be heard 1/4 to 1/2 mile away from the source. Switch to 2 meters and I could
get a lot closer where the noise originated, within +/- 100 yards or so. Switch to 440 and I could tell within a few poles.
Then as I reported before I built up a 440 MHz Quagi which enabled me to stand across the road from the
offending pole and definitely pinpoint it.

Here's where it gets interesting. The particular technician I was working with from the power company has
had great success using a hand held acoustic tool. This thing even has a gun sight on it to enable him to
pinpoint the offending insulator/lightning arrestor/bad crimp, etc. On this pole however, he couldn't get a
good reading. Today a crew worked on it, and finally determined it was a bad transformer feeding two houses.
I guess that explains why the acoustic tool was ineffective. I had the 10 m receiver here set so that when the
noise level dropped 6 db the squelch would close and so I was able to know instantly when they had fixed it.

This noise source was 1.2 miles from my house. Noise was S9+5 db on 80 m with a Beverage antenna,
S8 on 10 meters with a 3 ele beam. Having the beam indicate the direction to look was very important.

A very frustrating 12 months + 6 days from the time I first reported it. 80 meters right now sounds like there's
no antenna connected. This is wonderful.

Rick K2XT

1371. Re: Line noise

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-25 20:19:07 UTC
From: "Helmut Wabnig"
Message-ID: <uoh8959slrivklv0u8q4jdk28hjh29tu6m@4ax.com>
Source record: 13783

On Tue, 25 Aug 2009 19:09:58 GMT, "Rick" <ricknj10@hotmail.com> wrote:

>A few months ago we had a discussion going here about my line noise problem
>here in NJ.
>I am happy to report the problem got fixed today, and K2XT is one happy Dude
>! I further want to
>warn 80 meter and 160 meter DX ops that I am back on the lower bands this
>winter, have QRO,
>and so look out Baby, I'm going to be able to hear that DX!
>
>In great summary what we found a couple months ago was, driving from my
>house along the roads near here,
>we could locate line noise by using my FT-100 transceiver on different
>bands, in AM mode. Although the
>noise causes me the most problems on 80/160 my attempts at DF'ing it on
>those bands were useless. On ten and
>six meters the noise can be heard 1/4 to 1/2 mile away from the source.
>Switch to 2 meters and I could
>get a lot closer where the noise originated, within +/- 100 yards or so.
>Switch to 440 and I could tell within a few poles.
>Then as I reported before I built up a 440 MHz Quagi which enabled me to
>stand across the road from the
>offending pole and definitely pinpoint it.
>
>Here's where it gets interesting. The particular technician I was working
>with from the power company has
>had great success using a hand held acoustic tool. This thing even has a
>gun sight on it to enable him to
>pinpoint the offending insulator/lightning arrestor/bad crimp, etc. On this
>pole however, he couldn't get a
>good reading. Today a crew worked on it, and finally determined it was a
>bad transformer feeding two houses.
>I guess that explains why the acoustic tool was ineffective. I had the 10 m
>receiver here set so that when the
>noise level dropped 6 db the squelch would close and so I was able to know
>instantly when they had fixed it.
>
>This noise source was 1.2 miles from my house. Noise was S9+5 db on 80 m
>with a Beverage antenna,
>S8 on 10 meters with a 3 ele beam. Having the beam indicate the direction
>to look was very important.
>
>A very frustrating 12 months + 6 days from the time I first reported it. 80
>meters right now sounds like there's

>no antenna connected. This is wonderful.
>
>Rick K2XT
>
You are a lucky guy :-)

w.

1372. Re: MFJ-269 Antenna Analyzer experience

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-25 22:03:58 UTC
From: Jim Lux <james.p.lux@jpl.nasa.gov>
Message-ID: <4A945FCE.1000205@jpl.nasa.gov>
Source record: 13784

Sal M. Onella wrote:
> .
> < snip >
>> Basically what you do is calibrate the instrument at the measurement
>> point, whether that point is the instrument connector or at the end of
>> a length of coax.
>>
>> You attach an open, a short and a known resistance; 50 ohms by default
>> but it is user definable.
>>
>> The instrument than frequency sweeps and stores the results in a user
>> definable calibration file.
>>
>> When you make a measurement of an unknown, you define which calibration
>> file to use and the instrument corrects the readings to display the
>> characteristics at the measurement point.
>>
>> Given that this is a $500 insturment and not a $20,000 labratory
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>> there are going to be limits to how accurate all this is.
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> When I inspected antennas, we had two multi-kilobuck "Site Master"
> instruments from Anritsu, mentioned here, that had a set of calibrated
> terminations. IIRC, to calibrate the unit(s), we had to connect the
> terminations, a short, a 50-ohm resistor and a shielded open circuit, one at
> a time, to the instrument and tell it which one was connected. It swept the
> frequencies of interest and stored its own baseline behavior over that band
> of interest. Then, anything connected to it was referenced to that
> baseline. We could also store a range of sweep frequencies (usually by the
> name or type of antenna we intended to sweep) and it would recall all the
> parameters. Automated, repeatable sweep testing is not available (yet) in
> lower cost instruments.

The $600 TenTec/TAPR VNA does open/short/thru/load calibration with
sweeps, etc. I don't have the AIM, but I'll bet it does too. These
days, it's not a big deal to include it.

1373. Re: Line noise

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-26 02:09:40 UTC
From: Tom Horne <hornetd@verizon.net>
Message-ID: <EP0lm.887$FV4.155@nwrddc01.gnilink.net>
Source record: 13785

Rick wrote:
> A few months ago we had a discussion going here about my line noise problem
> here in NJ.
> I am happy to report the problem got fixed today, and K2XT is one happy Dude
> ! I further want to
> warn 80 meter and 160 meter DX ops that I am back on the lower bands this
> winter, have QRO,
> and so look out Baby, I'm going to be able to hear that DX!
>
> In great summary what we found a couple months ago was, driving from my
> house along the roads near here,
> we could locate line noise by using my FT-100 transceiver on different
> bands, in AM mode. Although the
> noise causes me the most problems on 80/160 my attempts at DF'ing it on
> those bands were useless. On ten and
> six meters the noise can be heard 1/4 to 1/2 mile away from the source.
> Switch to 2 meters and I could
> get a lot closer where the noise originated, within +/- 100 yards or so.
> Switch to 440 and I could tell within a few poles.
> Then as I reported before I built up a 440 MHz Quagi which enabled me to
> stand across the road from the
> offending pole and definitely pinpoint it.
>
> Here's where it gets interesting. The particular technician I was working
> with from the power company has
> had great success using a hand held acoustic tool. This thing even has a
> gun sight on it to enable him to
> pinpoint the offending insulator/lightning arrestor/bad crimp, etc. On this
> pole however, he couldn't get a
> good reading. Today a crew worked on it, and finally determined it was a
> bad transformer feeding two houses.
> I guess that explains why the acoustic tool was ineffective. I had the 10 m
> receiver here set so that when the
> noise level dropped 6 db the squelch would close and so I was able to know
> instantly when they had fixed it.
>
> This noise source was 1.2 miles from my house. Noise was S9+5 db on 80 m
> with a Beverage antenna,
> S8 on 10 meters with a 3 ele beam. Having the beam indicate the direction
> to look was very important.
>
> A very frustrating 12 months + 6 days from the time I first reported it. 80
> meters right now sounds like there's
> no antenna connected. This is wonderful.

>
> Rick K2XT
>
>

Congratulations. Your persistence really paid off.
--
Tom Horne

"This alternating current stuff is just a fad. It is much too dangerous
for general use." Thomas Alva Edison

1374. Re: Line noise

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-26 04:40:08 UTC
From: "Sal M. Onella" <salmonella@food.poisoning.org>
Message-ID: <dD3lm.116934$rg4.40861@newsfe02.iad>
Source record: 13787

"Rick" <ricknj10@hotmail.com> wrote in message
news:aGWkm.802$5c6.485@nwrddc02.gnilink.net...
>

< snip >

Today a crew worked on it, and finally determined it was a
> bad transformer feeding two houses.
> I guess that explains why the acoustic tool was ineffective. I

If you were getting clobbered at your distance, those two houses must have
had little or no BCB reception.

Sal

1375. Re: MFJ-269 Antenna Analyzer experience

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-26 04:45:25 UTC
From: "Sal M. Onella" <salmonella@food.poisoning.org>
Message-ID: <dD3lm.116935$rg4.3355@newsfe02.iad>
Source record: 13786

"Jim Lux" <james.p.lux@jpl.nasa.gov> wrote in message
news:4A945FCE.1000205@jpl.nasa.gov...
> Sal M. Onella wrote:
> > .
> > < snip >
> >> Basically what you do is calibrate the instrument at the measurement
> >> point, whether that point is the instrument connector or at the end of
> >> a length of coax.
> >>
> >> You attach an open, a short and a known resistance; 50 ohms by default
> >> but it is user definable.
> >>
> >> The instrument than frequency sweeps and stores the results in a user
> >> definable calibration file.
> >>
> >> When you make a measurement of an unknown, you define which calibration
> >> file to use and the instrument corrects the readings to display the
> >> characteristics at the measurement point.
> >>
> >> Given that this is a $500 insturment and not a $20,000 labratory
> > instrument
> >> there are going to be limits to how accurate all this is.
> >
> > When I inspected antennas, we had two multi-kilobuck "Site Master"
> > instruments from Anritsu, mentioned here, that had a set of calibrated
> > terminations. IIRC, to calibrate the unit(s), we had to connect the
> > terminations, a short, a 50-ohm resistor and a shielded open circuit,
one at
> > a time, to the instrument and tell it which one was connected. It swept
the
> > frequencies of interest and stored its own baseline behavior over that
band
> > of interest. Then, anything connected to it was referenced to that
> > baseline. We could also store a range of sweep frequencies (usually by
the
> > name or type of antenna we intended to sweep) and it would recall all
the
> > parameters. Automated, repeatable sweep testing is not available (yet)
in
> > lower cost instruments.
>
>
> The $600 TenTec/TAPR VNA does open/short/thru/load calibration with
> sweeps, etc. I don't have the AIM, but I'll bet it does too. These

> days, it's not a big deal to include it.
>
>

Thanks for bringing me into the present.

I have an analyzer already. When I drop it off the roof (inevitable), I will look at the TenTec/TAPR VNA.

1376. Re: Do I Insulate the yagi boom from the mast

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-26 05:55:00 UTC
From: "Sal M. Onella" <salmonella@food.poisoning.org>
Message-ID: <V64lm.121066$9P.104038@newsfe08.iad>
Source record: 13788

"Bob Bob" <bob3bob3@suddenlink.net> wrote in message
news:qjq5m6-too.ln1@p400bob.personal.cox.net...
> Kind of off topic but maybe interesting.
>
> In Sydney in I guess the late 70's two broadcast FM stations came online
> on 105 and 106MHz (Approx). Their antennas were both mounted on one of
> the big TV towers in the northern suburbs.
>
> Individual tests proved positive, good range etc etc. When they were
> both turned on however they caused severe interference to the AM BC band
> (1MHz or so) and also the CH10 TV (212MHz or so). As I remember hearing
> the fault was a rusty rivet holding some tower sections together.
>
> This information is anecdotal. I havent verified it!

Oh, yes! The "rusty bolt effect" is well known to those of us who have
worked US Navy EMI problems. I did it off and on for almost thirty years.
A non-linear junction mixes two or more signals and the structure involved
reradiates the sums and differences of the fundamentals and their harmonics.
The structure can be any topside metallic item or collection of items.

The result is a comb of frequencies which can cause widespread interference
literally for miles. In some cases broadband noise is also present. In
really bad cases, HF receive is effectively non-functional.

The solution is to bond or insulate everything topside in areas of high RF
energy -- eliminate as many non-linear junctions as possible.

1377. Re: Do I Insulate the yagi boom from the mast

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-26 11:25:48 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <%Y8lm.154347$0e4.91145@newsfe19.iad>
Source record: 13789

Sal M. Onella wrote:
> A non-linear junction mixes two or more signals ...

I once had a cracked/cold solder joint in a 40m downspout
vertical that seemed to partially rectify the source
signal generating undesirable harmonics on 15m detected
by another ham 1/2 mile away. A jumper across the bad
junction cured the problem.
--
73, Cecil, IEEE, OOTC, http://www.w5dxp.com

1378. Re: MFJ-269 Antenna Analyzer experience

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-26 13:00:34 UTC
From: Michael Coslo <mjc5@psu.edu>
Message-ID: <h73blp$bo1u$1@tr22n12.aset.psu.edu>
Source record: 13790

Roy Lewallen wrote:
>
>
> And suppose that these are exactly what our measurement of the cable
> said. We measure 21 + j20 at the input end, and conclude that the
> impedance of the antenna is 322 - j105 ohms.
>
> But suppose the measurement at the input end was inaccurate by about 5%,
> and that the actual input end Z was 22 + j21. Then the load Z is 273 -
> j125, about 15% off in R, 20% in X. . .

Thanks Roy,

My knowledge of the matter is at the noobie level, but given that loss eventually gets you reading only the Z0 of the cable, it's what I suspected. I hadn't thought about a big mismatch between the cable and antenna, so there's another data point.

- 73 de Mike N3LI -

1379. Re: New mobile VHF/UHF from Yaesu: FTM-350 (fixed)

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-26 13:05:44 UTC
From: Michael Coslo <mjc5@psu.edu>
Message-ID: <h73bvd$bo20$1@tr22n12.aset.psu.edu>
Source record: 13791

noreply@nospam.com wrote:
> Yaesu released a new mobile VHF/UHF radio at the Tokyo Ham Fair last weekend, the FTM-350.
> The FTM-350 is a 2m/70cm rig, capable of putting out 50W max. GPS and APRS are
> included in the box.
>
> More info and images can be found on
> http://rigreference.com/rigs/view/4522/Yaesu-FTM_350

I guess they kind of liked the Kenwood D-7XX series, eh?

Any rate, built in GPS is cool and has been needed for as long as HF and VHF rigs have needed USB ports instead of ancient Serial ports.

Looks nice, any idea on price?

- 73 de Mike N3LI -

1380. Re: Do I Insulate the yagi boom from the mast

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-27 03:54:14 UTC
From: "Sal M. Onella" <salmonella@food.poisoning.org>
Message-ID: <Grnlm.152588$FP2.47690@newsfe05.iad>
Source record: 13792

"Cecil Moore" <nospam@w5dxp.com> wrote in message
news:%Y8lm.154347$0e4.91145@newsfe19.iad...
> Sal M. Onella wrote:
> > A non-linear junction mixes two or more signals ...
>
> I once had a cracked/cold solder joint in a 40m downspout
> vertical that seemed to partially rectify the source
> signal generating undesirable harmonics on 15m detected
> by another ham 1/2 mile away. A jumper across the bad
> junction cured the problem.

Yup. Navy ships have from a few dozen to several hundred such jumpers,
depending on ship type. Many are welded but some are bolted, especially if
the object must be moved for use, etc.

I have heard that hams who use a tin roof as an HF ground plane are apt to
generate harmonics.

Sal

1381. Re: New mobile VHF/UHF from Yaesu: FTM-350 (fixed)

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-27 09:48:47 UTC
From: RigReference <noreply@rigreference.com>
Message-ID: <4a96567d$0$20194$703f8584@news.kpn.nl>
Source record: 13793

Michael Coslo wrote:
> noreply@nospam.com wrote:
>> Yaesu released a new mobile VHF/UHF radio at the Tokyo Ham Fair last
>> weekend, the FTM-350. The FTM-350 is a 2m/70cm rig, capable of putting
>> out 50W max. GPS and APRS are included in the box.
>> More info and images can be found on
>> http://rigreference.com/rigs/view/4522/Yaesu-FTM_350
>
>
> I guess they kind of liked the Kenwood D-7XX series, eh?
>
>
> Any rate, built in GPS is cool and has been needed for as long as HF and
> VHF rigs have needed USB ports instead of ancient Serial ports.
>
> Looks nice, any idea on price?
>
>
> - 73 de Mike N3LI -

The similar FT-10R has a list price of 450 USD. I imagine the new
FTM-350 won't be far from this figure, but I have nothing to back this
up with.

Regards
http://rigreference.com

1382. Re: Do I Insulate the yagi boom from the mast

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-27 10:25:31 UTC
From: christofire <christofire@btinternet.com>
Message-ID: <3PCdnZE_U8K-wgvXnZ2dnUVZ8mWdnZ2d@bt.com>
Source record: 13794

"Sal M. Onella" <salmonella@food.poisoning.org> wrote in message
news:Grnlm.152588$FP2.47690@newsfe05.iad...
>
> "Cecil Moore" <nospam@w5dxp.com> wrote in message
> news:%Y8lm.154347$0e4.91145@newsfe19.iad...
>> Sal M. Onella wrote:
>> > A non-linear junction mixes two or more signals ...
>>
>> I once had a cracked/cold solder joint in a 40m downspout
>> vertical that seemed to partially rectify the source
>> signal generating undesirable harmonics on 15m detected
>> by another ham 1/2 mile away. A jumper across the bad
>> junction cured the problem.
>
> Yup. Navy ships have from a few dozen to several hundred such jumpers,
> depending on ship type. Many are welded but some are bolted, especially
> if
> the object must be moved for use, etc.
>
> I have heard that hams who use a tin roof as an HF ground plane are apt to
> generate harmonics.
>
> Sal

Some of the towers and masts used for broadcasting in the UK have welded-on tabs that are welded together after the sections are bolted together. A particular potential problem has existed since Band II was extended up to 108 MHz: that of generation and radiation of IPs in the band above, used for VOR and ILS.

Chris

1383. Re: Do I Insulate the yagi boom from the mast

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-27 15:36:05 UTC
From: Michael Coslo <mjc5@psu.edu>
Message-ID: <h76955$8872$1@tr22n12.aset.psu.edu>
Source record: 13795

Sal M. Onella wrote:

> I have heard that hams who use a tin roof as an HF ground plane are apt to
> generate harmonics.

As well as those who spend too much time around the wimmin!

- 73 de Mike N3LI -

1384. Emtronics TEV-1

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-27 23:56:21 UTC
From: George <vk4ajl@bigpond.net.au>
Message-ID: <F2Flm.14372$ze1.14171@news-server.bigpond.net.au>
Source record: 13796

Wonder if anyone has had any problems with the Emtronics TEV-1 vertical
antenna
I just can't get it to work
vk4ajl@wia.org.au
or skype me vk4ajl

1385. Re: New mobile VHF/UHF from Yaesu: FTM-350 (fixed)

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-28 02:05:59 UTC
From: subodhkant razoria <sub56789000@gmail.com>
Message-ID: <8d074a84-45df-4101-bf26-c6f9fb0a2452@p10g2000prm.googlegroups.com>
Source record: 13797

On Aug 27, 2:48 pm, RigReference <nore...@rigreference.com> wrote:
> Michael Coslo wrote:
> > nore...@nospam.com wrote:
> >> Yaesu released a new mobile VHF/UHF radio at the Tokyo Ham Fair last
> >> weekend, the FTM-350. The FTM-350 is a 2m/70cm rig, capable of putting
> >> out 50W max. GPS and APRS are included in the box.
> >> More info and images can be found on
> >>http://rigreference.com/rigs/view/4522/Yaesu-FTM_350
>
> > I guess they kind of liked the Kenwood D-7XX series, eh?
>
> > Any rate, built in GPS is cool and has been needed for as long as HF and
> > VHF rigs have needed USB ports instead of ancient Serial ports.
>
> > Looks nice, any idea on price?
>
> >   - 73 de Mike N3LI -
>
> The similar FT-10R has a list price of 450 USD. I imagine the new
> FTM-350 won't be far from this figure, but I have nothing to back this
> up with.
>
> Regardshttp://rigreference.com- Hide quoted text -
>
> - Show quoted text -

e

1386. Re: Emtronics TEV-1

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-28 02:20:32 UTC
From: dplatt@radagast.org
Message-ID: <ggrjm6-p27.ln1@radagast.org>
Source record: 13798

In article <F2Flm.14372$ze1.14171@news-server.bigpond.net.au>,
George <vk4ajl@bigpond.net.au> wrote:

>Wonder if anyone has had any problems with the Emtronics TEV-1 vertical
>antenna
>I just can't get it to work

What's your feed / tuning arrangement?

Based on what I see on the page at

http://www.andrewscom.com.au/site-content-section-08-emtron.htm

the TEV-1 is simply an end-fed monopole/whip. Although it's described as "broadband" I rather suspect that it's no more broadband than any length of pipe of that length would be. It's going to need some form of wide-range tuner, and a good ground and/or radials, in order to work on multiple bands.

The Andrews page suggests four forms of feeding:

- with a wide-range "high-impedance" autotuner such as an SGC. In this arrangement, it would be acting as part of the long-wire antenna that these antenna couplers are designed for.

- With a 4:1 balun and a 50-ohm feedline, to a tuner in the shack. I'd expect substantial losses in the feedline on many bands.

- With a high-impedance (e.g. "450 ohm") balanced feedline to the shack, and then either a balun/tuner or (I believe) a tuner designed to feed a high-Z balanced line directly.

- Inductive match (i.e. base loading coil), presumably for a specific band.

I would guess that the simple autotuners built into many HF rigs would probably not have the range to handle this antenna on most bands... they're usually limited to flattening out relatively low SWRs, to keep the finals happy. You'll need some form of wide-matching-range tuner (e.g. a good external "T" or "L" matching box) to handle the wide range of impedances that this antenna is likely to present on various bands.

--
Dave Platt <dplatt@radagast.org> AE6EO
Friends of Jade Warrior home page: http://www.radagast.org/jade-warrior
I do _not_ wish to receive unsolicited commercial email, and I will
boycott any company which has the gall to send me such ads!

1387. Re: MFJ-269 Antenna Analyzer experience

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-28 10:50:35 UTC
From: wood@itd.nrl.navy.mil
Message-ID: <wood-2808090650350001@jbw-mac.itd.nrl.navy.mil>
Source record: 13799

In article <h73blp$bo1u$1@tr22n12.aset.psu.edu>, Michael Coslo
<mjc5@psu.edu> wrote:

> My knowledge of the matter is at the noobie level, but given that loss
> eventually gets you reading only the Z0 of the cable, it's what I
> suspected. I hadn't thought about a big mismatch between the cable and
> antenna, so there's another data point.
>
>
> - 73 de Mike N3LI -

Hello, and I ran into this issue years ago when trying to measure high (>
10 or 20) VSWR loads (in this case out-of-band shipboard HF antenna
feedpoint impedance) connected via a length of transmission line.
Accurate determination of load resistance is difficult to ascertain under
these conditions. A 1953 AIEE (a progenitor of the IEEE) paper by W.W.
Macalpine, "Computation of Impedance and Efficiency of Transmission Lines
with High Sanding Wave Ratio" describes the problem.

I was, however, able to obtain accurate results when I included the small
imaginary part (frequency dependent) of the characteristic impedance that
is present in a low-loss line. Outside the high VSWR load issue the
imaginary part can be ignored. Sincerely, and 73s from N4GGO,

John Wood (Code 5550) e-mail: wood@itd.nrl.navy.mil
Naval Research Laboratory
4555 Overlook Avenue, SW
Washington, DC 20375-5337

1388. Re: MFJ-269 Antenna Analyzer experience

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-28 20:34:38 UTC
From: Owen Duffy <none@no.where>
Message-ID: <Xns9C7642E878DBBnonenowhere@61.9.191.5>
Source record: 13800

wood@itd.nrl.navy.mil (J. B. Wood) wrote in
news:wood-2808090650350001@jbw-mac.itd.nrl.navy.mil:

...
> Hello, and I ran into this issue years ago when trying to measure high
> (> 10 or 20) VSWR loads (in this case out-of-band shipboard HF antenna
> feedpoint impedance) connected via a length of transmission line.
> Accurate determination of load resistance is difficult to ascertain
> under these conditions. A 1953 AIEE (a progenitor of the IEEE) paper
> by W.W. Macalpine, "Computation of Impedance and Efficiency of
> Transmission Lines with High Sanding Wave Ratio" describes the
> problem.
>
> I was, however, able to obtain accurate results when I included the
> small imaginary part (frequency dependent) of the characteristic
> impedance that is present in a low-loss line. Outside the high VSWR
> load issue the imaginary part can be ignored. Sincerely, and 73s from
> N4GGO,

John,

If I understand correctly, Macalpine's work was in finding solutions given the computation tools readily available.

The approximation of a real transmission line as having Zo that is real can introduce significant error in some line calcs.

Improving the model to include an estimated X value based on the loss is a next step that improves calcs. This technique is widely used, and is revealed by Ro equal to the nominal Zo, whilst Xo is a small negative quantity for practical low loss cables at HF. This model produces significantly different results for high line VSWR at lower frequencies.

TLLC (http://www.vk1od.net/calc/tl/tllc.php) goes a step further and estimates a value for Ro based on the loss. For example, the Zo used for RG58 at 1MHz is 50.06-j2.31 ohms. This model produces significantly different results for extreme line VSWR at lower frequencies.

The more detailed models would be computationally unwieldly with log tables or a slide rule (the tools of Macalpine's day), but TLLC demonstrates that it is a trivial computational matter today, though not to lose sight of the fact that mathematical function libraries are often approximations favouring speed over ultimate accuracy.

Again, we must keep in mind that the uncertainty of the data fed into the model (including manufacturing tolerances, and through life component degradation) contributes to uncertainty of the output, and as Roy has

mentioned, the sensitivity of results to input data can be higher than people might otherwise expect.

Properly implemented, the VNA OSL calibration process and measurement process should overcome the problem of a sufficiently accurate model of the actual transmission line used in the 'fixture', though not the phase stability between calibration and measurement, especially where they are done under very different environmental conditions.

Owen

1389. Sun burst

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-29 01:08:23 UTC
From: Art Unwin <arthurunwin@gmail.com>
Message-ID: <c271cb1c-eb2e-40b0-9d70-6706897cfd28@j21g2000yqe.googlegroups.com>
Source record: 13701

Aussiland television was turned off for a short while yesterday.
Statement made that there was a sunburst aproaching the satellites!
They were only off for a short while but it would appear the sunspot
cycle has become alive!

1390. Re: Sun burst

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-29 02:00:02 UTC
From: jimp@specsol.spam.sux.com
Message-ID: <d3emm6-4a9.ln1@mail.specsol.com>
Source record: 13702

Art Unwin <arthurunwin@gmail.com> wrote:
> Aussiland television was turned off for a short while yesterday.
> Statement made that there was a sunburst aproaching the satellites!
> They were only off for a short while but it would appear the sunspot
> cycle has become alive!

http://www.swpc.noaa.gov/alerts/alerts_timeline.html

No X-ray events, radio burst alerts, geomagnetic warnings, electron
flux alerts, proton flux alerts, sunspots, or anything else.

--
Jim Pennino

Remove .spam.sux to reply.

1391. Re: Sun burst

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-29 03:12:14 UTC
From: "Sal M. Onella" <salmonella@food.poisoning.org>
Message-ID: <i01mm.17$Ov.12@newsfe01.iad>
Source record: 13703

<jimp@specsol.spam.sux.com> wrote in message
news:d3emm6-4a9.ln1@mail.specsol.com...

> http://www.swpc.noaa.gov/alerts/alerts_timeline.html

Good one. Please also try these links; they provide solar observations and
analysis.

http://spaceweather.com/

http://umbra.nascom.nasa.gov/eit/eit_full_res.html

http://dx.qsl.net/propagation/ This one puts the Solar Flux number at the
top.

1392. Re: Sun burst

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-29 03:30:01 UTC
From: jimp@specsol.spam.sux.com
Message-ID: <ghjmm6-qt9.ln1@mail.specsol.com>
Source record: 13704

Sal M. Onella <salmonella@food.poisoning.org> wrote:
>
> <jimp@specsol.spam.sux.com> wrote in message
> news:d3emm6-4a9.ln1@mail.specsol.com...
>
>
>
>> http://www.swpc.noaa.gov/alerts/alerts_timeline.html
>
>
> Good one. Please also try these links; they provide solar observations and
> analysis.
>
> http://spaceweather.com/
>
> http://umbra.nascom.nasa.gov/eit/eit_full_res.html
>
> http://dx.qsl.net/propagation/ This one puts the Solar Flux number at the
> top.

If you run Firefox, there is the Propfire extension that puts semi-real
time info at the bottom of the browser.

--
Jim Pennino

Remove .spam.sux to reply.

1393. Re: Sun burst

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-29 08:02:11 UTC
From: derek <derekbluey@gmail.com>
Message-ID: <64bfa8b0-450c-4068-af46-339023cae65d@x5g2000prf.googlegroups.com>
Source record: 13705

On Aug 29, 10:00 am, j...@specsol.spam.sux.com wrote:

> No X-ray events, radio burst alerts, geomagnetic warnings, electron
> flux alerts, proton flux alerts, sunspots, or anything else.

Perth, Western Australia

Foxtel went off air Thurs morning 5am approx for a short
time with a notice saying it was due to solar activity.

Derek

1394. Re: Sun burst

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-29 10:57:08 UTC
From: Dave <noone@nowhere.com>
Message-ID: <8Q7mm.90$Jd7.67@nwrddc02.gnilink.net>
Source record: 13706

"Art Unwin" <arthurunwin@gmail.com> wrote in message
news:c271cb1c-eb2e-40b0-9d70-6706897cfd28@j21g2000yqe.googlegroups.com...
> Aussiland television was turned off for a short while yesterday.
> Statement made that there was a sunburst aproaching the satellites!
> They were only off for a short while but it would appear the sunspot
> cycle has become alive!

no solar activity... eclipse season maybe? for a short time each spring and
fall geostationary satellites happen to line up with the sun's path,
stations that have no backup satellite may lose signal when their satellite
lines up with the sun for a few minutes and the sun's noise blocks the
satellite signal.

1395. Re: Sun burst

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-29 15:35:49 UTC
From: KD7HB <co_farmer@yahoo.com>
Message-ID: <67036cd6-a2bc-453d-8fb2-7034160b1951@o9g2000prg.googlegroups.com>
Source record: 13707

On Aug 29, 3:57 am, "Dave" <no...@nowhere.com> wrote:
> "Art Unwin" <arthurun...@gmail.com> wrote in message
>
> news:c271cb1c-eb2e-40b0-9d70-6706897cfd28@j21g2000yqe.googlegroups.com...
>
> > > Aussiland television was turned off for a short while yesterday.
> > > Statement made that there was a sunburst aproaching the satellites!
> > > They were only off for a short while but it would appear the sunspot
> > > cycle has become alive!
>
> no solar activity... eclipse season maybe? for a short time each spring and
> fall geostationary satellites happen to line up with the sun's path,
> stations that have no backup satellite may lose signal when their satellite
> lines up with the sun for a few minutes and the sun's noise blocks the
> satellite signal.

Exactly right. Back in 1986, I worked for a bank data processing
service in Bellevue, WA. I set up a leased data line between our site
and two banks in Hawaii. The line went to San Francisco then via
satellite to Hawaii. Twice a year the service was stopped for about
1/2 hour while the sun passed through the focus of the satellite dish
in Hawaii. I don't think it affected the SF end of the link. AT&T
always called to warn of the disruption.

Paul

1396. Re: Sun burst

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-29 16:37:54 UTC
From: Jeff Liebermann <jeffl@cruzio.com>
Message-ID: <9hki95dt0d33ndm5jlsp8pi47fq1tcec0g@4ax.com>
Source record: 13708

On Sat, 29 Aug 2009 08:35:49 -0700 (PDT), KD7HB <co_farmer@yahoo.com>
wrote:

>Exactly right. Back in 1986, I worked for a bank data processing
>service in Bellevue, WA. I set up a leased data line between our site
>and two banks in Hawaii. The line went to San Francisco then via
>satellite to Hawaii. Twice a year the service was stopped for about
>1/2 hour while the sun passed through the focus of the satellite dish
>in Hawaii. I don't think it affected the SF end of the link. AT&T
>always called to warn of the disruption.

If the dish is pointed at a geosynchronous satellite, it should affect
both ends of the link, but at different times of the day. Actually,
for the typical DBS 0.7 meter dish, the outage appears for about 3-5
days and lasts about 5-10 minutes.

I live in a rather dense forest, where finding a "hole" in the tree
canopy for DBS reception is tricky. The best way to locate an antenna
is to check where the sun shines through the trees during the times of
the solar outage. Where there's light on the roof, there's a path to
a specific satellite. I've been posting bi-annual tables to help with
the calcs (when I remember to do so). For example:
<http://groups.google.com/group/ba.mountain-folk/msg/69c19369b4a5ffde?dmode=source>
It's also a good quality test for dish location. If the dish is
showing tree branch shadows on its face during the solar outage, it
needs to be moved (or the trees trimmed).

Assorted calculators:
<http://www.intelsat.com/resources/satellitedata/sundata.asp>
<http://www.satellite-calculations.com/SUNcalc/SUNcalc.htm>
<http://www.satellite-calculations.com/Satellite/SUNcalc.htm>
<http://www.ses-americom.com/americom_2008/siteSections/tools/sunoutage/index.php>
The Panamsat derived calculators have a bug in them where it will not
accept dish diameters smaller than 1 meter. For small 0.7 meter DBS
dishes, just use 1 meter and proportionally reduce the outage
duration.

--
Jeff Liebermann jeffl@cruzio.com
150 Felker St #D http://www.LearnByDestroying.com
Santa Cruz CA 95060 http://802.11junk.com
Skype: JeffLiebermann AE6KS 831-336-2558

1397. Re: Sun burst

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-29 18:31:59 UTC
From: You <you@shadow.orgs>
Message-ID: <you-3C6582.10315929082009@unknown.usenetserver.com>
Source record: 13709

In article
<64bfa8b0-450c-4068-af46-339023cae65d@x5g2000prf.googlegroups.com>,
derek <derekbluey@gmail.com> wrote:

> On Aug 29, 10:00 am, j...@specsol.spam.sux.com wrote:
>
>
> > No X-ray events, radio burst alerts, geomagnetic warnings, electron
> > flux alerts, proton flux alerts, sunspots, or anything else.
>
>
>
>
>
> Perth, Western Australia
>
> Foxtel went off air Thurs morning 5am approx for a short
> time with a notice saying it was due to solar activity.
>
> Derek

This just shows that Foxtel's Public Media types don't understand the
technology that they use..... Sun Outages happen twice a year for a
couple of days in a row each time. The Sun's Track lines up behind the
GeoSync Sats position, in relation to the receiving Antenna, and the
sun's noise overwhelms the Signal in the receiver. This whole deal is
nothing NEW, just misunderstood by the Bloody Wonk, who wrote the Press
Release....

1398. Re: Sun burst

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-29 19:35:56 UTC
From: Art Unwin <arthurunwin@gmail.com>
Message-ID: <7470c014-e16c-4bd0-9adc-4698f02feb98@j9g2000vbp.googlegroups.com>
Source record: 13710

On Aug 29, 1:31 pm, You <y...@shadow.orgs> wrote:
> In article
> <64bfa8b0-450c-4068-af46-339023cae...@x5g2000prf.googlegroups.com>,
>
>
>
> derek <derekbl...@gmail.com> wrote:
> > On Aug 29, 10:00 am, j...@specsol.spam.sux.com wrote:
>
> > > No X-ray events, radio burst alerts, geomagnetic warnings, electron
> > > flux alerts, proton flux alerts, sunspots, or anything else.
>
> >   Perth, Western Australia
>
> >   Foxtel went off air Thurs morning 5am approx for a short
> > time   with a notice saying it was due to solar activity.
>
> > Derek
>
> This just shows that Foxtel's Public Media types don't understand the
> technology that they use..... Sun Outages happen twice a year for a
> couple of days in a row each time. The Sun's Track lines up behind the
> GeoSync Sats position, in relation to the receiving Antenna, and the
> sun's noise overwhelms the Signal in the receiver. This whole deal is
> nothing NEW, just misunderstood by the Bloody Wonk, who wrote the Press
> Release....

Let us put it into perspective. I used the term "sunburst" because I
thought it was an isolated strong sun spotas it is so early in the
cycle. But if they used the term sunburst as refering to its noise
level then no harm done as far as notifying the viewing public. Except
for me it appears that hams in general are aware of the true phenomina
and are not expecting the Sun to fall from the sky. A lot of excellent
explanations came thru and I enjoyed them. Ofcourse, if it a
subsidiary of FOX in the US then pile it on by all means
Thanks

1399. Re: Sun burst

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-29 21:36:10 UTC
From: Bob Bob <bob3bob3@suddenlink.net>
Message-ID: <7kjom6-m74.ln1@p400bob.personal.cox.net>
Source record: 13711

Hi Paul

Just for interest what is the S/N margin with most commercial satellite systems and how "strong" is the sun relative to those levels? I would assume the margin for an end use TV viewer would be less than this?

Cheers Bob VK2YQA

KD7HB wrote:

>
> Exactly right. Back in 1986, I worked for a bank data processing
> service in Bellevue, WA. I set up a leased data line between our site
> and two banks in Hawaii. The line went to San Francisco then via
> satellite to Hawaii. Twice a year the service was stopped for about
> 1/2 hour while the sun passed through the focus of the satellite dish
> in Hawaii. I don't think it affected the SF end of the link. AT&T
> always called to warn of the disruption.
>
> Paul

1400. Re: Sun burst

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-29 22:36:12 UTC
From: Owen Duffy <none@no.where>
Message-ID: <Xns9C775784DEA12nonenowhere@61.9.191.5>
Source record: 13712

Bob Bob <bob3bob3@suddenlink.net> wrote in news:7kjom6-m74.ln1
@p400bob.personal.cox.net:

> Hi Paul
>
> Just for interest what is the S/N margin with most commercial satellite
> systems and how "strong" is the sun relative to those levels? I would
> assume the margin for an end use TV viewer would be less than this?

Bob, it is a few years since I did satellite path designs... but relying on memory...

Most satellite TV here is digital, and the issue becomes a C/N ratio that delivers acceptable error rates after FEC. The characteristic has a knee, and error rates degrade rapidly at the knee. Satellite facilities are so expensive, that operation is usually quite close to the knee... save a margin for such things as weather, and that margin is usually no more than necessary for most but not all such variables. You don't need much Sun noise to ruin performance. (BTW, I think that the satellites used for this purpose here are bent pipe technology (aka linear transponder), the uplink is not regenerated on the bird.)

The issues discussed in the thread seem to mix up two distinct effects. If the earth station sees the sun behind the satellite, C/N may be degraded sufficiently to disrupt digital services. At equinoxes, the bird rotates into the earth's shaddow and some times of day, and that means it has to operate exclusively on battery, and if it uses the Sun for antenna tracking, it will need to change reference. Using CO2 for a reference (earth's atmosphere) is not reliable if the Moon appears from behind the earth, the antennas could track the moon. I am not up to date on the latest tracking references... but I am sure the Sun is still a good reference, good contrast, visible most of the time.

Owen

1401. Re: Sun burst

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-30 05:24:10 UTC
From: "Sal M. Onella" <salmonella@food.poisoning.org>
Message-ID: <X1omm.127703$O23.48424@newsfe11.iad>
Source record: 13713

"Dave" <noone@nowhere.com> wrote in message
news:8Q7mm.90$Jd7.67@nwrddc02.gnilink.net...
>
> "Art Unwin" <arthurunwin@gmail.com> wrote in message
> news:c271cb1c-eb2e-40b0-9d70-6706897cfd28@j21g2000yqe.googlegroups.com...
> > Aussiland television was turned off for a short while yesterday.
> > Statement made that there was a sunburst aproaching the satellites!
> > They were only off for a short while but it would appear the sunspot
> > cycle has become alive!
>
> no solar activity... eclipse season maybe? for a short time each spring
and
> fall geostationary satellites happen to line up with the sun's path,
> stations that have no backup satellite may lose signal when their
satellite
> lines up with the sun for a few minutes and the sun's noise blocks the
> satellite signal.
>

Don't know if they still do it, but once upon a time HBO produced a program guide for their home-sat subscribers. In the issues for April and October (I think) they'd always advise us about sun outages and give us the predicted dates, based on our latitude.

1402. Re: Sun burst

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-30 05:54:34 UTC
From: "Sal M. Onella" <salmonella@food.poisoning.org>
Message-ID: <vuomm.470$ec2.344@newsfe13.iad>
Source record: 13714

"Bob Bob" <bob3bob3@suddenlink.net> wrote in message
news:7kjom6-m74.ln1@p400bob.personal.cox.net...
> Hi Paul
>
> Just for interest what is the S/N margin with most commercial satellite
> systems and how "strong" is the sun relative to those levels? I would
> assume the margin for an end use TV viewer would be less than this?
>
> Cheers Bob VK2YQA

The Carrier-to-Noise ratio for analog TV was recommended to be 8db or better for a noise-free picture (~50dB S/N after demodulation). With my 10-foot dish, the peak of a solar outage would render the picture unrecognizable as such for up to a minute. This means the sun had to be about 4 dB stronger, since I recall 4 dB C/N was no picture at all. I hope this helps.

Sidelight: Analog degradation showed up as a type of video snow known as "sparklies," usually in brightly colored areas. The beginning of a solar outage would always be the appearance of sparklies.

I had the analog system for almost 20 years, so I was pretty conversant with these periodic outages.

Digital, I don't know. I have a small dish setup but I haven't played with it in years.

Sal

1403. New antenna design

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-30 18:39:11 UTC
From: Art Unwin <arthurunwin@gmail.com>
Message-ID: <43e5cecf-702b-487c-b005-8b4f7b133f4e@o36g2000vbl.googlegroups.com>
Source record: 13715

Gentlemen
! promised in the past that I would make details of my antenna
available to you in September, something I am not able to do now
My initial patent request at the moment is in the rejection mode.
Like many others of this group the PTO do not recognise the importance
of equilibrium with respect to the classical form of physics. In fact
they state that all can be pre anticipated as there are many antennas
that fall under such a scheme of things.
In addition, they are asking for changes to a drawing that does
not exist, either in my records or the web pre printed application.
Obviously they are in a pre mode rejection approach since I cannot
possibly accede to their request. Thus, in turn, I cannot release the
antenna replication information because of their actions with respect
to equilibrium .
I know that some will cry fraud but there is nothing I can do about
it.
I spoke to a patent attorney for the military who tells me that most
military
patent requests are initially rejected but they are easily reversed if
one
took on the labor of a beurocratic appeal for which I do not have the
funds or inclination.
The first patent request on this subject is on the web as Patent #
2008
655,899 I think, where Fig 3 is a computer info print out and not
accompanied by any such drawing which I am required to add to. If the
PTO changes its stance on equilibrium I will, of course, proceed with
sharing my antenna design work.
I expect that this posting will provide cat calls and insults but I
have been placed into a impossible position. If the patent office is
correct that all
shown is declared as obviouse then somebody, some day, will share with
the rest of the World and we all will be privy to much smaller antenna
designs.
If the past century can be seen as a guide I and many of you will be
long gone before this journey is repeated again.

1404. Re: New antenna design

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-30 18:57:36 UTC
From: Jeff Liebermann <jeffl@cruzio.com>
Message-ID: <lnil95t0pi82tm5439j6tu6j0sfst0p7i5@4ax.com>
Source record: 13716

On Sun, 30 Aug 2009 11:39:11 -0700 (PDT), Art Unwin
<arthurunwin@gmail.com> wrote:

>The first patent request on this subject is on the web as Patent #
>2008
>655,899

Methinks these are yours:

Constant impedance matching system
<http://www.google.com/patents?id=hCMpAAAAEBAJ&dq=5,790,081>

Variable capacitance antenna for multiband reception and transmission
<http://www.google.com/patents?id=GEsbAAAAEBAJ&dq=5,625,367>

Push button arranged for mounting to a panel
<http://www.google.com/patents?id=qaY3AAAAEBAJ>

Push button assembly
<http://www.google.com/patents?id=YF0tAAAAEBAJ>

Any more that I missed?
--
Jeff Liebermann jeffl@cruzio.com
150 Felker St #D http://www.LearnByDestroying.com
Santa Cruz CA 95060 http://802.11junk.com
Skype: JeffLiebermann AE6KS 831-336-2558

1405. Re: New antenna design

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-30 19:05:06 UTC
From: Art Unwin <arthurunwin@gmail.com>
Message-ID: <7a5ccb7e-cc98-427a-88ed-733a343f95e6@r33g2000vbp.googlegroups.com>
Source record: 13717

On Aug 30, 1:57 pm, Jeff Liebermann <je...@cruzio.com> wrote:
> On Sun, 30 Aug 2009 11:39:11 -0700 (PDT), Art Unwin
>
> <arthurun...@gmail.com> wrote:
> >The first patent request on this subject is on the web as Patent #
> >2008
> >655,899
>
> Methinks these are yours:
>
> Constant impedance matching system
> <http://www.google.com/patents?id=hCMpAAAAEBAJ&dq=5,790,081>
>
> Variable capacitance antenna for multiband reception and transmission
> <http://www.google.com/patents?id=GEsbAAAAEBAJ&dq=5,625,367>
>
> Push button arranged for mounting to a panel
> <http://www.google.com/patents?id=qaY3AAAAEBAJ>
>
> Push button assembly
> <http://www.google.com/patents?id=YF0tAAAAEBAJ>
>
> Any more that I missed?
> --
> Jeff Liebermann   je...@cruzio.com
> 150 Felker St #D   http://www.LearnByDestroying.com
> Santa Cruz CA 95060http://802.11junk.com
> Skype: JeffLiebermann   AE6KS   831-336-2558

Yes, they are mine in this country but I am talking about
2008 when I applied for the subject antenna

1406. Help with Antenna Install In DC Metro / Maryland Area

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-30 21:43:04 UTC
From: Andiroo <a.richman@btinternet.com>
Message-ID: <810509f1-d876-46c8-8778-8743a79140bf@r36g2000vbn.googlegroups.com>
Source record: 13718

Hi All

I have recently moved into Montgomery County Maryland from overseas (UK) and need to either identify a professional aerial installation company or some knowledgeable person to enable me to install a couple of antennas - an Alpha Delta DC-CC and a DIamond Co-Linear for 2metres. Support with siting options also probably needed.

Any idea welcomed.

Best wishes

Andy Richman
M3ZLN

1407. radiators

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-30 21:54:05 UTC
From: Art Unwin <arthurunwin@gmail.com>
Message-ID: <4943d328-890c-457c-b88f-bf45304b1bb5@f10g2000vbf.googlegroups.com>
Source record: 13719

Tom, W8ji apparently is an expert with antennas having lectured
at Dayton and has authored many technical articles around antennas,
states that radiators must be straight for maximum efficiency,
apparently
a break off from the standard ham statements of bigger is better as
well as more wire is better.
I have searched and searched for the reason why such a statement is
spread around as if it is has a factual or a mathematical statement to
back it up. For instance a quad radiator is not straight! Nor is a
loop or nor a helical as well as many others. At the same time it is
recognized that all is not understood about radiation and never has a
radiator been constructed that complies in its entirety with Maxwell.
I have untold books on antennas but none (not including ARRL stuff)
provide any sort of reason that this could be true.
Is anybody aware of a recognized author stating why this should be
considered true when current leaning is towards point radiation which
obviously seen as a break away statement..

1408. Re: radiators

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-30 22:15:05 UTC
From: jimp@specsol.spam.sux.com
Message-ID: <mq9rm6-4gq.ln1@mail.specsol.com>
Source record: 13720

Art Unwin <arthurunwin@gmail.com> wrote:
> Tom, W8ji apparently is an expert with antennas having lectured
> at Dayton and has authored many technical articles around antennas,
> states that radiators must be straight for maximum efficiency,

I highly doubt he ever said anything of the sort.

> apparently
> a break off from the standard ham statements of bigger is better as
> well as more wire is better.

And the physical reality that antenna performance is directly related
to size in wavelengths.

<snip rest>

--
Jim Pennino

Remove .spam.sux to reply.

1409. Re: Help with Antenna Install In DC Metro / Maryland Area

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-30 22:42:15 UTC
From: "J. Mc Laughlin" <jcm@power-net.net>
Message-ID: <TbidncgqLOvYnQbXnZ2dnUVZ_oWdnZ2d@bright.net>
Source record: 13721

Dear Andy: Welcome to USA.

One of the best antenna rigging companies is in New England:
http://www.xxtowers.com/

While you are on this side of The Pond, consider getting a US license - very
easy to do.

73, Mac N8TT

--
J. McLaughlin; Michigan, USA
Home: JCM@power-net.net
"Andiroo" <a.richman@btinternet.com> wrote in message
news:810509f1-d876-46c8-8778-8743a79140bf@r36g2000vbn.googlegroups.com...
> Hi All
>
> I have recently moved into Montgomery County Maryland from overseas
> (UK) and need to either identify a professional aerial installation
> company or some knowledgeable person to enable me to install a couple
> of antennas - an Alpha Delta DC-CC and a DIamond Co-Linear for
> 2metres. Support with siting options also probably needed.
>
> Any idea welcomed.
>
> Best wishes
>
> Andy Richman
> M3ZLN

1410. Re: radiators

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-30 23:29:06 UTC
From: tom <news4792@taring.org>
Message-ID: <4a9b0b36$0$28114$8046368a@newsreader.iphouse.net>
Source record: 13722

Art Unwin wrote:
> Tom, W8ji apparently is an expert with antennas having lectured
> at Dayton and has authored many technical articles around antennas,
> states that radiators must be straight for maximum efficiency,

Hmm. Please provide a reference where this was stated. I doubt that's
what was actually the verbiage used.

> cognized that all is not understood about radiation and never has a
> radiator been constructed that complies in its entirety with Maxwell.

According to only you.

> I have untold books on antennas but none (not including ARRL stuff)
> provide any sort of reason that this could be true.
> Is anybody aware of a recognized author stating why this should be
> considered true when current leaning is towards point radiation which
> obviously seen as a break away statement..

Again, please provide a reference that "current leaning is towards point
radiation".

I sure I won't get a real answer here. As usual.

Just like his bailout on providing a description on his antenna earlier
this weekend.

fraud.

tom
K0TAR

1411. Re: radiators

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-30 23:46:43 UTC
From: Art Unwin <arthurunwin@gmail.com>
Message-ID: <2e822260-ed65-4176-8bb5-61eecb6fb2a2@o35g2000vbi.googlegroups.com>
Source record: 13723

On Aug 30, 5:15 pm, j...@specsol.spam.sux.com wrote:
> Art Unwin <arthurun...@gmail.com> wrote:
> > Tom, W8ji apparently is an expert with antennas having lectured
> > at Dayton and has authored many technical articles around antennas,
> > states that radiators must be straight for maximum efficiency,
>

> I highly doubt he ever said anything of the sort.

As long as you turn a blind eye to what he states
then you are in good shape! But then somebody in this group
will point you to Tom's statement and you can then respond as
to what he really meant which is not what he stated.

>
> > apparently
> > a break off from the standard ham statements of bigger is better as
> > well as more wire is better.
>

> And the physical reality that antenna performance is directly related
> to size in wavelengths.

It depends on your definition of "size". I prefer the term
encapsulating volume.
All physics laws are based on the presence of equilibrium. Thus you
may deform a radiator to the smallest volume as long as you retain a
state of equilibrium, regardless of the number of wavelengths at
issue. This is why "point radiation" is still discussed.
As an aside, the number of wavelengths used has nothing to do with
Maxwells equations
which accounts for ALL forces presence in the forming of radiation and
not the simple
radiator coupling and re radiation approach alone. It all comes down
to root L.C. in a equilibrium environment as the determinate factor
in his equations.

So, the bottom line is that you disagree with the statement made by
Tom as being incorrect.
It will be interesting what the rest of the group have to say as they
wade in.

>
> <snip rest>
>
> --

> Jim Pennino
>
> Remove .spam.sux to reply.

1412. Re: radiators

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-30 23:53:32 UTC
From: Art Unwin <arthurunwin@gmail.com>
Message-ID: <1286d4a8-e175-49eb-888c-d60a5417723f@r27g2000vbn.googlegroups.com>
Source record: 13724

On Aug 30, 6:29 pm, tom <news4...@taring.org> wrote:
> Art Unwin wrote:
> > Tom, W8ji apparently is an expert with antennas having lectured
> > at Dayton and has authored many technical articles around antennas,
> > states that radiators must be straight for maximum efficiency,
>
> Hmm. Please provide a reference where this was stated. I doubt that's
> what was actually the verbiage used.
>
> > cognized that all is not understood about radiation and never has a
> > radiator been constructed that complies in its entirety with Maxwell.
>
> According to only you.
>
> > I have untold books on antennas but none (not including ARRL stuff)
> > provide any sort of reason that this could be true.
> > Is anybody aware of a recognized author stating why this should be
> > considered true when current leaning is towards point radiation which
> > obviously seen as a break away statement..
>
> Again, please provide a reference that "current leaning is towards point
> radiation".
>
> I sure I won't get a real answer here. As usual.
>
> Just like his bailout on providing a description on his antenna earlier
> this weekend.
>
> fraud.
>
> tom
> K0TAR

You are correct Tom. I have no interest in exchanging insults with
you.
My interests are in radio to which you supply nothing. There you go,
I have now answered you once and that is it.

1413. Re: New antenna design

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-31 00:02:02 UTC
From: Jeff Liebermann <jeffl@cruzio.com>
Message-ID: <463m95h2esu9dgl3bdkqpctr0uuakvotnm@4ax.com>
Source record: 13725

On Sun, 30 Aug 2009 12:05:06 -0700 (PDT), Art Unwin
<arthurunwin@gmail.com> wrote:

>On Aug 30, 1:57ï¿½pm, Jeff Liebermann <je...@cruzio.com> wrote:
>> On Sun, 30 Aug 2009 11:39:11 -0700 (PDT), Art Unwin
>>
>> <arthurun...@gmail.com> wrote:
>> >The first patent request on this subject is on the web as Patent #
>> >2008
>> >655,899
>>
>> Methinks these are yours:
>>
>> Constant impedance matching system
>> <http://www.google.com/patents?id=hCMpAAAAEBAJ&dq=5,790,081>
>>
>> Variable capacitance antenna for multiband reception and transmission
>> <http://www.google.com/patents?id=GEsbAAAAEBAJ&dq=5,625,367>
>>
>> Push button arranged for mounting to a panel
>> <http://www.google.com/patents?id=qaY3AAAAEBAJ>
>>
>> Push button assembly
>> <http://www.google.com/patents?id=YF0tAAAAEBAJ>
>>
>> Any more that I missed?

>Yes, they are mine in this country but I am talking about
>2008 when I applied for the subject antenna

Well, the only application I could find with 655,899 in it is a seat
belt buckle. I thought I was being helpful by reminding you of some
of the numbers. Numbers are always a nice thing to have. Do try to
recall your application number so I can look it up.

As for your difficulties with the USPTO, I have no idea what you're
talking about. If you need help obtaining a patent, the very last
place I would ask is the military. All their patents tend to become
classified, even if they're trivial. Unless your patent has some
obvious military significance, such as a plasma antenna, don't bother
with the military. If you go to NASA, they'll want the rights to sell
licenses for the technology:
<http://technology.arc.nasa.gov/partnering/licensing.cfm>

It's not terribly difficult to get a patent on your own:
<http://www.uspto.gov/web/patents/howtopat.htm>

<http://www.nolo.com/legal-encyclopedia/article-29493.html>
<http://www.ehow.com/how_4441109_get-patent.html>
and the usual YouTube videos:
<http://video.google.com/videosearch?hl=en&source=hp&q=how+to+get+a+patent>
in 20 parts at about 9 min each.

There's even fill in the blank software to make the necessary
documentation and drawings easier:
<http://www.inventorprise.com>
<http://www.patentpro.us>

If you can't get patent protection, you can manufacture your antenna
and protect the technology as a trade secret. However, that's very
difficult with antennas, as they're easily reverse engineered and
analyzed.
<http://en.wikipedia.org/wiki/Trade_secret>
Hmmmm.... are you planning to manufacture and sell your antenna?

--
Jeff Liebermann jeffl@cruzio.com
150 Felker St #D http://www.LearnByDestroying.com
Santa Cruz CA 95060 http://802.11junk.com
Skype: JeffLiebermann AE6KS 831-336-2558

1414. Re: radiators

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-31 00:21:34 UTC
From: Jeff Liebermann <jeffl@cruzio.com>
Message-ID: <hp4m95d4il9ce0inpvii9dodpqv5cu2t8b@4ax.com>
Source record: 13726

On Sun, 30 Aug 2009 14:54:05 -0700 (PDT), Art Unwin
<arthurunwin@gmail.com> wrote:

>Tom, W8ji apparently is an expert with antennas having lectured
>at Dayton and has authored many technical articles around antennas,
>states that radiators must be straight for maximum efficiency,

He might have been talking about small antennas:
<http://www.w8ji.com/radiation_resistance.htm>
"Small antennas require extraordinary care to obtain high efficiency."
The 2004 Dayton PowerPoint presentation is at:
<http://www.w8ji.com/Dayton/Limited%20Space%20Antennas.ppt>
Using Google, I couldn't find any statement resembling the "straight
radiators" claim.

Ummm... fractal antennas are anything but straight and have the best
gain for their size of any antenna.
<http://www.fractenna.com>

Also, efficiency isn't everything. For example, the efficiency of the
typical mobile HF antenna is fairly lousy because the antenna is a
small fraction of a wavelength long. Still, it's the best that can be
done on HF without trailing a long wire to a balloon, and dragging a
grounding plate.
<http://www.k0bg.com/eff.html>

--
Jeff Liebermann jeffl@cruzio.com
150 Felker St #D http://www.LearnByDestroying.com
Santa Cruz CA 95060 http://802.11junk.com
Skype: JeffLiebermann AE6KS 831-336-2558

1415. Re: radiators

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-31 00:27:56 UTC
From: Dale Parfitt <parinc1@verizon.net>
Message-ID: <gOEmm.412$tl3.158@nwrddc01.gnilink.net>
Source record: 13727

"Art Unwin" <arthurunwin@gmail.com> wrote in message
news:4943d328-890c-457c-b88f-bf45304b1bb5@f10g2000vbf.googlegroups.com...
> Tom, W8ji apparently is an expert with antennas having lectured
> at Dayton and has authored many technical articles around antennas,
> states that radiators must be straight for maximum efficiency,
> apparently

Art,
The only place I have ever read that on Tom's site is related to Beverage antennas- the statement is true, and for obvious (to most of us) reasons.

Dale W4OP

1416. Re: radiators

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-31 00:35:08 UTC
From: Jeff Liebermann <jeffl@cruzio.com>
Message-ID: <tg6m955okp20d87m8vijkvv4f064eciab0@4ax.com>
Source record: 13728

On Sun, 30 Aug 2009 17:21:34 -0700, Jeff Liebermann <jeffl@cruzio.com>
wrote:

>On Sun, 30 Aug 2009 14:54:05 -0700 (PDT), Art Unwin
><arthurunwin@gmail.com> wrote:
>
>>Tom, W8ji apparently is an expert with antennas having lectured
>>at Dayton and has authored many technical articles around antennas,
>>states that radiators must be straight for maximum efficiency,

>Using Google, I couldn't find any statement resembling the "straight
>radiators" claim.

Oh wait. Maybe he was referring to the mounting pole:
<http://picasaweb.google.com/lh/photo/HC8B4F-AnCQF6I_u0k3MYg>

--
Jeff Liebermann jeffl@cruzio.com
150 Felker St #D http://www.LearnByDestroying.com
Santa Cruz CA 95060 http://802.11junk.com
Skype: JeffLiebermann AE6KS 831-336-2558

1417. Re: radiators

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-31 00:45:01 UTC
From: jimp@specsol.spam.sux.com
Message-ID: <plirm6-rer.ln1@mail.specsol.com>
Source record: 13729

Art Unwin <arthurunwin@gmail.com> wrote:
> On Aug 30, 5:15 pm, j...@specsol.spam.sux.com wrote:
>> Art Unwin <arthurun...@gmail.com> wrote:
>> > Tom, W8ji apparently is an expert with antennas having lectured
>> > at Dayton and has authored many technical articles around antennas,
>> > states that radiators must be straight for maximum efficiency,
>>
>
>> I highly doubt he ever said anything of the sort.
>
> As long as you turn a blind eye to what he states
> then you are in good shape! But then somebody in this group
> will point you to Tom's statement and you can then respond as
> to what he really meant which is not what he stated.

I highly doubt that will ever happen either.

>> > apparently
>> > a break off from the standard ham statements of bigger is better as
>> > well as more wire is better.
>>
>
>
>> And the physical reality that antenna performance is directly related
>> to size in wavelengths.
>
> It depends on your definition of "size". I prefer the term
> encapsulating volume.

Yeah, sure.

<snip rest>

--
Jim Pennino

Remove .spam.sux to reply.

1418. Re: New antenna design

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-31 01:43:47 UTC
From: Art Unwin <arthurunwin@gmail.com>
Message-ID: <902e2f37-6c7b-4bae-9a4d-e066f6e62a54@d4g2000vbm.googlegroups.com>
Source record: 13730

On Aug 30, 7:02 pm, Jeff Liebermann <je...@cruzio.com> wrote:
> On Sun, 30 Aug 2009 12:05:06 -0700 (PDT), Art Unwin
>
>
>
> <arthurun...@gmail.com> wrote:
> >On Aug 30, 1:57 pm, Jeff Liebermann <je...@cruzio.com> wrote:
> >> On Sun, 30 Aug 2009 11:39:11 -0700 (PDT), Art Unwin
>
> >> <arthurun...@gmail.com> wrote:
> >> >The first patent request on this subject is on the web as Patent #
> >> >2008
> >> >655,899
>
> >> Methinks these are yours:
>
> >> Constant impedance matching system
> >> <http://www.google.com/patents?id=hCMpAAAAEBAJ&dq=5,790,081>
>
> >> Variable capacitance antenna for multiband reception and transmission
> >> <http://www.google.com/patents?id=GEsbAAAAEBAJ&dq=5,625,367>
>
> >> Push button arranged for mounting to a panel
> >> <http://www.google.com/patents?id=qaY3AAAAEBAJ>
>
> >> Push button assembly
> >> <http://www.google.com/patents?id=YF0tAAAAEBAJ>
>
> >> Any more that I missed?
> >Yes, they are mine in this country but I am talking about
> >2008 when I applied for the subject antenna
>
> Well, the only application I could find with 655,899 in it is a seat
> belt buckle. I thought I was being helpful by reminding you of some
> of the numbers. Numbers are always a nice thing to have. Do try to
> recall your application number so I can look it up.
You are different, you are polite
Yes I will supply the patent request number and the subject is well
discussed on this group.
The bottom line is that the PTO does not recognize the term
equilibrium the same as most of this group. From my education a theory
is only that until it satisfies the laws of Newton
and Maxwell. The boundary laws are such that with classical physics
all laws deal with the Cosmos as a whole where balance or equilibrium

reins supreme. There is no law in existence that is accepted without
conforming to boundary laws which goes back to Newtonian laws. Now
equilibrium and boundary rules do not occupy the curriculum in the
U.S. I cannot explain why but this group and the PTO subscribe to the
idea that equilibrium has no position in this Universe, that I have to
accept even tho commercial computer programs based on Maxwell provide
confirmation of my findings. I can move on,no sweat

>
> As for your difficulties with the USPTO, I have no idea what you're
> talking about. If you need help obtaining a patent, the very last
> place I would ask is the military. All their patents tend to become
> classified, even if they're trivial. Unless your patent has some
> obvious military significance, such as a plasma antenna, don't bother
> with the military. If you go to NASA, they'll want the rights to sell
> licenses for the technology:
> <http://technology.arc.nasa.gov/partnering/licensing.cfm>
>
> It's not terribly difficult to get a patent on your own:
> <http://www.uspto.gov/web/patents/howtopat.htm>
> <http://www.nolo.com/legal-encyclopedia/article-29493.html>
> <http://www.ehow.com/how_4441109_get-patent.html>
> and the usual YouTube videos:
> <http://video.google.com/videosearch?hl=en&source=hp&q=how+to+get+a+pa...>
> in 20 parts at about 9 min each.
>
> There's even fill in the blank software to make the necessary
> documentation and drawings easier:
> <http://www.inventorprise.com>
> <http://www.patentpro.us>
>
> If you can't get patent protection, you can manufacture your antenna
> and protect the technology as a trade secret. However, that's very
> difficult with antennas, as they're easily reverse engineered and
> analyzed.
> <http://en.wikipedia.org/wiki/Trade_secret>
> Hmmmm.... are you planning to manufacture and sell your antenna?

The PTO is losing examiners faster than it can replace them and this
is showing.
I want ham radio to serve those who are not equipted to join the
group. If I apply for a patent and thus reveal my findings and the
patent office does its thing then amateurs will gain by it but the
wolves are then able to take all. On this group there is denial of a
better way which is an obsticle all patent owners have to face so it
is better for me to stay silent and wait for a better environment to
provide my antennas. I have antennas that are way smaller than present
even a directive rotatable top band antenna and I am content as are
others I have shared with. While equilibrium in physics are disparaged
in the U.S. sciences
then I must be content with what I have! And I am as others are in the

denial of its possible existance.
Regards
Art

>
> --
> Jeff Liebermann   je...@cruzio.com
> 150 Felker St #D   http://www.LearnByDestroying.com
> Santa Cruz CA 95060http://802.11junk.com
> Skype: JeffLiebermann   AE6KS   831-336-2558

1419. Re: New antenna design

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-31 01:44:22 UTC
From: Jeff Liebermann <jeffl@cruzio.com>
Message-ID: <dd9m9591lnfo20rrp5fb0qr4pn4mdja2ti@4ax.com>
Source record: 13731

On Sun, 30 Aug 2009 12:05:06 -0700 (PDT), Art Unwin
<arthurunwin@gmail.com> wrote:

>Yes, they are mine in this country but I am talking about
>2008 when I applied for the subject antenna

Foundit. It's not on Google Patents for some odd reason.
See: Application Number 11/655899 or 20080231540 at:
<http://appft.uspto.gov/netacgi/nph-Parser?Sect1=PTO2&Sect2=HITOFF&p=1&u=%2Fnetahtml%2FPTO
%2Fsearch-adv.html&r=1&f=G&l=50&d=PG01&S1=655899&OS=655899&RS=655899>
Sorry about the giant URL. If that wraps or doesn't work, try:
<http://appft.uspto.gov/netahtml/PTO/srchnum.html>
and type in either application number. If you're going to refer to
your patent application by number, don't forget the 11/ prefix.

For some odd reason, I can't see the five attached figures. Probably
my fault (or Quicktime).

I suspect you may have some problems with claim 3.
"3. A clustered array according to claim 1 where the radiating
elements of said cluster have random three dimensional Cartesian
directional positions of placement with respect to each other and the
surface of the earth."

I don't think you can patent a random collection of elements as it
would be classed as too broad a claim. That would encompass all
antennas that were NOT designed according to non-random calculations.
While the use of randomness is possible (and common) in patents, I've
noticed that they always disclose the method by which the randomness
is achieved.

I would be interesting in seeing a photo, NEC2 deck, and test results
for your random element antenna. Take you time, no hurry.

--
Jeff Liebermann jeffl@cruzio.com
150 Felker St #D http://www.LearnByDestroying.com
Santa Cruz CA 95060 http://802.11junk.com
Skype: JeffLiebermann AE6KS 831-336-2558

1420. Re: New antenna design

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-31 02:06:14 UTC
From: Art Unwin <arthurunwin@gmail.com>
Message-ID: <3a197a64-7a67-4f93-a716-f488e5be989e@l34g2000vba.googlegroups.com>
Source record: 13732

On Aug 30, 8:44 pm, Jeff Liebermann <je...@cruzio.com> wrote:
> On Sun, 30 Aug 2009 12:05:06 -0700 (PDT), Art Unwin
>
> <arthurun...@gmail.com> wrote:
> >Yes, they are mine in this country but I am talking about
> >2008 when I applied for the subject antenna
>
> Foundit. It's not on Google Patents for some odd reason.
> See: Application Number 11/655899 or 20080231540 at:
> <http://appft.uspto.gov/netacgi/nph-Parser?Sect1=PTO2&Sect2=HITOFF&p=1...>
> Sorry about the giant URL. If that wraps or doesn't work, try:
> <http://appft.uspto.gov/netahtml/PTO/srchnum.html>
> and type in either application number. If you're going to refer to
> your patent application by number, don't forget the 11/ prefix.
>
> For some odd reason, I can't see the five attached figures. Probably
> my fault (or Quicktime).
>
> I suspect you may have some problems with claim 3.
> "3. A clustered array according to claim 1 where the radiating
> elements of said cluster have random three dimensional Cartesian
> directional positions of placement with respect to each other and the
> surface of the earth."
>
> I don't think you can patent a random collection of elements as it
> would be classed as too broad a claim. That would encompass all
> antennas that were NOT designed according to non-random calculations.
> While the use of randomness is possible (and common) in patents, I've
> noticed that they always disclose the method by which the randomness
> is achieved.
>
> I would be interesting in seeing a photo, NEC2 deck, and test results
> for your random element antenna. Take you time, no hurry.

The PTO has offered alternative claims but after trashing the request
such an offer would not stand up in court. True a lot of people are
just interested in saying they have a patent
but I am not willing to pay maintenance fees for something that does
not provide protection.
The killer of course is the allegation that I have not placed numbers
on a drawing which does not exist or was submitted from me. There is
no oversight or redress from an examiners descision and no discussion
available since he is not fluent in spoken English so time will run
out and it will be declared abandoned. Walter Cronkite had the phrase

that deals with such situations. By the way I use a program that uses Mininec as well as being an optimizer. I did have a academic in the antenna field confirm that my discovery was correct and provided NEC4 proofs which is what PTO accepts as a basic of proof. I got this confirmation not because I doubted what I had but it is the thing all engineers should do.
So my work will sleep with me at night and never see the light of day and hams can feel they have lost nothing. At present I have no antennas left to operate on.

>
> --
> Jeff Liebermann   je...@cruzio.com
> 150 Felker St #D   http://www.LearnByDestroying.com
> Santa Cruz CA 95060http://802.11junk.com
> Skype: JeffLiebermann   AE6KS   831-336-2558

1421. Re: radiators

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-31 02:23:12 UTC
From: Art Unwin <arthurunwin@gmail.com>
Message-ID: <2ebd0627-a63d-4541-81b7-83ce4bd77e0f@d34g2000vbm.googlegroups.com>
Source record: 13733

On Aug 30, 7:21 pm, Jeff Liebermann <je...@cruzio.com> wrote:
> On Sun, 30 Aug 2009 14:54:05 -0700 (PDT), Art Unwin
>
> <arthurun...@gmail.com> wrote:
> >Tom, W8ji apparently is an expert with antennas having lectured
> >at Dayton and has authored many technical articles around antennas,
> >states that radiators must be straight for maximum efficiency,
>
> He might have been talking about small antennas:

That may have been at the back of his mind but he did not stipulate
that

> <http://www.w8ji.com/radiation_resistance.htm>
> "Small antennas require extraordinary care to obtain high efficiency."

Very true for electrically small antennas with emphasis on
electrically.

> The 2004 Dayton PowerPoint presentation is at:
> <http://www.w8ji.com/Dayton/Limited%20Space%20Antennas.ppt>
> Using Google, I couldn't find any statement resembling the "straight
> radiators" claim.

I never said this is a quote from the Dayton lecture. Tom has numorous
dissertations with regard to antennas

>
> Ummm... fractal antennas are anything but straight and have the best
> gain for their size of any antenna.
> <http://www.fractenna.com>
That is what Chip states for his company but I have no idea how a
fractal would work on top band. Most on this group deride the claims
of Chip with more than a handful of insults

>
> Also, efficiency isn't everything. For example, the efficiency of the
> typical mobile HF antenna is fairly lousy because the antenna is a
> small fraction of a wavelength long.

Exactly because it takes a WL or multiple there of to attain
equilibrium

Still, it's the best that can be
> done on HF without trailing a long wire to a balloon, and dragging a
> grounding plate.

No. You are incorrect in my eyes! A multiple of a wavelength does
not require a ground plain and can be condensed into any shape or form
whilst retaining the required equilibrium. This is per the laws of
Maxwell when considering all forces involved in radiation for maximum
efficiency.
Regards
Art

> <http://www.k0bg.com/eff.html>
>
> --
> Jeff Liebermann   je...@cruzio.com
> 150 Felker St #D   http://www.LearnByDestroying.com
> Santa Cruz CA 95060http://802.11junk.com
> Skype: JeffLiebermann   AE6KS   831-336-2558

1422. Re: New antenna design

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-31 02:24:24 UTC
From: tom <news4792@taring.org>
Message-ID: <4a9b344c$0$28124$8046368a@newsreader.iphouse.net>
Source record: 13734

Art Unwin wrote:
<snip>
> The bottom line is that the PTO does not recognize the term
> equilibrium the same as most of this group.

I wonder why that is? Maybe something to do with reality?

tom
K0TAR

1423. Re: radiators

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-31 02:26:40 UTC
From: Art Unwin <arthurunwin@gmail.com>
Message-ID: <d14d766b-c681-4d1e-bd1f-d505ceed6eba@j9g2000vbp.googlegroups.com>
Source record: 13735

On Aug 30, 7:27 pm, "Dale Parfitt" <pari...@verizon.net> wrote:
> "Art Unwin" <arthurun...@gmail.com> wrote in message
>
> news:4943d328-890c-457c-b88f-bf45304b1bb5@f10g2000vbf.googlegroups.com...
>
> > Tom, W8ji apparently is an expert with antennas having lectured
> > at Dayton and has authored many technical articles around antennas,
> > states that radiators must be straight for maximum efficiency,
> > apparently
>
> Art,
> The only place I have ever read that on Tom's site is related to Beverage
> antennas- the statement is true, and for obvious (to most of us) reasons.
>
> Dale W4OP

I know it is considered as obvious to those who resist change.
Obvious as you stated means that there is no possible alternative
available because all is known.

1424. Re: radiators

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-31 02:41:25 UTC
From: Dale Parfitt <parinc1@verizon.net>
Message-ID: <pLGmm.423$tl3.65@nwrddc01.gnilink.net>
Source record: 13736

"Art Unwin" <arthurunwin@gmail.com> wrote in message
news:d14d766b-c681-4d1e-bd1f-d505ceed6eba@j9g2000vbp.googlegroups.com...
On Aug 30, 7:27 pm, "Dale Parfitt" <pari...@verizon.net> wrote:
> "Art Unwin" <arthurun...@gmail.com> wrote in message
>
> news:4943d328-890c-457c-b88f-bf45304b1bb5@f10g2000vbf.googlegroups.com...
>
> > Tom, W8ji apparently is an expert with antennas having lectured
> > at Dayton and has authored many technical articles around antennas,
> > states that radiators must be straight for maximum efficiency,
> > apparently
>
> Art,
> The only place I have ever read that on Tom's site is related to Beverage
> antennas- the statement is true, and for obvious (to most of us) reasons.
>
> Dale W4OP

I know it is considered as obvious to those who resist change.
Obvious as you stated means that there is no possible alternative
available because all is known.

Well, suppose you show us for a given length Beverage antenna, how
configuring it in any other shape but straight makes it a better Beverage.

Dale W4OP

1425. Re: radiators

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-31 02:46:54 UTC
From: Art Unwin <arthurunwin@gmail.com>
Message-ID: <704393b1-1fb4-4c6d-88b4-b67c06d718d8@r33g2000vbp.googlegroups.com>
Source record: 13737

On Aug 30, 7:35 pm, Jeff Liebermann <je...@cruzio.com> wrote:
> On Sun, 30 Aug 2009 17:21:34 -0700, Jeff Liebermann <je...@cruzio.com>
> wrote:
>
> >On Sun, 30 Aug 2009 14:54:05 -0700 (PDT), Art Unwin
> ><arthurun...@gmail.com> wrote:
>
> >>Tom, W8ji apparently is an expert with antennas having lectured
> >>at Dayton and has authored many technical articles around antennas,
> >>states that radiators must be straight for maximum efficiency,
> >Using Google, I couldn't find any statement resembling the "straight
> >radiators" claim.
>
> Oh wait. Maybe he was referring to the mounting pole:
> <http://picasaweb.google.com/lh/photo/HC8B4F-AnCQF6I_u0k3MYg>
>
> --
> Jeff Liebermann   je...@cruzio.com
> 150 Felker St #D   http://www.LearnByDestroying.com
> Santa Cruz CA 95060http://802.11junk.com
> Skype: JeffLiebermann   AE6KS   831-336-2558

No. As I remember it he stated this to somebody on the Double Helix
question
on QRZ antenna design forum some time back. Last time I looked at that
there was several thousand viewers but nobody challenged him! I
believe it is some three pages back in the archives. I am sure he has
stated same in other places. If you ask him I am sure he will point
out the instances to you.
Regards

1426. Re: New antenna design

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-31 04:19:26 UTC
From: "Sal M. Onella" <salmonella@food.poisoning.org>
Message-ID: <jbImm.157473$Qg6.40873@newsfe14.iad>
Source record: 13738

"Art Unwin" <arthurunwin@gmail.com> wrote in message
news:902e2f37-6c7b-4bae-9a4d-e066f6e62a54@d4g2000vbm.googlegroups.com...

< snip >

> The boundary laws are such that with classical
> physics all laws deal with the Cosmos as a whole
> where balance or equilibrium reins supreme.

What about the notion of entropy in a closed system? No balance there.

1427. Re: New antenna design

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-31 04:19:32 UTC
From: "Sal M. Onella" <salmonella@food.poisoning.org>
Message-ID: <pblmm.157474$Qg6.109447@newsfe14.iad>
Source record: 13739

"Art Unwin" <arthurunwin@gmail.com> wrote in message
news:43e5cecf-702b-487c-b005-8b4f7b133f4e@o36g2000vbl.googlegroups.com...

< snip >

> I spoke to a patent attorney for the military

What person is this?

I ask because the phrase "military patent attorney" produced no results at Google. The phrase "patent attorney for the military " produces exactly one result: your post using the phrase.

Why involve the military at all?

I ask because the military doesn't buy from individuals. It buys from companies. Your antenna, whatever its ability to inspire wonderment (or not), will be developed and produced by a company that acquires rights to your eventual patent. (I have a passing acquaintance with military procurements, having worked on all three sides of that triangle: 21 years active military, 20 years defense contractor and five years Civil Service, including training for procurement.)

1428. Re: New antenna design

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-31 04:37:12 UTC
From: Jeff Liebermann <jeffl@cruzio.com>
Message-ID: <uujm951teuqenigian7hj9217p500p0tcg@4ax.com>
Source record: 13740

On Sun, 30 Aug 2009 21:19:32 -0700, "Sal M. Onella"
<salmonella@food.poisoning.org> wrote:

>I ask because the phrase "military patent attorney" produced no results at
>Google. The phrase "patent attorney for the military " produces exactly one
>result: your post using the phrase.

Last time I checked, we don't have a single "military". We have an
Army, Navy, Air Force, Coast Guard, and some other organizations, all
under the Dept of Defense. Each have their own policies for handling
patents. For example:

Office of the Judge Advocate General
Department of the Army
Intellectual Property Office
Regulatory Law and Intellectual Property Division
901 North Stuart
Street, Arlington, VA 22203-1837.

Basically a patent attorney. It's possible that Art talked to one of
them.

<www.army.mil/USAPA/epubs/pdf/p27_11.pdf>
Looks old, but interesting.

> I ask because the military doesn't buy from individuals. It buys from
> companies.

True. However all the branches will license patents from individuals.
If they want something manufactured by a 3rd party, and they need a
patent, they will arrange for licensing (or confiscation in case of
need or secrecy). I don't wanna get into technology transfers and
royalties.

--
Jeff Liebermann jeffl@cruzio.com
150 Felker St #D http://www.LearnByDestroying.com
Santa Cruz CA 95060 http://802.11junk.com
Skype: JeffLiebermann AE6KS 831-336-2558

1429. Re: New antenna design

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-31 05:15:00 UTC
From: jimp@specsol.spam.sux.com
Message-ID: <4j2sm6-c4t.ln1@mail.specsol.com>
Source record: 13741

Jeff Liebermann <jeffl@cruzio.com> wrote:
> On Sun, 30 Aug 2009 21:19:32 -0700, "Sal M. Onella"
> <salmonella@food.poisoning.org> wrote:
>
>>I ask because the phrase "military patent attorney" produced no results at
>>Google. The phrase "patent attorney for the military " produces exactly one
>>result: your post using the phrase.
>
> Last time I checked, we don't have a single "military". We have an
> Army, Navy, Air Force, Coast Guard, and some other organizations, all
> under the Dept of Defense. Each have their own policies for handling
> patents. For example:
>
> Office of the Judge Advocate General
> Department of the Army
> Intellectual Property Office
> Regulatory Law and Intellectual Property Division
> 901 North Stuart
> Street, Arlington, VA 22203-1837.
>
> Basically a patent attorney. It's possible that Art talked to one of
> them.

Not unless it was at a bar and Art was buying.

A military attorney is not going to be talking to a civilian off the street.

--
Jim Pennino

Remove .spam.sux to reply.

1430. true or... ?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-31 10:05:12 UTC
From: "-.-. --.-" <a@a.com>
Message-ID: <h7g797$g7l$1@nnrp-beta.newsland.it>
Source record: 13742

Hello ng,

on our ham ng in the it.* hierarchy, a ham posted this PDF:
http://eh-antenna.com/EH_HZ.pdf

I'm not a good mathematic person.. what is written on this PDF goes out of my analisys possibilities. Perhaps, if gently someone try to explain to me if there is something of real in what the author claim to be absolutely real, i'll thank in advance all you readers here.
Just to have a personal opinion about this "Hz field" if someone explain me in light terms the "physical interpretation" that the author claim in the paper, based on Maxwell equations.

regards,

-.-. --.- (cq - Italy).

1431. Re: MFJ-269 Antenna Analyzer experience

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-31 10:30:01 UTC
From: wood@itd.nrl.navy.mil
Message-ID: <wood-3108090630010001@jbw-mac.itd.nrl.navy.mil>
Source record: 13743

In article <Xns9C7642E878DBBnonenowhere@61.9.191.5>, Owen Duffy
<none@no.where> wrote:

> John,
>
> If I understand correctly, Macalpine's work was in finding solutions given
> the computation tools readily available.
>
> The approximation of a real transmission line as having Zo that is real can
> introduce significant error in some line calcs.
>
> Improving the model to include an estimated X value based on the loss is a
> next step that improves calcs. This technique is widely used, and is
> revealed by Ro equal to the nominal Zo, whilst Xo is a small negative
> quantity for practical low loss cables at HF. This model produces
> significantly different results for high line VSWR at lower frequencies.
>
> TLLC (http://www.vk1od.net/calc/tl/tllc.php) goes a step further and
> estimates a value for Ro based on the loss. For example, the Zo used for
> RG58 at 1MHz is 50.06-j2.31 ohms. This model produces significantly
> different results for extreme line VSWR at lower frequencies.
>
> The more detailed models would be computationally unwieldly with log tables
> or a slide rule (the tools of Macalpine's day), but TLLC demonstrates that
> it is a trivial computational matter today, though not to lose sight of the
> fact that mathematical function libraries are often approximations
> favouring speed over ultimate accuracy.
>
> Again, we must keep in mind that the uncertainty of the data fed into the
> model (including manufacturing tolerances, and through life component
> degradation) contributes to uncertainty of the output, and as Roy has
> mentioned, the sensitivity of results to input data can be higher than
> people might otherwise expect.
>
> Properly implemented, the VNA OSL calibration process and measurement
> process should overcome the problem of a sufficiently accurate model of the
> actual transmission line used in the 'fixture', though not the phase
> stability between calibration and measurement, especially where they are
> done under very different environmental conditions.
>
> Owen

Good info, Owen and it should be noted that "VNA" is a vector network
analyzer and "OSL" refers to the open, short, and load (usually 50 or 75
ohms) reference standards used to calibrate the VNA over the frequency

range of ineterest.

The small reactive (imaginary) part of the transmission line characteristic impedance is covered (as are all things to do with RF transmission lines) in detail in R.W.P. King's seminal work, "Transmission Line Theory". King also covers transmission line baluns in depth. 73s,

John Wood (Code 5550) e-mail: wood@itd.nrl.navy.mil
Naval Research Laboratory
4555 Overlook Avenue, SW
Washington, DC 20375-5337

1432. Re: Help with Antenna Install In DC Metro / Maryland Area

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-31 10:42:28 UTC
From: wood@itd.nrl.navy.mil
Message-ID: <wood-3108090642280001@jbw-mac.itd.nrl.navy.mil>
Source record: 13744

In article
<810509f1-d876-46c8-8778-8743a79140bf@r36g2000vbn.googlegroups.com>,
Andiroo <a.richman@btinternet.com> wrote:

> Hi All
>
> I have recently moved into Montgomery County Maryland from overseas
> (UK) and need to either identify a professional aerial installation
> company or some knowledgeable person to enable me to install a couple
> of antennas - an Alpha Delta DC-CC and a DIamond Co-Linear for
> 2metres. Support with siting options also probably needed.
>
> Any idea welcomed.
>
> Best wishes
>
> Andy Richman
> M3ZLN

Greetings, Andy, and as I reside in the metro DC area (Arlington County,
VA) the first thing you should do is check on the local
ordinances/homeowner association restrictions on antenna height, etc. A
ham buddy of mine in Vienna, VA, had to cut his planned tower height "down
to size". Of course in the case of an outright ban on outdoor antennas,
you could always go with the vertical inside the pvc flag pole.
Sincerely, and 73s from N4GGO,

John Wood (Code 5550) e-mail: wood@itd.nrl.navy.mil
Naval Research Laboratory
4555 Overlook Avenue, SW
Washington, DC 20375-5337

1433. Re: true or... ?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-31 11:40:13 UTC
From: Richard Fry <rfry@adams.net>
Message-ID: <6dfebc60-4065-4a8f-aa34-75155a01ecad@g6g2000vbr.googlegroups.com>
Source record: 13745

See http://w8ji.com/e-h_antenna.htm .

1434. Re: radiators

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-31 11:53:54 UTC
From: Richard Fry <rfry@adams.net>
Message-ID: <b005737e-54d9-4dc6-ad30-f2449f1f11c7@b18g2000vbl.googlegroups.com>
Source record: 13746

On Aug 30, 9:23 pm, Art Unwin <arthurun...@gmail.com> wrote:

> Exactly because it takes a WL or multiple there of to attain
> equilibrium

Art -- how, then, do you account for the fact that a 1/4-wave monopole and r-f ground system used by many AM broadcast stations produces radiated fields that have been measured to be within a few percent of the maximum possible for the applied power?

If "equilibrium" takes a WL or multiple thereof, why are such fractional wavelength radiators so efficient?

RF

1435. Re: radiators

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-31 12:10:35 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <s5Pmm.2331$Ov.506@newsfe01.iad>
Source record: 13747

Art Unwin wrote:
> Tom, W8ji ... states that radiators must be
> straight for maximum efficiency, ...

Why are short helical antennas less efficient than
full-size straight radiators? Is there any way to
fold a full-size straight radiator that results
in increased efficiency?
--
73, Cecil, IEEE, OOTC, http://www.w5dxp.com

1436. Re: New antenna design

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-31 12:37:26 UTC
From: Ralph E Lindberg <n7bsn@callsign.net>
Message-ID: <n7bsn-DA4DBF.05365631082009@news.individual.net>
Source record: 13748

In article <4j2sm6-c4t.ln1@mail.specsol.com>, jimp@specsol.spam.sux.com
wrote:

> Jeff Liebermann <jeffl@cruzio.com> wrote:
> > On Sun, 30 Aug 2009 21:19:32 -0700, "Sal M. Onella"
> > <salmonella@food.poisoning.org> wrote:
> >
> >>I ask because the phrase "military patent attorney" produced no results at
> >>Google. The phrase "patent attorney for the military " produces exactly one
> >>result: your post using the phrase.
> >
> > Last time I checked, we don't have a single "military". We have an
> > Army, Navy, Air Force, Coast Guard, and some other organizations, all
> > under the Dept of Defense. Each have their own policies for handling
> > patents. For example:
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> > Office of the Judge Advocate General
> > Department of the Army
> > Intellectual Property Office
> > Regulatory Law and Intellectual Property Division
> > 901 North Stuart
> > Street, Arlington, VA 22203-1837.
> >
> > Basically a patent attorney. It's possible that Art talked to one of
> > them.
>
> Not unless it was at a bar and Art was buying.
>
> A military attorney is not going to be talking to a civilian off the street.

I know the one where I work does talk with an employees about a personal
patent. But not help/work with the actually application

--

Personal e-mail is the n7bsn but at amsat.org
This posting address is a spam-trap and seldom read
RV and Camping FAQ can be found at
http://www.ralphandellen.us/rv

1437. Re: New antenna design

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-31 12:45:06 UTC
From: Ralph E Lindberg <n7bsn@callsign.net>
Message-ID: <n7bsn-495B75.05443631082009@news.individual.net>
Source record: 13749

In article <463m95h2esu9dgl3bdkqpctr0uuakvotnm@4ax.com>,
Jeff Liebermann <jeffl@cruzio.com> wrote:

> As for your difficulties with the USPTO, I have no idea what you're
> talking about. If you need help obtaining a patent, the very last
> place I would ask is the military. All their patents tend to become
> classified, even if they're trivial.

I can't think of a single patent where I work has applied for that was
classified (hint, US Navy R&E). I strongly doubt that anyone would seek
any patent that had classified details.

> Unless your patent has some
> obvious military significance,

Or has some impact on any military related industrial application

--

Personal e-mail is the n7bsn but at amsat.org
This posting address is a spam-trap and seldom read
RV and Camping FAQ can be found at
http://www.ralphandellen.us/rv

1438. Re: New antenna design

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-31 13:09:04 UTC
From: "Geoffrey S. Mendelson" <gsm@mendelson.com>
Message-ID: <slrnh9ninq.ucb.gsm@cable.mendelson.com>
Source record: 13750

Ralph E Lindberg wrote:

> I can't think of a single patent where I work has applied for that was
> classified (hint, US Navy R&E). I strongly doubt that anyone would seek
> any patent that had classified details.

In industry, one uses patents and trade secrets to protect intelectual property. Patents have to be written in such a way that someone "skilled in the art" can duplicate the idea.

I'm not sure of the current state of US patent law, but in general it was intended that someone would read a patent, build the device and improve it. The improvement would be a deriviative work or it may be something new.

In either case, the original work, or a derivative work would be the exclusive property of the owner of the patent for a length of time, now 20 years from first publication or date of filing (whichever is earlier) in the US, and 21 years in the rest of the world.

Trade secrets are different, they rely on things that have never been revealed. For example, the formula for WD-40, Coka Cola, or KFC breading. KFC is an interesting combination, the process was patented, the formula was not.

So you can duplicate KFC chicken at home and now that the patent has run out in your restaurant in theory, but in practice, you can't because you don't know for sure what the ingredients and their proportions are in the breading.

There quite simply is no need to seek a patent with classified details. It's similar to a trade secret, but instead of contracts and ethics protecting it, the secrecy of it is protected by law.

There is also a law going back to the time of Lincoln administration about developing things under government contract, patenting them and then dedicating the patent to the people of the US. There is a big tax advantage, if it interests you, look up the details.

As far as radios are concerned, one could have patented a transformer consisting of a toriodal core of powdered iron and other materials (aka ferite) without revealing the other materials.

If that had been a "secret" invention, then others could duplicate the device but without the formula for the exact compostition of the core, no one would get the results you did. That's a two edged sword, they may be better at it. :-)

Note that this is just an example, I really have no idea of who invented the toroid transformer.

Geoff.

--
Geoffrey S. Mendelson, Jerusalem, Israel gsm@mendelson.com N3OWJ/4X1GM

1439. re:Radiators

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-31 13:13:42 UTC
From: Cyclone651 <rollie@iowatelecom.net>
Message-ID: <h7giaecbc1@news.netins.net>
Source record: 13651

And then in frequencies as low as the 10 meter band there are some that have used CIRCULAR POLARIZATION. A radiator is a radiator is a radiator is a radiator and maybe circular is better in some instances than a straight line. Use what works best for you.....

1440. Dynes Switch ?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-31 14:03:19 UTC
From: Robert11 <rgsros@xnotme.invalid>
Message-ID: <h7gl7aleo1@news.eternal-september.org>
Source record: 13652

Hello,

Saw this Dynex Switch, and was wondering if anyone might "guess" as to what
its usable frequency range (receiving only) might be ?
Thinking of it for switching antenna inputs around.

Or, is it just too cheap to consider for any sw HF (or scanning freq's)
application ?
My guess is that it is, but thought I'd ask anyway in case someone here is
actually using it.

I'm not too sure what S Video freq ranges are.

Dynex® - S-Video A/V Selector Switch
Model: DX-VS201 | SKU: 6352298

http://www.bestbuy.com/site/olspage.jsp?skuId=6352298&st=switch&lp=1&type=product&cp=1&id=
1076628516373

Thanks,
Bob

1441. Re: New antenna design

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-31 14:30:00 UTC
From: jimp@specsol.spam.sux.com
Message-ID: <043tm6-kj3.ln1@mail.specsol.com>
Source record: 13653

Ralph E Lindberg <n7bsn@callsign.net> wrote:
> In article <4j2sm6-c4t.ln1@mail.specsol.com>, jimp@specsol.spam.sux.com
> wrote:
>
>> Jeff Liebermann <jeffl@cruzio.com> wrote:
>> > On Sun, 30 Aug 2009 21:19:32 -0700, "Sal M. Onella"
>> > <salmonella@food.poisoning.org> wrote:
>> >
>> >>I ask because the phrase "military patent attorney" produced no results at
>> >>Google. The phrase "patent attorney for the military " produces exactly one
>> >>result: your post using the phrase.
>> >
>> > Last time I checked, we don't have a single "military". We have an
>> > Army, Navy, Air Force, Coast Guard, and some other organizations, all
>> > under the Dept of Defense. Each have their own policies for handling
>> > patents. For example:
>> >
>> > Office of the Judge Advocate General
>> > Department of the Army
>> > Intellectual Property Office
>> > Regulatory Law and Intellectual Property Division
>> > 901 North Stuart
>> > Street, Arlington, VA 22203-1837.
>> >
>> > Basically a patent attorney. It's possible that Art talked to one of
>> > them.
>>
>> Not unless it was at a bar and Art was buying.
>>
>> A military attorney is not going to be talking to a civilian off the street.
>
> I know the one where I work does talk with an employees about a personal
> patent. But not help/work with the actually application

To be expected and employees aren't coming in off the street.

--
Jim Pennino

Remove .spam.sux to reply.

1442. Re: Dynes Switch ?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-31 14:49:06 UTC
From: "Geoffrey S. Mendelson" <gsm@mendelson.com>
Message-ID: <slrnh9nokh.att.gsm@cable.mendelson.com>
Source record: 13654

Robert11 wrote:
>
> Dynex? - S-Video A/V Selector Switch
> Model: DX-VS201 | SKU: 6352298

Around 4mHz for NTSC, 5mHz for PAL/SECAM.

Geoff.

--
Geoffrey S. Mendelson, Jerusalem, Israel gsm@mendelson.com N3OWJ/4X1GM

1443. Re: New antenna design

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-31 15:13:50 UTC
From: Art Unwin <arthurunwin@gmail.com>
Message-ID: <94c90e00-65aa-4959-8d67-83cb733ca5b9@k26g2000vbp.googlegroups.com>
Source record: 13655

On Aug 31, 9:30 am, j...@specsol.spam.sux.com wrote:
> Ralph E Lindberg <n7...@callsign.net> wrote:
>
>
>
> > In article <4j2sm6-c4t....@mail.specsol.com>, j...@specsol.spam.sux.com
> > wrote:
>
> >> Jeff Liebermann <je...@cruzio.com> wrote:
> >> > On Sun, 30 Aug 2009 21:19:32 -0700, "Sal M. Onella"
> >> > <salmone...@food.poisoning.org> wrote:
>
> >> >>I ask because the phrase "military patent attorney" produced no results at
> >> >>Google. The phrase "patent attorney for the military " produces exactly one
> >> >>result: your post using the phrase.
>
> >> > Last time I checked, we don't have a single "military". We have an
> >> > Army, Navy, Air Force, Coast Guard, and some other organizations, all
> >> > under the Dept of Defense. Each have their own policies for handling
> >> > patents. For example:
>
> >> > Office of the Judge Advocate General
> >> > Department of the Army
> >> > Intellectual Property Office
> >> > Regulatory Law and Intellectual Property Division
> >> > 901 North Stuart
> >> > Street, Arlington, VA 22203-1837.
>
> >> > Basically a patent attorney. It's possible that Art talked to one of
> >> > them.
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> >> Not unless it was at a bar and Art was buying.
>
> >> A military attorney is not going to be talking to a civilian off the street.
>
> > I know the one where I work does talk with an employees about a personal
> > patent. But not help/work with the actually application
>
> To be expected and employees aren't coming in off the street.
>
> --
> Jim Pennino
>
> Remove .spam.sux to reply.

Many Universities have near to them a quasi military funded work group
that employ some of the graduates of Universities especially in the
computer area.
The funding by the military is for different projects that they have.
These units
are monitored by patent personnel a couple of times a year where
information is gathered
for patent potential.Usually they do mundane computer work but there
are exceptions and there is some turn over as the graduates leave for
new found jobs. There are at least two such units that are in driving
distance from me that I know of and there may be more as there are
many Universities close to me.
I never said I consulted him or asked for assistance.
In these sort of discussions in this group small things grow so large
that they have a life of their own that often stray from the truth.

1444. Re: radiators

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-31 15:34:08 UTC
From: JB <nospam@goofball.net>
Message-ID: <Q3Smm.469$Jd7.262@nwrddc02.gnilink.net>
Source record: 13656

The Art of misdirection and obfuscation.

1445. Re: radiators

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-31 16:16:19 UTC
From: Art Unwin <arthurunwin@gmail.com>
Message-ID: <07062b31-a6e3-4032-8c15-98eb22b8d557@f10g2000vbf.googlegroups.com>
Source record: 13657

On Aug 31, 6:53 am, Richard Fry <r...@adams.net> wrote:
> On Aug 30, 9:23 pm, Art Unwin <arthurun...@gmail.com> wrote:
>
> > Exactly because it takes a WL or multiple there of to attain
> > equilibrium
>
> Art -- how, then, do you account for the fact that a 1/4-wave monopole
> and r-f ground system used by many AM broadcast stations produces
> radiated fields that have been measured to be within a few percent of
> the maximum possible for the applied power?
>
> If "equilibrium" takes a WL or multiple thereof, why are such
> fractional wavelength radiators so efficient?
>
> RF

One time response
Most hams are aware there are two basic resistances or impedances
involved in any antenna. The d.c. wire resistance is a constant
whether it is above ground or not.
Radiation resistance only occur when radiation is allowed to take
place which usually is considered above ground. When the circuit
cannot radiate such as in a ground plain or similar then the circuit
does not encounter radiation resistance thus the only resistance
encountered is the dc resistance which means it draws less power from
the source.
Thus for a half wave with ground plain it will draw 1/2 the power from
the source that a full wave will. So when talking about efficiency per
unit of energy supplied the only difference
between the two is the wire resistance that is not accompanied by
radiation which is extremely small. So overall efficiency changes of a
radiator is so small it really is of zero significance. What is
important is the ability of an antenna to radiate maximum strength
where you want and the ground plain applies a limitation which many
can live with.
The importance of efficiency is that one is accounting for all forces
that impact it where you enter a different mathematical areana which
opens up clues to the formation of radiation
and possibly other scenarios that can be of benefit in other areas.

A case in point. If one has a vertical then the radiation pattern is
donut shaped ie it has a hole that is devoid of radiation which is not
so good for military servalance. This is because the radiator is
oriented opposite to the gravitational force only. If one wants to
account for ALL forces involved then one must include with gravity the

Corriolis force without which NOTHING can be stable on Earth. One must include it when considering the Earths forces within a arbitrary boundary to achieve equilibrium. Thus to be in equilibrium a radiator must be tipped to include the Coreolis force which then allows for a spherical radiation pattern ala Poynting's vector where the forces within the boundary equals (and opposite) that outside the boundary and is in a state of equilibrium Thus when a radiator is tipped it now fills up the hole in the donut to obtain radiation that is equal in all directions(equilibrium) which is what a military installation would prefer as possible observation is 100 %. Thus starting with a single radiator that is in equilibrium you are starting from a different point to a planar mode when proceeding with array designs which then becomes educational with respect to possible occurances that are not available to systems outside that of the equilibrium.
NUFF SAID

1446. Re: New antenna design

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-31 16:17:56 UTC
From: Jeff Liebermann <jeffl@cruzio.com>
Message-ID: <4usn955mqr5ooj6j961regthvo246mh6pe@4ax.com>
Source record: 13658

On Mon, 31 Aug 2009 05:45:06 -0700, Ralph E Lindberg
<n7bsn@callsign.net> wrote:

>In article <463m95h2esu9dgl3bdkqpctr0uuakvotnm@4ax.com>,
> Jeff Liebermann <jeffl@cruzio.com> wrote:
>> As for your difficulties with the USPTO, I have no idea what you're
>> talking about. If you need help obtaining a patent, the very last
>> place I would ask is the military. All their patents tend to become
>> classified, even if they're trivial.
>
>I can't think of a single patent where I work has applied for that was
>classified (hint, US Navy R&E). I strongly doubt that anyone would seek
>any patent that had classified details.

I beg to differ. There are over 4000 classified patents, 88 of which
are by the US Navy:
<http://www.fas.org/sgp/othergov/invention/stats.html>
(Note the classification of patents of private inventors). In FY08,
the Navy apparently applied for 8 classified patents. Obvious, I have
no clue what they were for.

More:
<http://www.uspto.gov/web/offices/pac/mpep/documents/appxr_5_1.htm>
<http://en.wikipedia.org/wiki/Invention_Secrecy_Act>

Drivel: I sorta blundered across this one. The patent is fully
disclosed, but the title is "classified":
<http://www.google.com/patents?id=kG-oAAAAEBAJ&dq=2008/0047450>
Oops.

>> Unless your patent has some
>> obvious military significance,
>
>Or has some impact on any military related industrial application

Some horror stories where key commercial technologies somehow get
classified. From 2002:
<http://www.spiritofmaat.com/archive/feb2/vesprman.htm>
"As a former Patent Examiner, I can tell you that the number
of 'secretized' patents in the vault at the Patent Office
(Park 5 Bldg.) is closer to 4000 or more. They [applicants]
never receive a patent number, and the inventor is rarely,
if ever, compensated by the government for use of the
invention."

--
Jeff Liebermann jeffl@cruzio.com
150 Felker St #D http://www.LearnByDestroying.com
Santa Cruz CA 95060 http://802.11junk.com
Skype: JeffLiebermann AE6KS 831-336-2558

1447. Re: New antenna design

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-31 17:09:04 UTC
From: "Geoffrey S. Mendelson" <gsm@mendelson.com>
Message-ID: <slrnh9o0mv.mva.gsm@cable.mendelson.com>
Source record: 13659

Jeff Liebermann wrote:
><http://www.spiritofmaat.com/archive/feb2/vesprman.htm>
> "As a former Patent Examiner, I can tell you that the number
> of 'secretized' patents in the vault at the Patent Office
> (Park 5 Bldg.) is closer to 4000 or more. They [applicants]
> never receive a patent number, and the inventor is rarely,
> if ever, compensated by the government for use of the
> invention."

That's an interesting question. Normally an inventor is not compensated for the use of their invention, as it were, by an employer. In most cases the employer owns the research it funded and the results (including patents) of that research.

Quite often the payment for a patent was one dollar. The late father of a late friend of mine was one of the inventors on 18 patents filed by RCA, 9 of which he was the principal inventor. From what I remember he received besides his regular salary, an offical payment of $1 for the rights to each of them, and a nice little plaque for his wall.

In some exceptional cases, usually where the inventor is a noted expert in the field before employment they negotiated different terms. There were also independent inventors who filed "invention disclosures" and then attempted to sell the invention to investors or companies in the field.

This has pretty much disapeared in the US as people now file provisional patent applications and market those. The problem of this system is that abandoned provisional patent applications become public domain when they expire (one year after first publication or filing, whichever is earlier) and invention disclosures, never being publicised could go on forever.

The other question I have is if a patent is filled and never publicised, how does one know it exists? If someone else invents the idea (actually very common) and files a patent are they refused? Are they sued for infringment?

Geoff.

--
Geoffrey S. Mendelson, Jerusalem, Israel gsm@mendelson.com N3OWJ/4X1GM

1448. Re: Dynes Switch ?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-31 17:35:42 UTC
From: Dale Parfitt <parinc1@verizon.net>
Message-ID: <ORTmm.482$tl3.4@nwrddc01.gnilink.net>
Source record: 13660

"Robert11" <rgsros@xnotme.invalid> wrote in message
news:h7gl7aleo1@news.eternal-september.org...
> Hello,
>
> Saw this Dynex Switch, and was wondering if anyone might "guess" as to
> what
> its usable frequency range (receiving only) might be ?
> Thinking of it for switching antenna inputs around.
>
> Or, is it just too cheap to consider for any sw HF (or scanning freq's)
> application ?
> My guess is that it is, but thought I'd ask anyway in case someone here is
> actually using it.
>
> I'm not too sure what S Video freq ranges are.
>
> Dynex® - S-Video A/V Selector Switch
> Model: DX-VS201 | SKU: 6352298
>
> http://www.bestbuy.com/site/olspage.jsp?skuId=6352298&st=switch&lp=1&type=product&cp=1&id=1076628516373
>
> Thanks,
> Bob
I am missing something here I believe. This is going to have type S
connectors on it- how and why would you adapt from coax to S?

Dale W4OP

1449. Re: New antenna design

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-31 17:38:21 UTC
From: Art Unwin <arthurunwin@gmail.com>
Message-ID: <3c68274e-d97a-4ee3-b322-90d38886d785@o36g2000vbl.googlegroups.com>
Source record: 13661

On Aug 31, 12:09 pm, "Geoffrey S. Mendelson" <g...@mendelson.com>
wrote:
> Jeff Liebermann wrote:
> ><http://www.spiritofmaat.com/archive/feb2/vesprman.htm>
> > > "As a former Patent Examiner, I can tell you that the number
> > > of 'secretized' patents in the vault at the Patent Office
> > > (Park 5 Bldg.) is closer to 4000 or more. They [applicants]
> > > never receive a patent number, and the inventor is rarely,
> > > if ever, compensated by the government for use of the
> > > invention."
>
> That's an interesting question. Normally an inventor is not compensated for
> the use of their invention, as it were, by an employer. In most cases the
> employer owns the research it funded and the results (including patents)
> of that research.
>
> Quite often the payment for a patent was one dollar. The late father of a
> late friend of mine was one of the inventors on 18 patents filed by RCA,
> 9 of which he was the principal inventor. From what I remember he received
> besides his regular salary, an offical payment of $1 for the rights to each
> of them, and a nice little plaque for his wall.
>
> In some exceptional cases, usually where the inventor is a noted expert
> in the field before employment they negotiated different terms. There were
> also independent inventors who filed "invention disclosures" and then
> attempted to sell the invention to investors or companies in the field.
>
> This has pretty much disapeared in the US as people now file provisional
> patent applications and market those. The problem of this system is that
> abandoned provisional patent applications become public domain when they
> expire (one year after first publication or filing, whichever is earlier)
> and invention disclosures, never being publicised could go on forever.
>
> The other question I have is if a patent is filled and never publicised,
> how does one know it exists? If someone else invents the idea (actually very
> common) and files a patent are they refused? Are they sued for infringment?
>
> Geoff.
>
> --
> Geoffrey S. Mendelson, Jerusalem, Israel g...@mendelson.com N3OWJ/4X1GM

Wow ! You are way out of date with respect to PTO procedures on so
many things.

The main thing is patents have stopped going on for ever. The primary change you have
that affects patents today is that patent request are pre printed for the public before they ever reach an examiner. If I understand correctly not receiving a patent leaves your request as a free for all in terms of use. The courts have now put more power in the examiners hands and are less interested in cases challenging the aproved claims. For your interest antennas have come to the fore because Chip has sued many cell phone manufacturers for knowingly using Fractal patents. It will be interesting to see how the courts handle this in the light of the many patent changes. You are now seeing more generic drugs over the counter as drug patents are not being extended for minor changes. Thus drug companies are using other methods to preserve their interests via import rules to stop generic drugs coming in from other Countries covered by the world patent office org of which the U.S. is part. This does not include Peurto Rico where many U.S. drugs are manufactured today

1450. Re: radiators

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-31 17:40:09 UTC
From: Dale Parfitt <parinc1@verizon.net>
Message-ID: <ZVTmm.483$tl3.362@nwrddc01.gnilink.net>
Source record: 13662

"Art Unwin" <arthurunwin@gmail.com> wrote in message
news:d14d766b-c681-4d1e-bd1f-d505ceed6eba@j9g2000vbp.googlegroups.com...
On Aug 30, 7:27 pm, "Dale Parfitt" <pari...@verizon.net> wrote:
> "Art Unwin" <arthurun...@gmail.com> wrote in message
>
> news:4943d328-890c-457c-b88f-bf45304b1bb5@f10g2000vbf.googlegroups.com...
>
> > Tom, W8ji apparently is an expert with antennas having lectured
> > at Dayton and has authored many technical articles around antennas,
> > states that radiators must be straight for maximum efficiency,
> > apparently
>
It would assist us if you would cut and paste the quote from Tom' site.
As I said before, the only place I ever saw this was with reference to
Beverages- the statement is true and obvious to everyone except perhaps you
Art.
The onus is upon you to prove that a Beverage in any other deployment
except straight would be better. I don't want to hear about your theories
that only you embrace- a simple EZNEC model will be sufficient.

Dale W4OP

1451. Re: New antenna design

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-31 18:14:03 UTC
From: "Geoffrey S. Mendelson" <gsm@mendelson.com>
Message-ID: <slrnh9o4lg.slj.gsm@cable.mendelson.com>
Source record: 13663

Art Unwin wrote:
> Wow ! You are way out of date with respect to PTO procedures on so
> many things.
> The main thing is patents have stopped going on for ever. The primary
> change you have
> that affects patents today is that patent request are pre printed for
> the public before they ever reach an examiner.

Well not really. First of all an invention disclosure could go on forever
as I said because it all is based upon date of filing, or if nothing is filed,
date of first publication. If a person submits an invention disclosure to
an investor or prospective purchaser that is done with an agreement of
confidentiality, not publication.

Therefore an invention disclosure not being filed with the USPTO, or publicized
is not limited by the one year limitiation.

In the US, patent applications are published immediately. The USPTO has a
short period to reject applciations out of hand, and if they do not they
can be published as soon as the USPTO can, which I know is kind of vague.
However, you may request that the application is kept confidental until
18 months from date of application.

In the current environment, applications will be seen by an examiner in
around 18 months, so it may or may not be the case. It depends upon the
queue.

> If I understand
> correctly not receiving a patent leaves your request as a free for all
> in terms of use.

Yes. However you have a year to appeal a final rejection.

> The courts have now put more power in the examiners
> hands and are less interested in cases challenging the aproved claims.

I can't say anything about that, I have never dealt with the courts.

> For your interest antennas have come to the fore because Chip has sued
> many cell phone manufacturers for knowingly using Fractal patents. It
> will be interesting to see how the courts handle this in the light of
> the many patent changes.

Yes. In this case it may depend more upon the quality of legal representation
and the authors of the original patent applications. If Chip's patent
applications were written well, he may be able to prove infringment. If they
were not, then the likelyhood of him getting anything is small.

It would depend, IMHO on Chip's lawyers making them feel he is being vicitimized by the big bad cellular companies, or the companies making them feel he is a crackpot inventor who patented something similar, but not the close enough for them to pay him.

I've read an article foisted upon me about software patents that claimed they were bad because judges were unable to understand them. IMHO bad judges do not mean the whole system should be thrown out. I also expect that if the case were to go before a jury, it would be next to impossible to convince them of anything on a technical basis.

I was then told that I should read the paper's authors book, but to me it seemed ironic (and stupid) to pay $22.50 and postage to be told that my ideas should be free, while theirs were not.

>You are now seeing more generic drugs over
> the counter as drug patents are not being extended for minor changes.
> Thus drug companies are using other methods to preserve their
> interests via import rules to stop generic drugs coming in from other
> Countries covered by the world patent office org of which the U.S. is
> part. This does not include Peurto Rico where many U.S. drugs are
> manufactured today

That's a special case. Most generic drugs come from Israel, which follows FDA regulations and respects international patents, and India which does not. Indira Gandi was presented the case that drug patents were racist, because they prevented brown (Indian) people from buying drugs sold by price-gouging white people (ICL in specific).

She allowed that the process could be patented, but not the product itself, allowing Indian manufacturers to make generic drugs without using the approved processes, and not subject to any quality control or testing.

WIRED did an excelent article about it a few years ago. If you want more information, I suggest you look it up.

As for Puerto Rico, it is part of the US, and since the 1970's has become a haven for drug manufacturers because of the low taxes. The FDA was (is?) loath to approve drugs which they can not supervise the manufacture of, which they can do in Peurto Rico, but not in other countries.

Geoff.

--
Geoffrey S. Mendelson, Jerusalem, Israel gsm@mendelson.com N3OWJ/4X1GM

1452. Re: radiators

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-31 18:27:34 UTC
From: Richard Fry <rfry@adams.net>
Message-ID: <f78ef895-fc24-40c0-9be5-1408a6ab97ba@g23g2000vbr.googlegroups.com>
Source record: 13664

Art Unwin wrote:

> Thus to be in equilibrium a radiator
> must be tipped to include the Coreolis force which then allows for a
> spherical radiation pattern ala Poynting's vector where the forces
> within the boundary equals (and opposite) that outside the boundary
> and is in a state of equilibrium Thus when a radiator is tipped it now
> fills up the hole in the donut to obtain radiation that is equal in
> all directions(equilibrium) which is what a military installation
> would prefer as possible observation is 100 %

Then by your theory does the radiation launched by a vertical, 1/2-wave, center-fed dipole have a different pattern shape when that dipole is tipped away from the vertical plane?

I'm referring to the radiation pattern of the dipole itself, not including any reflections.

RF

1453. Re: radiators

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-31 18:31:30 UTC
From: Art Unwin <arthurunwin@gmail.com>
Message-ID: <65285594-d3a4-4209-b99d-7a865cbbe874@p15g2000vbl.googlegroups.com>
Source record: 13665

On Aug 31, 12:40 pm, "Dale Parfitt" <pari...@verizon.net> wrote:
> "Art Unwin" <arthurun...@gmail.com> wrote in message
>
> news:d14d766b-c681-4d1e-bd1f-d505ceed6eba@j9g2000vbp.googlegroups.com...
> On Aug 30, 7:27 pm, "Dale Parfitt" <pari...@verizon.net> wrote:> "Art Unwin"
<arthurun...@gmail.com> wrote in message
>
> >news:4943d328-890c-457c-b88f-bf45304b1bb5@f10g2000vbf.googlegroups.com...
>
> > > Tom, W8ji apparently is an expert with antennas having lectured
> > > at Dayton and has authored many technical articles around antennas,
> > > states that radiators must be straight for maximum efficiency,
> > > apparently
>
> It would assist us if you would cut and paste the quote from Tom' site.
> As I said before, the only place I ever saw this was with reference to
> Beverages- the statement is true and obvious to everyone except perhaps you
> Art.
> The onus is upon you to prove that a Beverage in any other deployment
> except straight would be better. I don't want to hear about your theories
> that only you embrace- a simple EZNEC model will be sufficient.
>
> Dale W4OP

Dale I am happy with the responses of the group. Seems like they are
united against the idea that radiators must be straight for maximum
efficiency. I never mentioned anything about Beverages, that was
somebody else. As far as Eznec is concerned I am not familiar with it
as I use a program equiped with an optimiser that tries to bring your
inputs in line with Maxwells equations. For instance, Eznec is only a
calculator devised to provide answers to that supplied with additions
to handle planar forms that are not in compliance. When you have an
optimiser and your input is not pre guided ,such as a planar input,
the optimiser will respond with a non planar design that includes
the
Coriolis force such that Maxwells equations are enforced , and that
requires equilibrium.
That also means the programs costs more but all antenna design
companies use them as they recognise the true value of adherence to
Maxwell's laws.
The above justifies my position on radiators unless you want to
declare "garbage in garbage out". I have a simple sample printed of a
computerized array that shows the above in the patent request that is
presently due for extinction. The military uses tipped radiators in

many places to gain coverage of the donut hole as I have shown, but you will not see printed matter on the subject except from me. The WWW changes a lot of things regarding secrecy. Remember, when Tesla died he was working on a cheap energy system. The FBI raided his lab and took every thing which even now has not seen the light of day!
I know. YOU now want me to provide a copy of the statement to you but then,. you can choose to believe or not to believe and use free speech to demand any thing. But I am not in your employ.

1454. Re: true or... ?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-31 19:01:41 UTC
From: dplatt@radagast.org
Message-ID: <l9jtm6-48c.ln1@radagast.org>
Source record: 13666

In article <h7g797$g7l$1@nnrp-beta.newsland.it>, -.-. --.- <a@a.com> wrote:
>Hello ng,
>
>on our ham ng in the it.* hierarchy, a ham posted this PDF:
>http://eh-antenna.com/EH_HZ.pdf
>
>I'm not a good mathematic person.. what is written on this PDF goes out of
>my analisys possibilities. Perhaps, if gently someone try to explain to me
>if there is something of real in what the author claim to be absolutely
>real, i'll thank in advance all you readers here.
>Just to have a personal opinion about this "Hz field" if someone explain me
>in light terms the "physical interpretation" that the author claim in the
>paper, based on Maxwell equations.

Here's my understanding, based on what I've read about this general class of antenna over the past few years.

I'll have to let someone with more math knowledge than I speak about the specifics of the claims in this paper... it goes beyond what I've studied. Pretty much everything I've read, says that these claims depend on a rather different interpretation of Maxwell's equations than mainstream theory utilizes. The general conclusion I've picked up, is that you can't generate separate and independent E and H fields (and then combine them) in the way that EH-antenna theory claims.

As far as I know, well-controlled practical experiments to demonstrate the benefits of EH-type antennas have not resulted in success. The antennas "work" to some extent - that is, you can get them to radiate, and can achieve an impedance match - but the same can be said of almost any kind of radiating structure. The claims of exceptionally high electrical efficiency (for such a physically small antenna) don't seem to work out, though.

In practice (from what I've read), EH antennas seem to behave like other physically-short dipole antennas which are brought to resonance by means of a large amount of capacitive end-loading. As such they have a rather narrow SWR bandwidth, a low radiation resistance, and the risk of high losses (both in the antenna itself and in the matching network).

Tests of these sorts of heavily-loaded antennas can be misleading, unless you take care to decouple the antenna very carefully. If you just hang an antenna of this sort on a mast and feed it directly with coax, both the mast structure and the feedline can act as part of the antenna system, with significant RF currents flowing on them and quite a bit of RF radiation taking place. This can make the antenna "look

better" than it actually is. Placing the antenna on some sort of insulated mounting, and using an effective current choke at the feedpoint, is necessary to distinguish the antenna's own electrical characteristics from those of the support structure and feedline.

There are some commercial HF antennas which make claims similar to the EH type - e.g. the Bilal Isotron family. The instructions for some Isotron models say that they *must* be mounted on a grounded mast for proper operation... which leads me to believe that radiation from the mast and feedline are probably an essential part of their operation.

--
Dave Platt <dplatt@radagast.org> AE6EO
Friends of Jade Warrior home page: http://www.radagast.org/jade-warrior
I do _not_ wish to receive unsolicited commercial email, and I will boycott any company which has the gall to send me such ads!

1455. Re: radiators

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-31 19:19:59 UTC
From: Dale Parfitt <parinc1@verizon.net>
Message-ID: <znVmm.497$tl3.326@nwrddc01.gnilink.net>
Source record: 13667

Hi Art,
I just want to make sure what you are quoting from ToW8JI.
So, if you have the time and inclination, please cut and paste Tom's
comments about straight radiators so we can all be on the same page.
I was the one who initially mentioned Beverages- because, although I am not
an expert on Tom's site, that is the only referecne I recall about straight
wires on his site.

Dale W4OP

1456. Re: New antenna design

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-31 20:10:07 UTC
From: Jeff Liebermann <jeffl@cruzio.com>
Message-ID: <2fbo95ths3qbqivhsvi6q1ifsvbge3a1gp@4ax.com>
Source record: 13668

On Sun, 30 Aug 2009 18:44:22 -0700, Jeff Liebermann <jeffl@cruzio.com>
wrote:

>For some odd reason, I can't see the five attached figures. Probably
>my fault (or Quicktime).

Here's a copy of the patent application, with the figures included:
<http://802.11junk.com/jeffl/crud/11-655899.pdf>

--
Jeff Liebermann jeffl@cruzio.com
150 Felker St #D http://www.LearnByDestroying.com
Santa Cruz CA 95060 http://802.11junk.com
Skype: JeffLiebermann AE6KS 831-336-2558

1457. Re: New antenna design

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-31 21:28:50 UTC
From: Art Unwin <arthurunwin@gmail.com>
Message-ID: <2008f28c-e7ce-48c2-b600-5a70aff35db3@g23g2000vbr.googlegroups.com>
Source record: 13669

On Aug 31, 3:10 pm, Jeff Liebermann <je...@cruzio.com> wrote:
> On Sun, 30 Aug 2009 18:44:22 -0700, Jeff Liebermann <je...@cruzio.com>
> wrote:
>
> >For some odd reason, I can't see the five attached figures. Probably
> >my fault (or Quicktime).
>
> Here's a copy of the patent application, with the figures included:
> <http://802.11junk.com/jeffl/crud/11-655899.pdf>
>
> --
> Jeff Liebermann   je...@cruzio.com
> 150 Felker St #D   http://www.LearnByDestroying.com
> Santa Cruz CA 95060http://802.11junk.com
> Skype: JeffLiebermann   AE6KS   831-336-2558

PTO states they will review all again. As I am a private entity w/o
attorney they are committed to supplying assistance. Have about 25
days to resolve, so all is not lost.

1458. Re: true or... ?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-31 21:50:26 UTC
From: Art Unwin <arthurunwin@gmail.com>
Message-ID: <9ab7a89d-79ab-470a-9a96-911c10406957@j9g2000vbp.googlegroups.com>
Source record: 13670

On Aug 31, 2:01 pm, dpl...@radagast.org (Dave Platt) wrote:
> In article <h7g797$g7...@nnrp-beta.newsland.it>, -.-. --.- <a...@a.com> wrote:
> >Hello ng,
>
> >on our ham ng in the it.* hierarchy, a ham posted this PDF:
> >http://eh-antenna.com/EH_HZ.pdf
>
> >I'm not a good mathematic person.. what is written on this PDF goes out of
> >my analisys possibilities. Perhaps, if gently someone try to explain to me
> >if there is something of real in what the author claim to be absolutely
> >real, i'll thank in advance all you readers here.
> >Just to have a personal opinion about this "Hz field" if someone explain me
> >in light terms the "physical interpretation" that the author claim in the
> >paper, based on Maxwell equations.
>
> Here's my understanding, based on what I've read about this general
> class of antenna over the past few years.
>
> I'll have to let someone with more math knowledge than I speak about
> the specifics of the claims in this paper... it goes beyond what I've
> studied. Pretty much everything I've read, says that these claims
> depend on a rather different interpretation of Maxwell's equations
> than mainstream theory utilizes. The general conclusion I've picked
> up, is that you can't generate separate and independent E and H fields
> (and then combine them) in the way that EH-antenna theory claims.
>
> As far as I know, well-controlled practical experiments to demonstrate
> the benefits of EH-type antennas have not resulted in success. The
> antennas "work" to some extent - that is, you can get them to radiate,
> and can achieve an impedance match - but the same can be said of
> almost any kind of radiating structure. The claims of exceptionally
> high electrical efficiency (for such a physically small antenna) don't
> seem to work out, though.
>
> In practice (from what I've read), EH antennas seem to behave like
> other physically-short dipole antennas which are brought to resonance
> by means of a large amount of capacitive end-loading. As such they
> have a rather narrow SWR bandwidth, a low radiation resistance, and
> the risk of high losses (both in the antenna itself and in the
> matching network).
>
> Tests of these sorts of heavily-loaded antennas can be misleading,
> unless you take care to decouple the antenna very carefully. If you
> just hang an antenna of this sort on a mast and feed it directly with

> coax, both the mast structure and the feedline can act as part of the
> antenna system, with significant RF currents flowing on them and quite
> a bit of RF radiation taking place. This can make the antenna "look
> better" than it actually is. Placing the antenna on some sort of
> insulated mounting, and using an effective current choke at the
> feedpoint, is necessary to distinguish the antenna's own electrical
> characteristics from those of the support structure and feedline.
>
> There are some commercial HF antennas which make claims similar to the
> EH type - e.g. the Bilal Isotron family. The instructions for some
> Isotron models say that they *must* be mounted on a grounded mast for
> proper operation... which leads me to believe that radiation from the
> mast and feedline are probably an essential part of their operation.
>
> --
> Dave Platt <dpl...@radagast.org>   AE6EO
> Friends of Jade Warrior home page: http://www.radagast.org/jade-warrior
>   I do _not_ wish to receive unsolicited commercial email, and I will
>   boycott any company which has the gall to send me such ads!

Yup. Basically Hatelly is trying to find the "weak force" as predicted
by Einstein so that is why he is attempting to combine E and H forces
in the hope that more light is provided
to the phenomina of the addition provided by Maxwell which as yet is
not fully explained
in the books. Tom did some work on it and stated that it was the feed
line that did the radiating such that it was the system that was
providing the radiation and not just the antenna. Personally I don't
care what parts contribute to the radiation as long as it goes where I
want to put it. The bottom line is that Hatelly and Gabrera of Egypt
made an antenna but not the one they hoped for. However, I have, but
it is still in limbo because of PTO activity.

1459. Re: true or... ?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-31 22:23:31 UTC
From: "-.-. --.-" <a@a.com>
Message-ID: <h7hih9dqc1@nnrp-beta.newsland.it>
Source record: 13671

"-.-. --.-" <a@a.com> ha scritto nel messaggio
news:h7g797$g7l$1@nnrp-beta.newsland.it...

I thanks people that until now reply to my post.

It's quite clear for me, an Richard and Dave wrote, the true radiating points of an EH antenna, basically the feedline an also imho via groundwave with the grounding system, especially on lower frequencies.

What i'm asking is not a *complete* explaining of Maxwell equations in few posts, and why in this specific case can be right or wrong the paper.. just from the guru of this ng a simple "yes, he wrote in the paper a right interpretation of Maxwell equation and, in theory, the thing can work" or a "no, he's worse than a 1st april fool".

Like the precedent post on underground antennas systems, i'm just curious and happy if someone *demostrate* me that a strange antenna have a incredible efficiency. But the demostration must be in a understandable way for me, and if i don't understand, i ask to who can understand and had the patience to explain.

Sorry, btw, for grammar & language errors.

73,

-.-. --.-

1460. Re: New antenna design

Newsgroup: rec.radio.amateur.antenna
Date: 2009-08-31 22:43:18 UTC
From: Jeff Liebermann <jeffl@cruzio.com>
Message-ID: <d1ko95t3irqj1gbh5e8tndslj905fesdp9@4ax.com>
Source record: 13672

On Mon, 31 Aug 2009 14:28:50 -0700 (PDT), Art Unwin
<arthurunwin@gmail.com> wrote:

>On Aug 31, 3:10ï¿½pm, Jeff Liebermann <je...@cruzio.com> wrote:
>> Here's a copy of the patent application, with the figures included:
>> <http://802.11junk.com/jeffl/crud/11-655899.pdf>

>PTO states they will review all again. As I am a private entity w/o
>attorney they are committed to supplying assistance. Have about 25
>days to resolve, so all is not lost.

Good luck. As I previously ranted, the obvious stumbling block is the
user of the term "random" array of elements. If the examiner
interprets that as "arbitrary", then your patent is too general to be
considered passable. You might what to look at other patents for
antennas at:
<http://www.google.com/patents/>
Ignore the applications and concentrate on the patents that have been
issued. Compare these patents with your application. You should see
fairly quickly what you're missing. (Hint: References and Citations).

--
Jeff Liebermann jeffl@cruzio.com
150 Felker St #D http://www.LearnByDestroying.com
Santa Cruz CA 95060 http://802.11junk.com
Skype: JeffLiebermann AE6KS 831-336-2558

1461. Re: radiators

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-01 00:00:48 UTC
From: Dave <noone@nowhere.com>
Message-ID: <QuZmm.531$Jd7.471@nwrddc02.gnilink.net>
Source record: 13673

"Art Unwin" <arthurunwin@gmail.com> wrote in message
news:07062b31-a6e3-4032-8c15-98eb22b8d557@f10g2000vbf.googlegroups.com...

snip a bunch of bafflegab... but now a real GEM! he was mumbling about
vertical antenna and the hole in the doughnut when they were vertical...

>Thus when a radiator is tipped it now
>fills up the hole in the donut to obtain radiation that is equal in
>all directions(equilibrium) which is what a military installation
>would prefer as possible observation is 100 %.

so now he has FINALLY defined his concept of "equilibrium"... read it
forever as isotropic! so his perfect antenna in equilibrium is isotropic or
has a gain of zero... to let him sum it up in his own words:

>NUFF SAID

more than enough i would say!

1462. Re: New antenna design

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-01 00:02:27 UTC
From: Art Unwin <arthurunwin@gmail.com>
Message-ID: <00778116-e771-4985-9925-31c2f6faf540@r27g2000vbn.googlegroups.com>
Source record: 13674

On Aug 31, 5:43 pm, Jeff Liebermann <je...@cruzio.com> wrote:
> On Mon, 31 Aug 2009 14:28:50 -0700 (PDT), Art Unwin
>
> <arthurun...@gmail.com> wrote:
> >On Aug 31, 3:10 pm, Jeff Liebermann <je...@cruzio.com> wrote:
> >> Here's a copy of the patent application, with the figures included:
> >> <http://802.11junk.com/jeffl/crud/11-655899.pdf>
> >PTO states they will review all again. As I am a private entity w/o
> >attorney they are committed to supplying assistance. Have about 25
> >days to resolve, so all is not lost.
>
> Good luck. As I previously ranted, the obvious stumbling block is the
> user of the term "random" array of elements. If the examiner
> interprets that as "arbitrary", then your patent is too general to be
> considered passable. You might what to look at other patents for
> antennas at:
> <http://www.google.com/patents/>
> Ignore the applications and concentrate on the patents that have been
> issued. Compare these patents with your application. You should see
> fairly quickly what you're missing. (Hint: References and Citations).
>
> --
> Jeff Liebermann   je...@cruzio.com
> 150 Felker St #D   http://www.LearnByDestroying.com
> Santa Cruz CA 95060http://802.11junk.com
> Skype: JeffLiebermann   AE6KS   831-336-2558

Oddly enough they (PTO)have offered claims with "arbitrary" involved
I say that is not bad since the positions are arbitrary but dependent
solely
on equilibrium where all are resonant, as is the enclosure, and can be
chosen as the feed..
all of which is determined on weighting applied which provide multiple
arrangements.
It is possible that if more radiators are added then one may not be
resonant and the boundary close to fracture. It is important to note
however that tho the majority will be resonant some will have a
impedance that is too low to feed. As can be seen from the above, for
equilibrium there are no compelling reasons for the elements to be
straight
We have to wait to what the supervisor has to say and what options are
available
Accept or role it in to the followi up application which is in the
same antenna catagory, the latter I am hoping for as it cuts down on

maintenance fees.
Regards

1463. Re: New antenna design

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-01 00:05:25 UTC
From: Dave <noone@nowhere.com>
Message-ID: <9zZmm.533$Jd7.349@nwrddc02.gnilink.net>
Source record: 13675

"tom" <news4792@taring.org> wrote in message
news:4a9b344c$0$28124$8046368a@newsreader.iphouse.net...
> Art Unwin wrote:
> <snip>
>> The bottom line is that the PTO does not recognize the term
>> equilibrium the same as most of this group.
>
> I wonder why that is? Maybe something to do with reality?
>
> tom
> K0TAR

reality has never stopped a patent in the past... search for the faster than
light antenna that also makes plants grow faster.

1464. Re: radiators

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-01 00:12:52 UTC
From: Art Unwin <arthurunwin@gmail.com>
Message-ID: <94c7d491-39c1-477a-863d-4f3ae9f2b054@g6g2000vbr.googlegroups.com>
Source record: 13676

On Aug 31, 7:00 pm, "Dave" <no...@nowhere.com> wrote:
> "Art Unwin" <arthurun...@gmail.com> wrote in message
>
> news:07062b31-a6e3-4032-8c15-98eb22b8d557@f10g2000vbf.googlegroups.com...
>
> snip a bunch of bafflegab... but now a real GEM! he was mumbling about
> vertical antenna and the hole in the doughnut when they were vertical...
>
> >Thus when a radiator is tipped it now
> >fills up the hole in the donut to obtain radiation that is equal in
> >all directions(equilibrium) which is what a military installation
> >would prefer as possible observation is 100 %.
>
> so now he has FINALLY defined his concept of "equilibrium"... read it
> forever as isotropic! so his perfect antenna in equilibrium is isotropic or
> has a gain of zero... to let him sum it up in his own words:
>
> >NUFF SAID
>
> more than enough i would say!

Not bad David. I suppose that can be seen as more modern than
equilibrium used centuries ago. Actually isotropic is presently used
more by cosmopologists when refering
to matter transformations and thus include the latent energy transfer
Very good, Now you are on the same road as I (I think) at least until
the next insult. (grin)

1465. Re: New antenna design

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-01 00:16:38 UTC
From: Dave <noone@nowhere.com>
Message-ID: <GJZmm.536$Jd7.113@nwrddc02.gnilink.net>
Source record: 13677

"Jeff Liebermann" <jeffl@cruzio.com> wrote in message
news:dd9m9591lnfo20rrp5fb0qr4pn4mdja2ti@4ax.com...
> On Sun, 30 Aug 2009 12:05:06 -0700 (PDT), Art Unwin
> <arthurunwin@gmail.com> wrote:
>
>>Yes, they are mine in this country but I am talking about
>>2008 when I applied for the subject antenna
>
> Foundit. It's not on Google Patents for some odd reason.
> See: Application Number 11/655899 or 20080231540 at:
> <http://appft.uspto.gov/netacgi/nph-Parser?Sect1=PTO2&Sect2=HITOFF&p=1&u=%2Fnetahtml%2FPTO%2Fsearch-adv.html&r=1&f=G&l=50&d=PG01&S1=655899&OS=655899&RS=655899>
> Sorry about the giant URL. If that wraps or doesn't work, try:
> <http://appft.uspto.gov/netahtml/PTO/srchnum.html>
> and type in either application number. If you're going to refer to
> your patent application by number, don't forget the 11/ prefix.

wow! exciting to finally see it in print! i already have the perfect name
for it... the "pickup stick antenna"... or what is that asian fortune
telling stick thing... google to the rescue:
http://en.wikipedia.org/wiki/Kau_cim the "Kau cim antenna" gives it a more
authoritative sound, maybe that would be better... throw some sticks in a
can and design a new antenna!

1466. Re: Help with Antenna Install In DC Metro / Maryland Area

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-01 00:50:01 UTC
From: Andiroo <a.richman@btinternet.com>
Message-ID: <9504c0c7-920c-477c-93c8-e5540c2724d5@m20g2000vbp.googlegroups.com>
Source record: 13678

On Aug 30, 6:42 pm, "J. Mc Laughlin" <j...@power-net.net> wrote:
> Dear Andy: Welcome to USA.
>
> One of the best antenna rigging companies is in New England:http://www.xxtowers.com/
>
> While you are on this side of The Pond, consider getting a US license - very
> easy to do.
>
> 73,   Mac   N8TT
>
> --
> J. McLaughlin; Michigan, USA
> Home: J...@power-net.net"Andiroo" <a.rich...@btinternet.com> wrote in message
>
> news:810509f1-d876-46c8-8778-8743a79140bf@r36g2000vbn.googlegroups.com...
>
>
>
> > Hi All
>
> > I have recently moved into Montgomery County Maryland from overseas
> > (UK) and need to either identify a professional aerial installation
> > company or some knowledgeable person to enable me to install a couple
> > of antennas - an Alpha Delta DC-CC and a DIamond Co-Linear for
> > 2metres. Support with siting options also probably needed.
>
> > Any idea welcomed.
>
> > Best wishes
>
> > Andy Richman
> > M3ZLN- Hide quoted text -
>
> - Show quoted text -

Hi Mac

The plan is i get a couple of Antennas up, get into the swing of US procedures via listening only (i am know DX well but interested to see local nets etc) and then get going on my exams / tests. I just want a wire Antenna and a small co-linear for now. Thanks for the X towers link. In the fullness of time i would like something like this but for now it will be something a bit more discreet / simple.

Best wishes

Andy

1467. Re: Help with Antenna Install In DC Metro / Maryland Area

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-01 00:56:38 UTC
From: Andiroo <a.richman@btinternet.com>
Message-ID: <aefd28da-aec7-4e7a-9562-3b04f5b23679@l35g2000vba.googlegroups.com>
Source record: 13679

On Aug 31, 6:42 am, w...@itd.nrl.navy.mil (J. B. Wood) wrote:
> In article
> <810509f1-d876-46c8-8778-8743a7914...@r36g2000vbn.googlegroups.com>,
>
> Andiroo <a.rich...@btinternet.com> wrote:
> > Hi All
>
> > I have recently moved into Montgomery County Maryland from overseas
> > (UK) and need to either identify a professional aerial installation
> > company or some knowledgeable person to enable me to install a couple
> > of antennas - an Alpha Delta DC-CC and a DIamond Co-Linear for
> > 2metres. Support with siting options also probably needed.
>
> > Any idea welcomed.
>
> > Best wishes
>
> > Andy Richman
> > M3ZLN
>
> Greetings, Andy, and as I reside in the metro DC area (Arlington County,
> VA) the first thing you should do is check on the local
> ordinances/homeowner association restrictions on antenna height, etc. A
> ham buddy of mine in Vienna, VA, had to cut his planned tower height "down
> to size". Of course in the case of an outright ban on outdoor antennas,
> you could always go with the vertical inside the pvc flag pole.
> Sincerely, and 73s from N4GGO,
>
> John Wood (Code 5550)   e-mail: w...@itd.nrl.navy.mil
> Naval Research Laboratory
> 4555 Overlook Avenue, SW
> Washington, DC 20375-5337

Hi John

Thanks for the helpful notice. I think we have found a great place for discreet antenna placement as its a 170'+/- yard which is moderatly wooded so will hide most of a wire antenna. Some issues about how to best position it. Also its a rented house so i know the owner / neighbours wont be keen on anything not discreet. To be honest i was thinking a vertical for HF for the time being might need to suffice as its easy and quick to get up. For now i will only be listening but have the US exam notes for technicians license and hoe to be off and running soon. Do you know who i would need to speak to about the precise laws / restrictions etc? I presume the planning dept in local

government? Having come to the US with visions of the huge antenna farms we Brits can only dream of it would be just my luck that i cant even get up a simple wire! Back home i just about managed to squeeze in a half size G5RV so i would be nice to get something i can use on 80m.

Now i need to get time to get my head down for study.

Best wishes

Andy
M3ZLN

1468. Re: New antenna design

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-01 01:44:11 UTC
From: Art Unwin <arthurunwin@gmail.com>
Message-ID: <770541a5-71f4-4c41-b33e-04ab3bb174e3@d34g2000vbm.googlegroups.com>
Source record: 13680

On Aug 31, 7:16 pm, "Dave" <no...@nowhere.com> wrote:
> "Jeff Liebermann" <je...@cruzio.com> wrote in message
>
> news:dd9m9591lnfo20rrp5fb0qr4pn4mdja2ti@4ax.com...
>
> > On Sun, 30 Aug 2009 12:05:06 -0700 (PDT), Art Unwin
> > <arthurun...@gmail.com> wrote:
>
> >>Yes, they are mine in this country but I am talking about
> >>2008 when I applied for the subject antenna
>
> > Foundit. It's not on Google Patents for some odd reason.
> > See: Application Number 11/655899 or 20080231540 at:
> > <http://appft.uspto.gov/netacgi/nph-Parser?Sect1=PTO2&Sect2=HITOFF&p=1...>
> > Sorry about the giant URL. If that wraps or doesn't work, try:
> > <http://appft.uspto.gov/netahtml/PTO/srchnum.html>
> > and type in either application number. If you're going to refer to
> > your patent application by number, don't forget the 11/ prefix.
>
> wow! exciting to finally see it in print! i already have the perfect name
> for it... the "pickup stick antenna"... or what is that asian fortune
> telling stick thing... google to the rescue:http://en.wikipedia.org/wiki/Kau_cimthe "Kau
cim antenna" gives it a more
> authoritative sound, maybe that would be better... throw some sticks in a
> can and design a new antenna!

Too late David
But I have a question for you, Does the New World (Rumsfield) use
the term "equilibrium" in any of the engineering curriculums or are
you quoting what appears to be American English and not that of the
Olde World? Personaly if I was dealing with entropy or those wonderful
graphic steam tables +equilibrium" would be discarded in favor of
yours. But to explain all that stuff would be impossible with this
group so I opted for the Universal term that was current in Newton and
Maxwell time. Maybe what we are seeing is a intrusion of new math
into physics! Either way it does explain to me why american jaws
dropped in ignorance when the term was used.

1469. Re: New antenna design

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-01 02:43:02 UTC
From: tom <news4792@taring.org>
Message-ID: <4a9c8a24$0$28113$8046368a@newsreader.iphouse.net>
Source record: 13681

Dave wrote:

> wow! exciting to finally see it in print! i already have the perfect
> name for it... the "pickup stick antenna"... or what is that asian
> fortune telling stick thing... google to the rescue:
> http://en.wikipedia.org/wiki/Kau_cim the "Kau cim antenna" gives it a
> more authoritative sound, maybe that would be better... throw some
> sticks in a can and design a new antenna!

Interesting! And from the verbiage -

"The Yagi antenna has a plethora of detuned elements compared to the
driven element which is always resonant".

Funny, every yagi I've designed and built has a driven element which is
NOT resonant. It has a non-resonant element and a matching network of
one sort or other, which is entirely different than being resonant. And
strangely enough, is high 90's efficient. Which Art claims isn't possible.

tom
K0TAR

1470. Re: radiators

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-01 03:04:54 UTC
From: Frank <ve6cb@nospam.telus.net>
Message-ID: <qb0nm.43307$PH1.33752@edtnps82>
Source record: 13682

>This is because the radiator is
>oriented opposite to the gravitational force only. If one wants to
>account for ALL forces involved then one must include with gravity the

Gravity has no measurable effect on electromagnetic radiation.

>Thus to be in equilibrium a radiator
>must be tipped to include the Coreolis force

The coriolis force does not effect electromagnetic radiation.

>which then allows for a
>spherical radiation pattern ala Poynting's vector where the forces
>within the boundary equals (and opposite) that outside the boundary
>and is in a state of equilibrium

How is the Poynting vector related to boundary conditions. What
boundary are you talking about?

1471. Re: radiators

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-01 03:29:26 UTC
From: tom <news4792@taring.org>
Message-ID: <4a9c9504$0$28118$8046368a@newsreader.iphouse.net>
Source record: 13683

Art Unwin wrote:

> boundary to achieve equilibrium. Thus to be in equilibrium a radiator
> must be tipped to include the Coreolis force which then allows for a
> spherical radiation pattern ala Poynting's vector where the forces
> within the boundary equals (and opposite) that outside the boundary
> and is in a state of equilibrium Thus when a radiator is tipped it now
> fills up the hole in the donut to obtain radiation that is equal in
> all directions(equilibrium) which is what a military installation

Ok, so this would mean that at every north or south latitude the angle would be different, and at the equator would be zero, since there's no coriolis effect there. Please give a table that shows the tip angle versus latitude. (Bet you won't because it's secret) And at the north or south pole it's not definable so antennas can't work there..

Why haven't you mentioned these facts before? Bet you haven't because you didn't think of it, but you'll claim otherwise or just not respond.

tom
K0TAR

1472. Re: radiators

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-01 03:30:01 UTC
From: jimp@specsol.spam.sux.com
Message-ID: <ukgum6-0d8.ln1@mail.specsol.com>
Source record: 13684

Frank <ve6cb@nospam.telus.net> wrote:
>>This is because the radiator is
>>oriented opposite to the gravitational force only. If one wants to
>>account for ALL forces involved then one must include with gravity the
>
> Gravity has no measurable effect on electromagnetic radiation.

Actually it does, but it takes something like the gravity of a star to
become noticable.

--
Jim Pennino

Remove .spam.sux to reply.

1473. Re: true or... ?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-01 04:13:06 UTC
From: "Sal M. Onella" <salmonella@food.poisoning.org>
Message-ID: <3O1nm.1346$UH2.753@newsfe01.iad>
Source record: 13686

"Dave Platt" <dplatt@radagast.org> wrote in message
news:l9jtm6-48c.ln1@radagast.org...

< snip >

> The
> antennas "work" to some extent - that is, you can get them to radiate,
> and can achieve an impedance match - but the same can be said of
> almost any kind of radiating structure.

Yup. I brought a 10m dipole closer to resonance on 20m by using a clip lead
to attach one element to an eight-foot ladder that was laying in the dirt.
The tuner was able to match this mess and I had a 2000 mile QSO with 100w.

Might have been some feedline radiation in play.

Sal

1474. Re: radiators

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-01 04:44:04 UTC
From: Frank <ve6cb@nospam.telus.net>
Message-ID: <oE1nm.41996$Db2.5526@edtnps83>
Source record: 13685

<jimp@specsol.spam.sux.com> wrote in message
news:ukgum6-0d8.ln1@mail.specsol.com...
> Frank <ve6cb@nospam.telus.net> wrote:
>>>This is because the radiator is
>>>oriented opposite to the gravitational force only. If one wants to
>>>account for ALL forces involved then one must include with gravity the
>>
>> Gravity has no measurable effect on electromagnetic radiation.
>
> Actually it does, but it takes something like the gravity of a star to
> become noticable.

True, as in the Einstein experiment with a star close to the eclipsed solar
disk.

1475. Crossposting Permitted to rec.radio.amateur.moderated

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-01 06:00:02 UTC
From: rram@panix.com
Message-ID: <radio/ham-radio/moderated/crossposting-1-1251784801@panix.com>
Source record: 13687
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.dx,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.policy,rec.radio.amateur.space,rec.radio.info

```
Posted-By: auto-faq 3.3.2 beta (PGPMoose V2.0, Perl 5.005)
Archive-name: radio/ham-radio/moderated/crossposting
Revision: 1.1 2009/04/12 19:42:04
Posting-Frequency: posted monthly
URL: http://www.panix.com/~rram/usenet/rram/index.html

Changes followed by "|".

After a 30-day public discussion and feedback period to gauge reader
opinions in March of 2009:

http://groups.google.com/group/rec.radio.amateur.moderated/browse_thread/thread/d7d337db35
f23326

the rec.radio.amateur.moderated Moderation Team has decided to consider
amending its charter, and permit limited simultaneous crossposting to
rec.radio.amateur.moderated and one other unmoderated
amateur-radio-related discussion newsgroup. We are currently trying
this on a temporary basis (90 days, through early July 2009), and adopt
it permanently if successful.

Approved rec.radio.amateur.* newsgroups are those that are currently
listed in the latest version of the "List of Big Eight Newsgroups" which
is crossposted monthly to news.announce.newgroups, news.groups, and
news.lists.misc.

Approved alt.radio.amateur.* and alt.ham-radio.* newsgroups are those
that have been created consistent with the suggestions in "So You Want
to Create an Alt Newsgroup" at:

http://www.faqs.org/faqs/alt-creation-guide/

Approved regional hierarchy newsgroups are those that contain either
"radio.amateur" or "ham-radio" in their names, including
uk.radio.amateur and aus.radio.amateur.misc.

We will make every reasonable effort to keep our list of approved
newsgroups up-to-date. In case we have overlooked any, and a submission
is rejected in error as a result, the rejected submitter can E-mail us
at our administrative contact address (in the signature at the bottom of
this article, and the default Reply-To for the rejection message)
requesting that it be added, and that the article be approved. We may
still choose to reject articles crossposted to any alt.* newsgroup with
an inappropriate name, including obscene language, embedded
name-calling, or encouragement of unlawful conduct.
```

Please direct any comments, questions, or criticisms to
rec-radio-amateur-moderated-request@panix.com.

1476. Re: New antenna design

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-01 06:03:18 UTC
From: Jeff Liebermann <jeffl@cruzio.com>
Message-ID: <kgdp95pkc5pb7nhtl1aui7i7kqkfl0ps5m@4ax.com>
Source record: 13688

On Mon, 31 Aug 2009 21:43:02 -0500, tom <news4792@taring.org> wrote:

>Funny, every yagi I've designed and built has a driven element which is
>NOT resonant. It has a non-resonant element and a matching network of
>one sort or other, which is entirely different than being resonant. And
>strangely enough, is high 90's efficient. Which Art claims isn't possible.
>
>tom
>K0TAR

Huh? I can tune across the frequency range of a Yagi-Uda antenna,
measure the VSWR, and most certainly see a resonance dip at the design
center frequency. I can also attach a grid dip meter to the feed,
through a coupling loop, and see the resonance. Take away the
reflector and directors, and we're left with an ordinary dipole, which
is most certainly a resonant antenna. If the driven element is not
resonant, what is producing the dip in VSWR at the design frequency?

Goggling for added support:

<http://www.hamuniverse.com/yagibasics.html>
"The Yagi antenna's overall basic design consists of a "resonant" fed
dipole..."

"Resonance phenomena on Yagi arrays"
<http://adsabs.harvard.edu//abs/1981CEEJ....6....9T>

<http://books.google.com/books?id=ujr0WOkx_nkC&pg=PA123&lpg=PA123&dq=yagi+resonant&source=
bl&ots=VLXGYNabey&sig=6r-TqPQHdMNb9Zg9sV8olViIeTc&hl=en&ei=7LWcSszEG4ayswPcwK2TDg&sa=X&oi=
book_result&ct=result&resnum=12#v=onepage&q=yagi%20resonant&f=false>
"Resonant with directivity...yagi..."

--
Jeff Liebermann jeffl@cruzio.com
150 Felker St #D http://www.LearnByDestroying.com
Santa Cruz CA 95060 http://802.11junk.com
Skype: JeffLiebermann AE6KS 831-336-2558

1477. Re: radiators

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-01 06:22:57 UTC
From: Jeff Liebermann <jeffl@cruzio.com>
Message-ID: <ehep959eo82n99kk90tj4jjr0ldis9u5gu@4ax.com>
Source record: 13689

On Mon, 31 Aug 2009 11:31:30 -0700 (PDT), Art Unwin
<arthurunwin@gmail.com> wrote:

>The above justifies my position on radiators unless you want to
>declare "garbage in garbage out".

Close. It's like Kirchoff's Current Law. The sum of all comments
over a point on Usenet is zero.

<http://802.11junk.com/jeffl/crud/11-655899.pdf>
Figure 3B on your patent application indicates:
Computer Derived Performance
(Use NEC, Mininec, or Mathcad style program)
along with some gain, F/B, and Z computation results. Above that is
part of a coordinate input table, showing wires 21 thru 23, used to
define antennas in a variety of NEC2 modeling programs. That suggests
that you have created an NEC2 (or NEC4) model for your Gaussian
Radiative Cluster (Antenna). This would be a big help in
understanding your antenna. I especially want to see how the elements
can be random and resonant at the same time, and what degree of
randomness is required.

--
Jeff Liebermann jeffl@cruzio.com
150 Felker St #D http://www.LearnByDestroying.com
Santa Cruz CA 95060 http://802.11junk.com
Skype: JeffLiebermann AE6KS 831-336-2558

1478. Re: true or... ?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-01 07:24:45 UTC
From: "Helmut Wabnig"
Message-ID: <21jp95p35ciqq2ooj1772er89mj266p8fi@4ax.com>
Source record: 13690

On Mon, 31 Aug 2009 12:01:41 -0700, dplatt@radagast.org (Dave Platt)
wrote:

>In article <h7g797$g7l$1@nnrp-beta.newsland.it>, -.-. --.- <a@a.com> wrote:
>>Hello ng,
>>
>>on our ham ng in the it.* hierarchy, a ham posted this PDF:
>>http://eh-antenna.com/EH_HZ.pdf
>>..........

bogus squared.

w.

1479. Re: radiators

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-01 09:04:04 UTC
From: "Geoffrey S. Mendelson" <gsm@mendelson.com>
Message-ID: <slrnh9pon5.pjq.gsm@cable.mendelson.com>
Source record: 13691

Jeff Liebermann wrote:

>I especially want to see how the elements
> can be random and resonant at the same time, and what degree of
> randomness is required.

Jeff, Art,

What bothered me is that if an antenna is really made from random elements, I can't quite figure out who designed it? G-D? The ether bunnies? No one? Is it a karmic joining of the forces of the universe? The work of the devil?

If it is a fixed number (or limited set) of elements placed in position, then it is certainly not random.

I am not an expert on patents, but from what I do know, if you can't patent randomly placing elements in no pattern. If you place them in a pattern, it is no longer random and can be patented if you can define that pattern.

You could observe, measure or calculate that if you randomly place elements, one or more of the resulting patterns, layouts, etc will produce specific results and patent that specific pattern. There is no requirment that you invent something by any means more scientific than just throwning sticks on the floor randomly.

However if you can not identify that pattern, you can't patent it. If you do identify that pattern, you can patent an Unwin antenna, or a Liebermann-Unwin antenna, if Jeff were to find that critical piece you were missing.

I did not read the entire patent application, Jeff posted it what was very late last night for me, but I did browse it. If the antenna is a modified Yagi-Uda design, then it is a design and not random. If it just happens to work better than one, I'm not sure that is relevant to the patent.

I think that what you are trying to patent is randomly tossing metal sticks on the ground and connecting wires to some of them in some random fashion. I don't think this is what you had intended to do at all.

Geoff.

--
Geoffrey S. Mendelson, Jerusalem, Israel gsm@mendelson.com N3OWJ/4X1GM

1480. Re: New antenna design

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-01 12:47:36 UTC
From: tom <news4792@taring.org>
Message-ID: <4a9d1839$0$42842$8046368a@newsreader.iphouse.net>
Source record: 13692

Jeff Liebermann wrote:
>
> Huh? I can tune across the frequency range of a Yagi-Uda antenna,
> measure the VSWR, and most certainly see a resonance dip at the design
> center frequency. I can also attach a grid dip meter to the feed,
> through a coupling loop, and see the resonance. Take away the

That's not resonance, it's matched at that frequency.

> reflector and directors, and we're left with an ordinary dipole, which
> is most certainly a resonant antenna. If the driven element is not
> resonant, what is producing the dip in VSWR at the design frequency?

The match. It's normally not a resonant element when in the middle of a
Yagi-Uda array, although it's _near_ resonance when the rest of the
elements are removed.

It is possible to have a resonance at the match frequency, but unusual.
Run a couple yagis through Eznec and check the driven element impedence.
For instance, the NBS yagi that comes with Eznec. At 50.125 it's
11.7+j5.9, not very resonant. I have a 222 yagi that has a DE longer
than the reflector, also unusual, but it works fine.

tom
K0TAR

1481. Re: radiators

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-01 13:41:03 UTC
From: Art Unwin <arthurunwin@gmail.com>
Message-ID: <2362d1cc-ff4c-41b1-bb56-91af110c8074@s6g2000vbp.googlegroups.com>
Source record: 13693

On Sep 1, 4:04 am, "Geoffrey S. Mendelson" <g...@mendelson.com> wrote:
> Jeff Liebermann wrote:
> >I especially want to see how the elements
> > can be random and resonant at the same time, and what degree of
> > randomness is required.
>
> Jeff, Art,
>
> What bothered me is that if an antenna is really made from random elements,
> I can't quite figure out who designed it? G-D? The ether bunnies? No one?
> Is it a karmic joining of the forces of the universe? The work of the devil?
>
> If it is a fixed number (or limited set) of elements placed in position,
> then it is certainly not random.
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> I am not an expert on patents, but from what I do know, if you can't patent
> randomly placing elements in no pattern. If you place them in a pattern, it
> is no longer random and can be patented if you can define that pattern.
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> You could observe, measure or calculate that if you randomly place
> elements, one or more of the resulting patterns, layouts, etc will
> produce specific results and patent that specific pattern. There is no
> requirment that you invent something by any means more scientific than
> just throwning sticks on the floor randomly.
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> However if you can not identify that pattern, you can't patent it. If
> you do identify that pattern, you can patent an Unwin antenna, or a
> Liebermann-Unwin antenna, if Jeff were to find that critical piece you
> were missing.
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> I did not read the entire patent application, Jeff posted it what was very
> late last night for me, but I did browse it. If the antenna is a modified
> Yagi-Uda design, then it is a design and not random. If it just happens to
> work better than one, I'm not sure that is relevant to the patent.
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> I think that what you are trying to patent is randomly tossing metal
> sticks on the ground and connecting wires to some of them in some random
> fashion. I don't think this is what you had intended to do at all.
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> Geoff.
>
> --
> Geoffrey S. Mendelson, Jerusalem, Israel g...@mendelson.com N3OWJ/4X1GM

The first object is to establish equilibrium by using a WL radiator. Anything less breaks away from equilibrium.Adding a second radiator affects the electrical length of both radiators together with their angle with respect to each other i.e. not planar.
The question then becomes what is the reference line to determine the exact position?
Now you can deviate from such a equilibrium by adding a radiator that is not a WL which then pressures the arbitrary boundary close to rupture and so on. Thus the available number and electrical WL escalate each without a reference point expands because it will change as you move it on the surface of the Earth. Thus "random" is a hard word to use when it is any arrangement that satisfies the term of equilibrium. If the radiators were magnetic in nature and was thrown on the floor they could combine in a arrangement via repell and attract that would be maintained or jarred to another cluster position while still retaining equilibrium. Thus one should see how difficult it is quantasize an arrangement when equilibrium has no measurable point of reference that meets PTO requirements. But I would be interested if a solution could be presented that provided the metrics of such a arrangement such that a drawing could be made that is a picture of any final arrangement of the cluster that would occur for all to duplicate. It was for the above reasons why I included a typical computerized arrangement which by itself is not required in a patent request. As always the difficulty is in the details thus the need to establish a datum line which I can use for the remaining disclosures is required such that it is not rejected on technicalities while providing all details in advance to the World. Thus we have what Jeff said, The sum of all comments on this new group amount to zero" duplicate under any circumstances.

1482. Re: radiators

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-01 17:54:51 UTC
From: Jeff Liebermann <jeffl@cruzio.com>
Message-ID: <c0mq955kd6f9bfpenh210lr6guc5rhusbt@4ax.com>
Source record: 13694

On Tue, 1 Sep 2009 09:04:04 +0000 (UTC), "Geoffrey S. Mendelson"
<gsm@mendelson.com> wrote:

>Jeff Liebermann wrote:
>
>>I especially want to see how the elements
>> can be random and resonant at the same time, and what degree of
>> randomness is required.
>
>Jeff, Art,
>
>What bothered me is that if an antenna is really made from random elements,
>I can't quite figure out who designed it?

The patent application requires references to prior art. How far one
goes back is strictly up to the applicant. If one wants to go back to
the creation of the universe, it's probably acceptable.

>G-D? The ether bunnies? No one?

Actually, it is possible to patent something that requires randomness.
I did some patent searching and found something on the topic. 4
example:
"Random antenna array interferometer for radio location"
<http://www.google.com/patents/about?id=yip4AAAAEBAJ&dq=random+antenna>
However, my reading of Art's application shows that the proposed
antenna is not really random, as it would fail any test for the degree
of randomness, mostly because the method of achieving random element
lengths is not specified. For example, the range of acceptably random
element lengths is missing, as is the effects on the basic parameters
(gain, F/B, VSWR, etc).
<http://en.wikipedia.org/wiki/Randomness_tests>
In my never humble opinion, the term "arbitrary" would be more
appropriate, as it does not require such a test and is not constrained
by any real or imaginary limits. Unfortunately, an arbitrary design
is not patentable.

>Is it a karmic joining of the forces of the universe? The work of the devil?

I don't know, and don't care. While some of my antennas require
divine inspiration during the design phase, and divine intervention
during testing, one would hope that Art would supply sufficient
information in the patent application to remove any need for such
outside assistance.

>If it is a fixed number (or limited set) of elements placed in position,
>then it is certainly not random.

Substitute arbitrary for random and see if the description works any
better.

Incidentally, it appears that not everything is random.
<http://802.11junk.com/jeffl/crud/11-655899.pdf>
See background [0015] which proclaims:
"... where elements 22 through 24 are made of aluminum
rods of one inch in diameter."
Well, "one inch" doesn't sound particularly random. Does it only work
with this diameter? Does it need to be solid rod, or can it be
tubing? What's this monster going to weigh on top band? What
happened to elements 1 through 21?

>I am not an expert on patents, but from what I do know, if you can't patent
>randomly placing elements in no pattern. If you place them in a pattern, it
>is no longer random and can be patented if you can define that pattern.

Yep.

>You could observe, measure or calculate that if you randomly place
>elements, one or more of the resulting patterns, layouts, etc will
>produce specific results and patent that specific pattern. There is no
>requirment that you invent something by any means more scientific than
>just throwning sticks on the floor randomly.

Yep. I'll leave the question of how one achieves resonance and
randomness simultaneously as an exercise for the reader.

>However if you can not identify that pattern, you can't patent it. If
>you do identify that pattern, you can patent an Unwin antenna, or a
>Liebermann-Unwin antenna, if Jeff were to find that critical piece you
>were missing.

There's more than one piece missing. I suggested that Art look at a
finished antenna patent for the missing parts and pieces. However,
I'm sure the USPTO examiner will supply a shopping list, so there's no
need for me to do the same. Although there are no patents with my
name attached, I've helped craft about 3 patents. The problems I ran
into were excessively broad claims, and insufficiently specific
descriptions and claims. It turned out to be a rather difficult
exercise, but eventually was accepted. Art's patent application has
both these problems. In this case, random is excessively broad, while
if they interpret it as arbitrary, it's insufficiently specific.

I'll see if I can get the application scanned so that the PDF text is
searchable. Then, I'll run a grammar chequer on it.

>I did not read the entire patent application, Jeff posted it what was very
>late last night for me, but I did browse it. If the antenna is a modified
>Yagi-Uda design, then it is a design and not random. If it just happens to
>work better than one, I'm not sure that is relevant to the patent.

Antennas are best designed under cover of darkness. However, testing
should be done when the sun is shining or you might fall off the roof.

>I think that what you are trying to patent is randomly tossing metal
>sticks on the ground and connecting wires to some of them in some random
>fashion. I don't think this is what you had intended to do at all.

Yep.

--
Jeff Liebermann jeffl@cruzio.com
150 Felker St #D http://www.LearnByDestroying.com
Santa Cruz CA 95060 http://802.11junk.com
Skype: JeffLiebermann AE6KS 831-336-2558

1483. Re: radiators

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-01 18:06:51 UTC
From: JIMMIE <JIMMIEDEE123@YAHOO.COM>
Message-ID: <8c6fdc8e-3f20-4d0d-ae4e-eda3867583ff@r27g2000vbn.googlegroups.com>
Source record: 13695

On Sep 1, 9:41 am, Art Unwin <arthurun...@gmail.com> wrote:
> On Sep 1, 4:04 am, "Geoffrey S. Mendelson" <g...@mendelson.com> wrote:
>
>
>
> > Jeff Liebermann wrote:
> > >I especially want to see how the elements
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> > > randomness is required.
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> > elements, one or more of the resulting patterns, layouts, etc will
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> > requirment that you invent something by any means more scientific than
> > just throwning sticks on the floor randomly.
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> > late last night for me, but I did browse it. If the antenna is a modified
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> > Geoff.

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> > --
> > Geoffrey S. Mendelson, Jerusalem, Israel g...@mendelson.com N3OWJ/4X1GM
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> The first object is to establish equilibrium by using a WL radiator.
> Anything less breaks away from equilibrium.Adding a second radiator
> affects the electrical length of both radiators together with their
> angle with respect to each other i.e. not planar.
> The question then becomes what is the reference line to determine the
> exact position?
> Now you can deviate from such a equilibrium by adding a radiator that
> is not a WL which then pressures the arbitrary boundary close to
> rupture and so on. Thus the available number and electrical WL
> escalate each without a reference point expands because it will change
> as you move it on the surface of the Earth. Thus "random" is a hard
> word to use when it is any arrangement that satisfies the term of
> equilibrium. If the radiators were magnetic in nature and was thrown
> on the floor they could combine in a arrangement via repell and
> attract that would be maintained or jarred to another cluster position
> while still retaining equilibrium. Thus one should see how difficult
> it is quantasize an arrangement when equilibrium has no measurable
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> of such a arrangement such that a drawing could be made that is a
> picture of any final arrangement of the cluster that would occur for
> all to duplicate. It was for the above reasons why I included a
> typical computerized arrangement which by itself is not required in a
> patent request. As always the difficulty is in the details thus the
> need to establish a datum line which I can use for the remaining
> disclosures is required such that it is not rejected on technicalities
> while providing all details in advance to the World. Thus we have what
> Jeff said, The sum of all comments on this new group amount to zero"
> duplicate under any circumstances.

Nothing wrong with this patent application except that granting it
would give Art rights to every antenna made. An antenna with randomly
placed elements could be defined as almost anything. In other words
the patent application lacks UNIQUENESS.

Jimmie

1484. Re: radiators

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-01 18:24:03 UTC
From: "Geoffrey S. Mendelson" <gsm@mendelson.com>
Message-ID: <slrnh9qpj6.iq7.gsm@cable.mendelson.com>
Source record: 13696

JIMMIE wrote:
> Nothing wrong with this patent application except that granting it
> would give Art rights to every antenna made. An antenna with randomly
> placed elements could be defined as almost anything. In other words
> the patent application lacks UNIQUENESS.

I disgree. If you place element(s) deliberately, they are not placed randomly. It may appear random, for example a discone made of wire elements for both the disk and the cone, but I assure you they were not placed randomly. Maybe not with much forethought, or any accuracy, but that is still not random.

Even if I were to toss a wire out of my window and let it fall where it may, that is not random. There are some random elements of it's placement (where is Ian Malcom when you need him), but the size, length and type of wire were chosen by me, the window was chosen by me, and I had some control of the direction and force.

Seemingly random, arbitrary, etc seem more appropriate than random.

Geoff.

--
Geoffrey S. Mendelson, Jerusalem, Israel gsm@mendelson.com N3OWJ/4X1GM

1485. Re: radiators

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-01 18:41:49 UTC
From: Art Unwin <arthurunwin@gmail.com>
Message-ID: <ecbcab58-b962-4ed5-92ca-2bfd30782f4b@q14g2000vbi.googlegroups.com>
Source record: 13697

On Sep 1, 1:06 pm, JIMMIE <JIMMIEDEE...@YAHOO.COM> wrote:
> On Sep 1, 9:41 am, Art Unwin <arthurun...@gmail.com> wrote:
>
>
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> > On Sep 1, 4:04 am, "Geoffrey S. Mendelson" <g...@mendelson.com> wrote:
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> > > Geoffrey S. Mendelson, Jerusalem, Israel g...@mendelson.com N3OWJ/4X1GM
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> > The first object is to establish equilibrium by using a WL radiator.
> > Anything less breaks away from equilibrium.Adding a second radiator
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> > angle with respect to each other i.e. not planar.
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> placed elements could be defined as almost anything. In other words
> the patent application lacks UNIQUENESS.
>
> Jimmie

Guys you are forgeting that it meets the metric of equi;ibrium thus
the arrangements that are random are only acceptable if they meet the
uniqueness (see above) of being in equilibrium.
I am glad that others see the difficulty I have been placed even tho
the method of equilibrium has been shown that is repeatable for others
to follow.The examiner has supplied some claims that he sees as
acceptable but as he is foreign born, his thoughts, as with mine, may

not hold up to challengein the U.S. In all other countries intent is acceptable as law is based on the intent of the lawwhen made. In the US the problem is way different where the intent is established by the words the intent of which depend on the times and the envinment which is why there is a need for more lawyers than any where else.
A case in point
"Abortion"
that can be struck down at any point dependent on the grammatical inference drawn by a majority of justices at any given time and how the challenge is posed. Or the environment
where a trial is to be heard and the impact of the dominant race or religeon (Simpson)
Yes, justice can be very blind.

1486. Re: radiators

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-01 19:01:50 UTC
From: Art Unwin <arthurunwin@gmail.com>
Message-ID: <407dfd5d-5c30-445e-90d5-7259275fda91@g23g2000vbr.googlegroups.com>
Source record: 13698

On Sep 1, 8:41 am, Art Unwin <arthurun...@gmail.com> wrote:
> On Sep 1, 4:04 am, "Geoffrey S. Mendelson" <g...@mendelson.com> wrote:
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> > Geoffrey S. Mendelson, Jerusalem, Israel g...@mendelson.com N3OWJ/4X1GM
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> disclosures is required such that it is not rejected on technicalities
> while providing all details in advance to the World. Thus we have what
> Jeff said, The sum of all comments on this new group amount to zero"
> duplicate under any circumstances.

Jeff, as a past examiner you surprize me. Present day patent provide
an immense announ of false hood as one cannot judge what works or not
with the exception of perpetual motion.
There fore isnt it just the claims that count as long as information
is provided in the body
to justify it. I could claim in the body that an antenna described
requires only a small battery to work the world and use that in the
claim. Whether it is true or not cannot be determined by the examiner
and the inventor does not now need to present a sample.
It is for the next inventer to claim a better mousetrap for economical
reasons that he sees where others think it has no valueand not worth
the effort. The initial inventor can lose all if he does not commence
with a commercial effort as ordained by the PTO
No wonder the courts want to limit their involvement in patent cases
and why the rules were changes i.e. PTO being challenged by those who
preside over justice in cases that are challenged. It is for this very

reason that laws in other countries establish the intent of the law AT THAT TIME so a judge presides only with the case at hand and not challenge the political made laws .

1487. Re: radiators

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-01 19:09:03 UTC
From: "Geoffrey S. Mendelson" <gsm@mendelson.com>
Message-ID: <slrnh9qs8k.mmf.gsm@cable.mendelson.com>
Source record: 13699

Art Unwin wrote:
> Guys you are forgeting that it meets the metric of equilibrium thus
> the arrangements that are random are only acceptable if they meet the
> uniqueness (see above) of being in equilibrium.

Then I would have said "place in a position of equilibrium" and not used
the word random at all. There is a very big difference between random
and equilibrium. If something is placed randomly, e.g. dropped on the floor,
and moves to a position of equilibrium it is no longer randomly placed.

> I am glad that others see the difficulty I have been placed even tho
> the method of equilibrium has been shown that is repeatable for others
> to follow.

That sentence alone disputes your claim of randomness. If a system can be
set up in equilibrium in a repeatable method, then there is no randomness
in the system. There may be more than one optimal point, but that is not
the same as a random one.

Are you trying to patent the device, i.e. an antenna consisiting of elements
in equilibrium, or a method of placing elements in as seemingly random way
to achieve equilibrium?

> The examiner has supplied some claims that he sees as
> acceptable but as he is foreign born, his thoughts, as with mine, may
> not hold up to challenge in the U.S.

That's how I found out that choosing a patent agent who charged us $3500
to write patent applications and then $3500 to chalenge a rejection was
worthless because in the end we did not get the patents. If we had
hired the "best in the country" at $600 an hour, we would of had our
patents.

Now we have nothing except rejected applications which while they bear our
names, they do not have the name of the patent agent we hired on them at all.

> In all other countries intent is
> acceptable as law is based on the intent of the lawwhen made. In the
> US the problem is way different where the intent is established by the
> words the intent of which depend on the times and the envinment which
> is why there is a need for more lawyers than any where else.

No, that is why there are courts. Almost every country has them.

Geoff.

--
Geoffrey S. Mendelson, Jerusalem, Israel gsm@mendelson.com N3OWJ/4X1GM

1488. Re: Crossposting Permitted to rec.radio.amateur.moderated

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-01 19:23:31 UTC
From: kb9rqz <mark@kb9rqz.com>
Message-ID: <9704c26c-a034-414a-b23f-899e08059976@e34g2000vbm.googlegroups.com>
Source record: 13700
Cross-posted to:
rec.radio.amateur.antenna,rec.radio.amateur.dx,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc

On Sep 1, 2:00 am, r...@panix.com (rec.radio.amateur.moderated Admin)
wrote:
>
for a ng that was created to aoid troll to be trolling is pretty lame

1489. Re: radiators

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-01 19:36:04 UTC
From: Art Unwin <arthurunwin@gmail.com>
Message-ID: <b44afbd9-8e2d-484f-8e8a-ab317dc04bcd@l34g2000vba.googlegroups.com>
Source record: 13601

On Sep 1, 1:24 pm, "Geoffrey S. Mendelson" <g...@mendelson.com> wrote:
> JIMMIE wrote:
> > Nothing wrong with this patent application except that granting it
> > would give Art rights to every antenna made. An antenna with randomly
> > placed elements could be defined as almost anything. In other words
> > the patent application lacks UNIQUENESS.
>
> I disgree. If you place element(s) deliberately, they are not placed
> randomly. It may appear random, for example a discone made of wire elements
> for both the disk and the cone, but I assure you they were not placed randomly.
> Maybe not with much forethought, or any accuracy, but that is still not
> random.
>
> Even if I were to toss a wire out of my window and let it fall where it may,
> that is not random. There are some random elements of it's placement (where
> is Ian Malcom when you need him), but the size, length and type of wire were
> chosen by me, the window was chosen by me, and I had some control of the
> direction and force.
>
> Seemingly random, arbitrary, etc seem more appropriate than random.
>
> Geoff.
>
> --
> Geoffrey S. Mendelson, Jerusalem, Israel g...@mendelson.com N3OWJ/4X1GM

Could be, but in this case there are three degrees of freedom for
placement where only the
cluster as a whole meets equilibrium are those that are acceptable
under the claims.
For descriptive purposes those familiar with the art or even physics
would accept almost anything as long as the entirety is considered in
equilibrium. Remember that after one element is placed in position at
any random place or angle then other added must follow in kind
dependent on how many elements are added even tho the first two
element placed meets all the requirement for commercials. Never the
less, one can choose to include any number of element to be used where
the addition of one immediately changes the position of others
including length to remain in equilibrium. So as I stated before there
is no datum to fix upon so that metrics can be applied. In any othe
Country a cluster of elements which in their entirety are in a state
of equilibrium is acceptable. As seen by prior posts on this newsgroup
"equilibrium" provides confusion in the U.S. and was the subject of
many years of auguement But for those familiar with the state of the

art would see no problem.
and it is they that all patents are addressed to.

1490. Re: radiators

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-01 19:59:04 UTC
From: "Geoffrey S. Mendelson" <gsm@mendelson.com>
Message-ID: <slrnh9qv4l.p1o.gsm@cable.mendelson.com>
Source record: 13602

Art Unwin wrote:

> There fore isnt it just the claims that count as long as information
> is provided in the body
> to justify it. I could claim in the body that an antenna described
> requires only a small battery to work the world and use that in the
> claim. Whether it is true or not cannot be determined by the examiner
> and the inventor does not now need to present a sample.

That's were having an expert write your patent matters. Depending upon how the application was written, such a claim could leave operating it without a battery or with a large battery in the public domain (outside the scope of the patent), and so on. Claims like that are best left to advertising and not patents.

> It is for the next inventer to claim a better mousetrap for economical
> reasons that he sees where others think it has no valueand not worth
> the effort. The initial inventor can lose all if he does not commence
> with a commercial effort as ordained by the PTO

No, the inventor is not required to do anything with their patent. You can sit on it for the rest of its life and do nothing. You are assuming that one has to sell something to pay the mantainance fees. The total paid out in parts at 3.5, 7.5 and 11.5 years is under $4,000 for a small inventor or company. That's $266 a year over 15 years, the approximate life of a patent that takes 5 years from first invention/publication to approval.

I'm sorry that patent bombing is no longer a poor man's game. (filing lots of patent applications and hoping one will pay off). However the rules of the game changed, possibly for the better. If you are quick about it, you can file a provisional patent and shop it around for the money to make a real patent out of it, or sell it to professional investors.

Since the filing fee for a small inventor is $110, you can file one for the cost in the US of dinner, a movie and a baby sitter.

The downside is if you fail to file, or fail to convert the provisional patent into a real one before the year is out, you loose, as I did with several inventions I wrote provisional patent applications from my blog postings but was unable to file them.

> No wonder the courts want to limit their involvement in patent cases
> and why the rules were changes i.e. PTO being challenged by those who
> preside over justice in cases that are challenged. It is for this very
> reason that laws in other countries establish the intent of the law AT
> THAT TIME so a judge presides only with the case at hand and not
> challenge the political made laws .

The courts want to get out of it because it is a lose-lose situation for everyone. If there were to be binding arbritation by experts, or just licensing deals, everyone would be happy.

Geoff.

--
Geoffrey S. Mendelson, Jerusalem, Israel gsm@mendelson.com N3OWJ/4X1GM

1491. Re: radiators

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-01 20:35:33 UTC
From: JIMMIE <JIMMIEDEE123@YAHOO.COM>
Message-ID: <844e2afb-4b30-4168-adcf-c0fd5b29648d@b18g2000vbl.googlegroups.com>
Source record: 13603

On Sep 1, 2:24 pm, "Geoffrey S. Mendelson" <g...@mendelson.com> wrote:
> JIMMIE wrote:
> > Nothing wrong with this patent application except that granting it
> > would give Art rights to every antenna made. An antenna with randomly
> > placed elements could be defined as almost anything. In other words
> > the patent application lacks UNIQUENESS.
>
> I disgree. If you place element(s) deliberately, they are not placed
> randomly. It may appear random, for example a discone made of wire elements
> for both the disk and the cone, but I assure you they were not placed randomly.
> Maybe not with much forethought, or any accuracy, but that is still not
> random.
>
> Even if I were to toss a wire out of my window and let it fall where it may,
> that is not random. There are some random elements of it's placement (where
> is Ian Malcom when you need him), but the size, length and type of wire were
> chosen by me, the window was chosen by me, and I had some control of the
> direction and force.
>
> Seemingly random, arbitrary, etc seem more appropriate than random.
>
> Geoff.
>
> --
> Geoffrey S. Mendelson, Jerusalem, Israel g...@mendelson.com N3OWJ/4X1GM

Lets say you toss a bunch of metal rods up in the air and let them
fall randomly, the odds of them falling in the shape of a yagi is the
same as falling in any other position. While it is extremely unlikely
they will take the pattern of a useful Yagi antenna it is also just as
extremely unlikely that they will take any other pattern.

In your case there are a number of variables with that could be
predetermined, however all it takes is one variable chosen by chance
to make it random.

Arthur could help by defining randomness limiting it to positions
within a certain set as is done with gaming equipment. There are also
a few other words he also needs to define as they appear to have a
rather unique usage.

Jimmie

1492. Re: radiators

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-01 20:54:04 UTC
From: "Geoffrey S. Mendelson" <gsm@mendelson.com>
Message-ID: <slrnh9r2an.22c.gsm@cable.mendelson.com>
Source record: 13604

JIMMIE wrote:

> Arthur could help by defining randomness limiting it to positions
> within a certain set as is done with gaming equipment.

>
As I said:

>> Seemingly random, arbitrary, etc seem more appropriate than random.

>There are also
> a few other words he also needs to define as they appear to have a
> rather unique usage.

Or better still replace them with clear wording that leaves no doubt as
to what he meant.

Geoff.

--
Geoffrey S. Mendelson, Jerusalem, Israel gsm@mendelson.com N3OWJ/4X1GM

1493. Re: New antenna design

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-01 21:04:52 UTC
From: Dave <noone@nowhere.com>
Message-ID: <U%fnm.696$Jd7.241@nwrddc02.gnilink.net>
Source record: 13605

"Art Unwin" <arthurunwin@gmail.com> wrote in message
news:770541a5-71f4-4c41-b33e-04ab3bb174e3@d34g2000vbm.googlegroups.com...

>Too late David
>But I have a question for you, Does the New World (Rumsfield) use
>the term "equilibrium" in any of the engineering curriculums or are
>you quoting what appears to be American English and not that of the
>Olde World? Personaly if I was dealing with entropy or those wonderful
>graphic steam tables +equilibrium" would be discarded in favor of
>yours. But to explain all that stuff would be impossible with this
>group so I opted for the Universal term that was current in Newton and
>Maxwell time. Maybe what we are seeing is a intrusion of new math
>into physics! Either way it does explain to me why american jaws
>dropped in ignorance when the term was used.

there is no 'equilibrium' used in the electromagnetics texts in my
collection that i can find. 'steady state' is the closest, but that is
normally used to refer to the response of a system after the transient
response has died out. 'equilibrium' is often used in thermodynamics, but
any analogy to that in electromagnetics is useless as it refers to a state
where there is no energy flow, and if energy isn't flowing then you have no
radiation. 'equilibrium' could also refer to a mechanical system that has
reached 'steady state' or a stable state, but again similar to the
thermodynamic use it is useless for electromagnetics... maybe for
electrostatic or static magnetic fields, but not for radiation.

1494. Re: New antenna design

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-02 00:09:06 UTC
From: Art Unwin <arthurunwin@gmail.com>
Message-ID: <d2e8aa12-286c-4f67-b42b-1db135e84ac1@g1g2000vbr.googlegroups.com>
Source record: 13606

On Sep 1, 4:04 pm, "Dave" <no...@nowhere.com> wrote:
> "Art Unwin" <arthurun...@gmail.com> wrote in message
>
> news:770541a5-71f4-4c41-b33e-04ab3bb174e3@d34g2000vbm.googlegroups.com...
>
> >Too late David
> >But I have a question for you, Does the New World (Rumsfield) use
> >the term "equilibrium" in any of the engineering curriculums or are
> >you quoting what appears to be American English and not that of the
> >Olde World? Personaly if I was dealing with entropy or those wonderful
> >graphic steam tables +equilibrium" would be discarded in favor of
> >yours. But to explain all that stuff would be impossible with this
> >group so I opted for the Universal term that was current in Newton and
> >Maxwell time. Maybe what we are seeing is a intrusion of new math
> >into physics! Either way it does explain to me why american jaws
> >dropped in ignorance when the term was used.
>
> there is no 'equilibrium' used in the electromagnetics texts in my
> collection that i can find. 'steady state' is the closest, but that is
> normally used to refer to the response of a system after the transient
> response has died out. 'equilibrium' is often used in thermodynamics, but
> any analogy to that in electromagnetics is useless as it refers to a state
> where there is no energy flow, and if energy isn't flowing then you have no
> radiation. 'equilibrium' could also refer to a mechanical system that has
> reached 'steady state' or a stable state, but again similar to the
> thermodynamic use it is useless for electromagnetics... maybe for
> electrostatic or static magnetic fields, but not for radiation.

Thanks for the response David. I will have to look at my books
regarding basic laws which are all connected to Maxwell's laws. A case
in point is the tank circuit which is seen as being in equilibrium and
where there is current flow and which I state is the electrical
circuit for radiation that is totally in accordance with the laws of
Maxwell. If you agree it can be used for a electrostatic field then
you are agreeing to any circuit which contains a capacitor with its
own contained electrostatic field. I agree that the term is not
presently in the books
which is why progress has been stunted and the reason for my
disclosure but I assure you that this is an error of the education
system since equilibrium is the basic datum line for all laws
including electrical. As an over check on my position antenna programs
will always
point to a non planar form in equilibrium per Maxwells laws so with
the assumption that programmers did use Maxwell's equations correctly

then my findings have been confirmed
Hang on for a while and I will report back on my findings as well as
Wilkedia type of definitions. Since the Universe is considered to have
an electrical foundation which includes the four forces of the
standard model then without the Universe
achieving a point of equilibrium we can all be seen as traveling thru
the Universe at the speed of light with no end to motion to place us
in a state of balance, a terrible thought if we cannot rely on seeing
the sunrise every day.
Regards
Art

1495. Re: radiators

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-02 00:30:33 UTC
From: Art Unwin <arthurunwin@gmail.com>
Message-ID: <dbb74538-4d58-4891-abd7-379ce40019d0@l34g2000vba.googlegroups.com>
Source record: 13607

On Sep 1, 2:59 pm, "Geoffrey S. Mendelson" <g...@mendelson.com> wrote:
> Art Unwin wrote:
> > There fore isnt it just the claims that count as long as information
> > is provided in the body
> > to justify it. I could claim in the body that an antenna described
> > requires only a small battery to work the world and use that in the
> > claim. Whether it is true or not cannot be determined by the examiner
> > and the inventor does not now need to present a sample.
>
> That's were having an expert write your patent matters. Depending upon
> how the application was written, such a claim could leave operating it
> without a battery or with a large battery in the public domain
> (outside the scope of the patent), and so on. Claims like that are best
> left to advertising and not patents.
>
> > It is for the next inventer to claim a better mousetrap for economical
> > reasons that he sees where others think it has no valueand not worth
> > the effort. The initial inventor can lose all if he does not commence
> > with a commercial effort as ordained by the PTO
>
> No, the inventor is not required to do anything with their patent. You can
> sit on it for the rest of its life and do nothing. You are assuming that
> one has to sell something to pay the mantainance fees. The total paid out
> in parts at 3.5, 7.5 and 11.5 years is under $4,000 for a small inventor
> or company. That's $266 a year over 15 years, the approximate life of a
> patent that takes 5 years from first invention/publication to approval.
>
> I'm sorry that patent bombing is no longer a poor man's game. (filing lots
> of patent applications and hoping one will pay off). However the rules of the
> game changed, possibly for the better. If you are quick about it, you can file
> a provisional patent and shop it around for the money to make a real patent
> out of it, or sell it to professional investors.
>
> Since the filing fee for a small inventor is $110, you can file one for
> the cost in the US of dinner, a movie and a baby sitter.
>
> The downside is if you fail to file, or fail to convert the provisional
> patent into a real one before the year is out, you loose, as I did with
> several inventions I wrote provisional patent applications from my blog
> postings but was unable to file them.
>
> > No wonder the courts want to limit their involvement in patent cases
> > and why the rules were changes i.e. PTO being challenged by those who
> > preside over justice in cases that are challenged. It is for this very

> > reason that laws in other countries establish the intent of the law AT
> > THAT TIME so a judge presides only with the case at hand and not
> > challenge the political made laws .
>
> The courts want to get out of it because it is a lose-lose situation for
> everyone. If there were to be binding arbritation by experts, or just licensing
> deals, everyone would be happy.
>
> Geoff.
>
> --
> Geoffrey S. Mendelson, Jerusalem, Israel g...@mendelson.com N3OWJ/4X1GM

Geoff, as you are aware I have many patents, both under the GE banner
as well as my own. The advantage of being an independent inventor or
private entity is that the Patent Office is committed to assist. To me
this is an advantage that exceeds paying $10,000 to a patent attorney.
In addition, when having a patent attorney he may well not advise you
as to what is happening between he and the PTO, and you as the
inventor cannot communicate with the PTO yourself. One time I had to
drive overnight to D.C. to fire my attorney such that I was able to
file something myself with just hours to spare. The costs that you
mentioned are incorrect even for a private entity on all that have
been filed by me but I understand changes have been made with respect
to the timing of maintenance fees e.t.c which appear to muddy up the
water some what. I have provided my credit card number to draw upon
and if they want less then they will tell me, which has been my
standard aproach over the years.I am comfortable with my present
status weather I win or lose as my work is now of record.
Cheers

1496. Re: radiators

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-02 00:40:09 UTC
From: Art Unwin <arthurunwin@gmail.com>
Message-ID: <11a20e7e-86e9-48ab-9136-1d70ccf847a8@v36g2000yqv.googlegroups.com>
Source record: 13608

On Sep 1, 3:35 pm, JIMMIE <JIMMIEDEE...@YAHOO.COM> wrote:
> On Sep 1, 2:24 pm, "Geoffrey S. Mendelson" <g...@mendelson.com> wrote:
>
>
>
> > JIMMIE wrote:
> > > Nothing wrong with this patent application except that granting it
> > > would give Art rights to every antenna made. An antenna with randomly
> > > placed elements could be defined as almost anything. In other words
> > > the patent application lacks UNIQUENESS.
>
> > I disgree. If you place element(s) deliberately, they are not placed
> > randomly. It may appear random, for example a discone made of wire elements
> > for both the disk and the cone, but I assure you they were not placed randomly.
> > Maybe not with much forethought, or any accuracy, but that is still not
> > random.
>
> > Even if I were to toss a wire out of my window and let it fall where it may,
> > that is not random. There are some random elements of it's placement (where
> > is Ian Malcom when you need him), but the size, length and type of wire were
> > chosen by me, the window was chosen by me, and I had some control of the
> > direction and force.
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> > Seemingly random, arbitrary, etc seem more appropriate than random.
>
> > Geoff.
>
> > --
> > Geoffrey S. Mendelson, Jerusalem, Israel g...@mendelson.com N3OWJ/4X1GM
>
> Lets say you toss a bunch of metal rods up in the air and let them
> fall randomly, the odds of them falling in the shape of a yagi is the
> same as falling in any other position. While it is extremely unlikely
> they will take the pattern of a useful Yagi antenna it is also just as
> extremely unlikely that they will take any other pattern.
>
> In your case there are a number of variables with that could be
> predetermined, however all it takes is one variable chosen by chance
> to make it random.
>
> Arthur could help by defining randomness limiting it to positions
> within a certain set as is done with gaming equipment. There are also
> a few other words he also needs to define as they appear to have a
> rather unique usage.

>
> Jimmie

Jim,
The patent examiner is committed to help me so such things do not
happen.
If you do not have an attorney they will step in and render
assistance.,Remember that It is really a question of presentation to
those skilled in the art of which the examiner is one
and not to the World at large. There is a former examiner in this
group so you really should address such questions to him for
verification that you can trust.

1497. Re: radiators

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-02 01:32:06 UTC
From: Art Unwin <arthurunwin@gmail.com>
Message-ID: <6131a5ed-a506-4199-93fc-0e2aa703f671@d21g2000vbm.googlegroups.com>
Source record: 13609

On Sep 1, 2:09 pm, "Geoffrey S. Mendelson" <g...@mendelson.com> wrote:
> Art Unwin wrote:
> > Guys you are forgeting that it meets the metric of equilibrium thus
> > the arrangements that are random are only acceptable if they meet the
> > uniqueness (see above) of being in equilibrium.
>
> Then I would have said "place in a position of equilibrium" and not used
> the word random at all. There is a very big difference between random
> and equilibrium. If something is placed randomly, e.g. dropped on the floor,
> and moves to a position of equilibrium it is no longer randomly placed.
>
> > I am glad that others see the difficulty I have been placed even tho
> > the method of equilibrium has been shown that is repeatable for others
> > to follow.
>
> That sentence alone disputes your claim of randomness. If a system can be
> set up in equilibrium in a repeatable method, then there is no randomness
> in the system. There may be more than one optimal point, but that is not
> the same as a random one.
>
> Are you trying to patent the device, i.e. an antenna consisiting of elements
> in equilibrium, or a method of placing elements in as seemingly random way
> to achieve equilibrium?
>
> > The examiner has supplied some claims that he sees as
> > acceptable but as he is foreign born, his thoughts, as with mine, may
> > not hold up to challenge in the U.S.
>
> That's how I found out that choosing a patent agent who charged us $3500
> to write patent applications and then $3500 to chalenge a rejection was
> worthless because in the end we did not get the patents. If we had
> hired the "best in the country" at $600 an hour, we would of had our
> patents.
>
> Now we have nothing except rejected applications which while they bear our
> names, they do not have the name of the patent agent we hired on them at all.
>
> > In all other countries intent is
> > acceptable as law is based on the intent of the lawwhen made. In the
> > US the problem is way different where the intent is established by the
> > words the intent of which depend on the times and the envinment which
> > is why there is a need for more lawyers than any where else.
>
> No, that is why there are courts. Almost every country has them.

>
> Geoff.
>
> --
> Geoffrey S. Mendelson, Jerusalem, Israel g...@mendelson.com N3OWJ/4X1GM

Courts are for applying the law of the land. In the U.S. laws are made
that cannot be enforced in the courts. In the UK the intent of any
initial law must be established and approved by the justices in the
House of Lords before it becomes the law of the land.
If the US Supreme Court did the same thing thousands of lawyers in the
land would be out of a job since the law is the law where intent has
been pre provided such that lawyers have very little work to do Or
even to argue about the intent of the law at hand. This allows for
separation of Church and State so that aparthide does not take place
and democracy is retained. The moment church is not separated a single
church then becomes dominant in the land where its edicts thus reign
supreme, which is a real problem if nearby Countries adopt a different
religion such that conflict reigns and where neither are willing to
abandon their faith to that of the unbelievers.

1498. Re: New antenna design

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-02 02:12:59 UTC
From: tom <news4792@taring.org>
Message-ID: <4a9dd495$0$28112$8046368a@newsreader.iphouse.net>
Source record: 13610

Jeff Liebermann wrote:

> "Resonance phenomena on Yagi arrays"
> <http://adsabs.harvard.edu//abs/1981CEEJ....6....9T>
>

BTW, this link has to do with resonance of the yagi in a narrowband range just below the director array cutoff frequency, and nothing to do with the driven element.

Google can be your friend, but when used without vetting the results can sometimes lead to embarrassment. In this group, it's nothing like the nonsense spouted by Art and some others however, so no worries.

tom
K0TAR

1499. Re: New antenna design

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-02 02:22:57 UTC
From: Art Unwin <arthurunwin@gmail.com>
Message-ID: <879563a7-ab88-4652-8f1e-d2e6a8480854@g31g2000yqc.googlegroups.com>
Source record: 13611

On Sep 1, 7:09 pm, Art Unwin <arthurun...@gmail.com> wrote:
> On Sep 1, 4:04 pm, "Dave" <no...@nowhere.com> wrote:
>
>
>
> > "Art Unwin" <arthurun...@gmail.com> wrote in message
>
> >news:770541a5-71f4-4c41-b33e-04ab3bb174e3@d34g2000vbm.googlegroups.com...
>
> > >Too late David
> > >But I have a question for you, Does the New World (Rumsfield) use
> > >the term "equilibrium" in any of the engineering curriculums or are
> > >you quoting what appears to be American English and not that of the
> > >Olde World? Personaly if I was dealing with entropy or those wonderful
> > >graphic steam tables +equilibrium" would be discarded in favor of
> > >yours. But to explain all that stuff would be impossible with this
> > >group so I opted for the Universal term that was current in Newton and
> > >Maxwell time. Maybe what we are seeing is a intrusion of new math
> > >into physics! Either way it does explain to me why american jaws
> > >dropped in ignorance when the term was used.
>
> > there is no 'equilibrium' used in the electromagnetics texts in my
> > collection that i can find. 'steady state' is the closest, but that is
> > normally used to refer to the response of a system after the transient
> > response has died out. 'equilibrium' is often used in thermodynamics, but
> > any analogy to that in electromagnetics is useless as it refers to a state
> > where there is no energy flow, and if energy isn't flowing then you have no
> > radiation. 'equilibrium' could also refer to a mechanical system that has
> > reached 'steady state' or a stable state, but again similar to the
> > thermodynamic use it is useless for electromagnetics... maybe for
> > electrostatic or static magnetic fields, but not for radiation.
>
> Thanks for the response David. I will have to look at my books
> regarding basic laws which are all connected to Maxwell's laws. A case
> in point is the tank circuit which is seen as being in equilibrium and
> where there is current flow and which I state is the electrical
> circuit for radiation that is totally in accordance with the laws of
> Maxwell. If you agree it can be used for a electrostatic field then
> you are agreeing to any circuit which contains a capacitor with its
> own contained electrostatic field. I agree that the term is not
> presently in the books
> which is why progress has been stunted and the reason for my
> disclosure but I assure you that this is an error of the education
> system since equilibrium is the basic datum line for all laws

> including electrical. As an over check on my position antenna programs
> will always
> point to a non planar form in equilibrium per Maxwells laws so with
> the assumption that programmers did use Maxwell's equations correctly
> then my findings have been confirmed
> Hang on for a while and I will report back on my findings as well as
> Wilkedia type of definitions. Since the Universe is considered to have
> an electrical foundation which includes the four forces of the
> standard model then without the Universe
> achieving a point of equilibrium we can all be seen as traveling thru
> the Universe at the speed of light with no end to motion to place us
> in a state of balance, a terrible thought if we cannot rely on seeing
> the sunrise every day.
> Regards
> Art

On a quick google on Newton equilibrium there does appear that
equilibrium is not liked
say as much as "balanced" Thus science is essentially changing laws to
today's intent
and at the same time describing the laws with respect to Earth and not
the Universe.
I can see now where so much reference is to gravity and not the
combination of Gravity
accompanied by the spin action of Corriolis, where neither can exist
without the other in cosmic terms. Thus every action and opposite
action considers the Corriolis as non existant
such that Gravity alone should be part of the Standard Model. It now
can be seen that the
"intent" of the laws has changed over the years without emphasising
the "core" of the laws as intended by the providers. Fortunately NASA
does not have to discover new laws for
each and every part of the Universe since the laws we use are
Universal and not just confined to Earth as we know it. Thus I,
coming from the Olde World, still adheres to the intent of the law in
macro style where others understand it as decifered by the new World
in micro form for a more understandable relationship in todays
education. In other words
first principles in education has given way to continuos plagurism or
learning by rote.

1500. Qoute: "Buy The Unwin Cluster Antenna Here"

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-02 03:54:46 UTC
From: "Sal M. Onella" <salmonella@food.poisoning.org>
Message-ID: <c0mnm.45$4t6.24@newsfe06.iad>
Source record: 13612

When I see anything like the above quoted subject line on a real, serious posting, that is the day I will read another post on this subject. I have been kidding myself for years that he has something to show us, tell us and/or sell us.

Time's up!

1501. Re: New antenna design

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-02 04:26:51 UTC
From: Art Unwin <arthurunwin@gmail.com>
Message-ID: <8ddff650-ef8c-4cfa-8134-892b6650cde7@upsg2000gro.googlegroups.com>
Source record: 13613

On Sep 1, 7:47 am, tom <news4...@taring.org> wrote:
> Jeff Liebermann wrote:
>
> > Huh? I can tune across the frequency range of a Yagi-Uda antenna,
> > measure the VSWR, and most certainly see a resonance dip at the design
> > center frequency. I can also attach a grid dip meter to the feed,
> > through a coupling loop, and see the resonance. Take away the
>
> That's not resonance, it's matched at that frequency.
>
> > reflector and directors, and we're left with an ordinary dipole, which
> > is most certainly a resonant antenna. If the driven element is not
> > resonant, what is producing the dip in VSWR at the design frequency?
>
> The match. It's normally not a resonant element when in the middle of a
> Yagi-Uda array, although it's _near_ resonance when the rest of the
> elements are removed.
>
> It is possible to have a resonance at the match frequency, but unusual.
> Run a couple yagis through Eznec and check the driven element impedence.
>   For instance, the NBS yagi that comes with Eznec. At 50.125 it's
> 11.7+j5.9, not very resonant. I have a 222 yagi that has a DE longer
> than the reflector, also unusual, but it works fine.
>
> tom
> K0TAR

My goodness. This is the silliest thing I have heard in years.
A yagi has a bandwidth based around a resonant frequency which is the
change over point
around which the impedance is not measured by the resistance alone.
If the feed radiator is devoid of any proximitry effect then its
material length differs from that of an array where the proximetry
actions exists. Thus a yagi driven element is resonant and different
from a driven element alone because of the proximitry effect. If your
radiator impedance is 11.7 +j5.9 then you are not at the point of
resonance which must be solely resistive. Modify the proximetry effect
to make it resonant.
This is exactly what you did by using a short length reflector at a
abnormal distance from the driven element. Methinks you regard only 50
ohms as being resonant where anything different from that is not
resonant. Tom you are nuts!

1502. Re: radiators

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-02 05:19:05 UTC
From: Jeff Liebermann <jeffl@cruzio.com>
Message-ID: <cnur95d3kmdb29gq75tpvd4aj2d8rd36ka@4ax.com>
Source record: 13614

On Tue, 1 Sep 2009 17:40:09 -0700 (PDT), Art Unwin
<arthurunwin@gmail.com> wrote:

>The patent examiner is committed to help me so such things do not
>happen.

On what planet did you find this patent examiner? When I was trying
to help scribble some patent applications (in about 2000), I never was
able to communicate with any patent examiner. They're totally
isolated from the applicant to protect against intimidation and
bribery. I received a check sheet and a letter of explanation of what
needed correcting. Attached was a list of recommendations and a
schedule for resubmission. The first one required 5 resubmissions,
over a period of about 2 years to get through. The next two were
somewhat easier and only took about a year. I was about to give up on
the last two, when the company hired a patent attorney, who got things
rolling again.
<http://en.wikipedia.org/wiki/Patent_examiner>

Sigh:
<http://usptoexaminers.com>
You might want to see how your examiner rates.

>If you do not have an attorney they will step in and render
>assistance.,

Who will? Certainly not the examiner.

The USPTO has the "Inventors Assistance Center" to help individuals
with their documentation:
<http://www.uspto.gov/web/offices/pac/dapp/pacmain.html>
The problem is that they can only help with the process, not with the
merits of the individual patent. You can talk with someone in
customer service, but that's the same story. If you want help with
your claims, you'll get directed to a patent attorney.

>Remember that It is really a question of presentation to
>those skilled in the art of which the examiner is one
>and not to the World at large. There is a former examiner in this
>group so you really should address such questions to him for
>verification that you can trust.

Agreed. Experience is good substitute for guesswork and Googleing.
Incidentally, I did a Google Groups search for "former patent
examiner" in this newsgroup and found nothing.

--
Jeff Liebermann 150 Felker St #D Santa Cruz CA 95060
831-336-2558
http://802.11junk.com jeffl@cruzio.com
http://www.LearnByDestroying.com AE6KS

1503. Re: radiators

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-02 05:29:43 UTC
From: Jeff Liebermann <jeffl@cruzio.com>
Message-ID: <v30s95hflac0gihel4a4elvelbiigd2bbp@4ax.com>
Source record: 13615

On Tue, 1 Sep 2009 12:01:50 -0700 (PDT), Art Unwin
<arthurunwin@gmail.com> wrote:

>Jeff, as a past examiner you surprize me.

Jeff or Geoff? I was never a patent examiner.

>Present day patent provide
>an immense annount of false hood as one cannot judge what works or not
>with the exception of perpetual motion.

Right. One does NOT need to demonstrate that something works in order
to obtain a patent. There are plenty of patents for some
non-functional devices. Basically, it needs to be novel, non-obvious,
and provide a useful function. That's all.

>There fore isnt it just the claims that count as long as information
>is provided in the body
>to justify it. I could claim in the body that an antenna described
>requires only a small battery to work the world and use that in the
>claim. Whether it is true or not cannot be determined by the examiner
>and the inventor does not now need to present a sample.
>It is for the next inventer to claim a better mousetrap for economical
>reasons that he sees where others think it has no valueand not worth
>the effort. The initial inventor can lose all if he does not commence
>with a commercial effort as ordained by the PTO
>No wonder the courts want to limit their involvement in patent cases
>and why the rules were changes i.e. PTO being challenged by those who
>preside over justice in cases that are challenged. It is for this very
>reason that laws in other countries establish the intent of the law AT
>THAT TIME so a judge presides only with the case at hand and not
>challenge the political made laws .

Rubbish. However, I think I now understand your writing style. Most
of your sentences are comma splices or conjunction splices, which glue
two marginally related concepts together. This lets you slide neatly
and gracefully from one topic to the next, usually in one paragraph.
Were this done without the splicing, it would appear as an abrupt
change in topic, or just random thoughts. Impressive. I need to
learn how to do that as it appears to be quite useful. Thanks.

--
Jeff Liebermann 150 Felker St #D Santa Cruz CA 95060
831-336-2558
http://802.11junk.com jeffl@cruzio.com
http://www.LearnByDestroying.com AE6KS

1504. Re: radiators

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-02 05:41:39 UTC
From: Jeff Liebermann <jeffl@cruzio.com>
Message-ID: <0s0s95p6fnel92munfmstrn9n4l6hac86k@4ax.com>
Source record: 13616

On Tue, 1 Sep 2009 17:30:33 -0700 (PDT), Art Unwin
<arthurunwin@gmail.com> wrote:

>The costs that you
>mentioned are incorrect even for a private entity on all that have
>been filed by me but I understand changes have been made with respect
>to the timing of maintenance fees e.t.c which appear to muddy up the
>water some what.

"What Does It Cost to Obtain a Patent"
<http://home.netcom.com/~patents2/What%20Does%20It%20Cost%20Patent.htm>
$10,000 for US only.

"Patent costs"
<http://www.oppedahl.com/cost/>
$2,000 to $10,000 (with an attorney).

"How Much Does a Patent Cost?"
<http://ezinearticles.com/?How-Much-Does-a-Patent-Cost?&id=1620437>
Several Thousand dollars.... oh well.

<http://community2.business.gov/bsng/board/message?board.id=GeneralBusiness&message.id=338
>
Various opinions ranging from $5,000 to $20,000 (with an attorney).

USPTO fee schedules:
<http://www.uspto.gov/go/fees/>

USPTO FAQ on fees:
<http://www.uspto.gov/main/faq/index_feefaq.html>

--
Jeff Liebermann 150 Felker St #D Santa Cruz CA 95060
831-336-2558
http://802.11junk.com jeffl@cruzio.com
http://www.LearnByDestroying.com AE6KS

1505. Re: radiators

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-02 05:44:44 UTC
From: Jeff Liebermann <jeffl@cruzio.com>
Message-ID: <dd1s95d3285sikpime4lclme61kckng4lj@4ax.com>
Source record: 13617

On Tue, 01 Sep 2009 22:19:05 -0700, Jeff Liebermann <jeffl@cruzio.com>
wrote:

>The first one required 5 resubmissions,
>over a period of about 2 years to get through. The next two were
>somewhat easier and only took about a year. I was about to give up on
>the last two, when the company hired a patent attorney, who got things
>rolling again.

Argh. I just checked my billing log (Quickbooks). The first one took
over 3 years. The other two about 2 years. My problem was that I
didn't get paid until AFTER the patent was accepted. Remind me to
never accept a contract like that again.

--
Jeff Liebermann 150 Felker St #D Santa Cruz CA 95060
831-336-2558
http://802.11junk.com jeffl@cruzio.com
http://www.LearnByDestroying.com AE6KS

1506. September 3

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-02 17:08:05 UTC
From: Art Unwin <arthurunwin@gmail.com>
Message-ID: <0cc657d5-65a3-4995-8bc9-17755b64433e@a7g2000yqo.googlegroups.com>
Source record: 13618

Seventy years ago the U.K declared war on Germany
And they were alone !

1507. Re: September 3

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-02 17:31:33 UTC
From: rgc@nodomain.none
Message-ID: <lom2n6xmr.ln2@dog.did.it>
Source record: 13619

<0cc657d5-65a3-4995-8bc9-17755b64433e@a7g2000yqo.googlegroups.com>,
Art Unwin <arthurunwin@gmail.com> writes:
>
> Seventy years ago the U.K declared war on Germany And they were
> alone !

France also declared war on 3rd September.

1508. Re: September 3

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-02 17:43:58 UTC
From: JC <menardjc@orange.fr>
Message-ID: <4a9eaedf$0$23475$ba4acef3@news.orange.fr>
Source record: 13620

Sept 3 1939: UK declares war at 11:00, France and New Zealand at 17:00.
Sep. 6: South Africa, Sept.10: Canada.

"Art Unwin" <arthurunwin@gmail.com> a crit dans le message de news:
0cc657d5-65a3-4995-8bc9-17755b64433e@a7g2000yqo.googlegroups.com...
> Seventy years ago the U.K declared war on Germany
> And they were alone !
>

1509. Re: September 3

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-02 18:03:21 UTC
From: Jeff Liebermann <jeffl@cruzio.com>
Message-ID: <efct95l85t2bo62687ni3f08jmif5jd5ml@4ax.com>
Source record: 13621

On Wed, 2 Sep 2009 10:08:05 -0700 (PDT), Art Unwin
<arthurunwin@gmail.com> wrote:

>Seventy years ago the U.K declared war on Germany
>And they were alone !

WW 2.0 started on Sept 1, when Germany invaded Poland.
<http://en.wikipedia.org/wiki/Invasion_of_Poland_(1939)>
It took England and France 3 days to decide what to do next. They
eventually declared war, then did nothing through the phoney war until
May 10, 1940, when Germany reminded them that they were at war by
invading the Benelux countries.
<http://en.wikipedia.org/wiki/Phoney_war>

Are you sure you really want to celebrate Sept 3? It seems more like
a national embarassement than something to celebrate.

--
Jeff Liebermann jeffl@cruzio.com
150 Felker St #D http://www.LearnByDestroying.com
Santa Cruz CA 95060 http://802.11junk.com
Skype: JeffLiebermann AE6KS 831-336-2558

1510. Re: September 3

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-02 18:30:30 UTC
From: JB <nospam@goofball.net>
Message-ID: <aRynm.865$tl3.761@nwrddc01.gnilink.net>
Source record: 13622

Seems people always wait too long to acknowledge what our eyes see when it couldn't possibly be true. Or it can't happen to us while it is clearly happening to others.

1511. Re: September 3

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-02 18:42:28 UTC
From: Gerard <pe1oud@amsat.org>
Message-ID: <4a9ebc8a$0$79691$dbd4b001@news.wanadoo.nl>
Source record: 13623

"Jeff Liebermann" <jeffl@cruzio.com> schreef in bericht
news:efct95l85t2bo62687ni3f08jmif5jd5ml@4ax.com...
>
> Are you sure you really want to celebrate Sept 3?
First of all, this is completely 'off-topic'.

Then I think that anyone who 'celebrates' the outbreak
of war should have his brain re-aligned.

> It seems more like a national embarassement
> than something to celebrate.
Furthermore, in light of recent history, Americans
would do well to use the phrase 'national embarrassment'
with extreme caution or not at all.

Moreover, embarrassment is spelled with two 'r's.

73 - Gerard - PE1OUD

E-mail: pe1oud(NOTTHIS)@amsat.org

1512. Re: New antenna design

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-02 18:46:23 UTC
From: JB <nospam@goofball.net>
Message-ID: <34znm.868$tl3.376@nwrddc01.gnilink.net>
Source record: 13624

Corriolis deals with mass, so it is incorporated with the same core Math
that deals with Gravity, Inertia, Acceleration. Corriolis really isn't a
"force".

However, since you bring up the idea of "spin", it seems to have become more
important than the laws of Physics in some classrooms.

"Art Unwin" <arthurunwin@gmail.com> wrote in message
news:879563a7-ab88-4652-8f1e-d2e6a8480854@g31g2000yqc.googlegroups.com...
On Sep 1, 7:09 pm, Art Unwin <arthurun...@gmail.com> wrote:
> On Sep 1, 4:04 pm, "Dave" <no...@nowhere.com> wrote:
>
>
>
> > "Art Unwin" <arthurun...@gmail.com> wrote in message
>
> >news:770541a5-71f4-4c41-b33e-04ab3bb174e3@d34g2000vbm.googlegroups.com...
>
> > > >Too late David
> > > >But I have a question for you, Does the New World (Rumsfield) use
> > > >the term "equilibrium" in any of the engineering curriculums or are
> > > >you quoting what appears to be American English and not that of the
> > > >Olde World? Personaly if I was dealing with entropy or those wonderful
> > > >graphic steam tables +equilibrium" would be discarded in favor of
> > > >yours. But to explain all that stuff would be impossible with this
> > > >group so I opted for the Universal term that was current in Newton and
> > > >Maxwell time. Maybe what we are seeing is a intrusion of new math
> > > >into physics! Either way it does explain to me why american jaws
> > > >dropped in ignorance when the term was used.
>
> > there is no 'equilibrium' used in the electromagnetics texts in my
> > collection that i can find. 'steady state' is the closest, but that is
> > normally used to refer to the response of a system after the transient
> > response has died out. 'equilibrium' is often used in thermodynamics,
but
> > any analogy to that in electromagnetics is useless as it refers to a
state
> > where there is no energy flow, and if energy isn't flowing then you have
no
> > radiation. 'equilibrium' could also refer to a mechanical system that
has
> > reached 'steady state' or a stable state, but again similar to the
> > thermodynamic use it is useless for electromagnetics... maybe for
> > electrostatic or static magnetic fields, but not for radiation.
>

> Thanks for the response David. I will have to look at my books
> regarding basic laws which are all connected to Maxwell's laws. A case
> in point is the tank circuit which is seen as being in equilibrium and
> where there is current flow and which I state is the electrical
> circuit for radiation that is totally in accordance with the laws of
> Maxwell. If you agree it can be used for a electrostatic field then
> you are agreeing to any circuit which contains a capacitor with its
> own contained electrostatic field. I agree that the term is not
> presently in the books
> which is why progress has been stunted and the reason for my
> disclosure but I assure you that this is an error of the education
> system since equilibrium is the basic datum line for all laws
> including electrical. As an over check on my position antenna programs
> will always
> point to a non planar form in equilibrium per Maxwells laws so with
> the assumption that programmers did use Maxwell's equations correctly
> then my findings have been confirmed
> Hang on for a while and I will report back on my findings as well as
> Wilkedia type of definitions. Since the Universe is considered to have
> an electrical foundation which includes the four forces of the
> standard model then without the Universe
> achieving a point of equilibrium we can all be seen as traveling thru
> the Universe at the speed of light with no end to motion to place us
> in a state of balance, a terrible thought if we cannot rely on seeing
> the sunrise every day.
> Regards
> Art

On a quick google on Newton equilibrium there does appear that
equilibrium is not liked
say as much as "balanced" Thus science is essentially changing laws to
today's intent
and at the same time describing the laws with respect to Earth and not
the Universe.
I can see now where so much reference is to gravity and not the
combination of Gravity
accompanied by the spin action of Corriolis, where neither can exist
without the other in cosmic terms. Thus every action and opposite
action considers the Corriolis as non existant
such that Gravity alone should be part of the Standard Model. It now
can be seen that the
"intent" of the laws has changed over the years without emphasising
the "core" of the laws as intended by the providers. Fortunately NASA
does not have to discover new laws for
each and every part of the Universe since the laws we use are
Universal and not just confined to Earth as we know it. Thus I,
coming from the Olde World, still adheres to the intent of the law in
macro style where others understand it as decifered by the new World
in micro form for a more understandable relationship in todays
education. In other words

first principles in education has given way to continuos plagurism or learning by rote.

1513. Re: September 3

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-02 18:54:05 UTC
From: Art Unwin <arthurunwin@gmail.com>
Message-ID: <6d8e41de-007c-4f51-9f60-73699b49f9c3@o10g2000yqa.googlegroups.com>
Source record: 13625

On Sep 2, 12:31 pm, r...@nodomain.none (Roy Culley) wrote:
> <0cc657d5-65a3-4995-8bc9-17755b644...@a7g2000yqo.googlegroups.com>,
> Art Unwin <arthurun...@gmail.com> writes:
>
>
>
> > Seventy years ago the U.K declared war on Germany And they were
> > alone !
>
> France also declared war on 3rd September.

Only after the UK not before

1514. Re: September 3

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-02 18:55:17 UTC
From: Art Unwin <arthurunwin@gmail.com>
Message-ID: <44f3edec-a129-456b-a194-006e338c3302@z16g2000yqe.googlegroups.com>
Source record: 13626

On Sep 2, 12:43 pm, "JC" <menar...@orange.fr> wrote:
> Sept 3 1939: UK declares war at 11:00, France and New Zealand at 17:00.
> Sep. 6: South Africa, Sept.10: Canada.
>
> "Art Unwin" <arthurun...@gmail.com> a écrit dans le message de news:
> 0cc657d5-65a3-4995-8bc9-17755b644...@a7g2000yqo.googlegroups.com...
>
> > Seventy years ago the U.K declared war on Germany
> > And they were alone !

Yes. The Commonweath followed the King

1515. ART vs. W8JI

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-02 19:01:43 UTC
From: Dale Parfitt <parinc1@verizon.net>
Message-ID: <riznm.870$tl3.129@nwrddc01.gnilink.net>
Source record: 13627

Arrt,
I have repeatedly asked you to supply us with your original quote from
W8JI's page concerning a straight radiator is the best. Will you please do
so?
Now, there's an entire thread on this and no where any foundation.
Dale W4OP

1516. Re: September 3

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-02 19:30:30 UTC
From: Art Unwin <arthurunwin@gmail.com>
Message-ID: <9397146c-2c9a-46d3-a0fc-fd5c53d16482@38g2000yqr.googlegroups.com>
Source record: 13628

On Sep 2, 1:03 pm, Jeff Liebermann <je...@cruzio.com> wrote:
> On Wed, 2 Sep 2009 10:08:05 -0700 (PDT), Art Unwin
>
> <arthurun...@gmail.com> wrote:
> >Seventy years ago the U.K declared war on Germany
> >And they were alone !
>
> WW 2.0 started on Sept 1, when Germany invaded Poland.
> <http://en.wikipedia.org/wiki/Invasion_of_Poland_(1939)>
> It took England and France 3 days to decide what to do next. They
> eventually declared war, then did nothing through the phoney war until
> May 10, 1940, when Germany reminded them that they were at war by
> invading the Benelux countries.
> <http://en.wikipedia.org/wiki/Phoney_war>
>
> Are you sure you really want to celebrate Sept 3? It seems more like
> a national embarassement than something to celebrate.
>
> --
> Jeff Liebermann   je...@cruzio.com
> 150 Felker St #D   http://www.LearnByDestroying.com
> Santa Cruz CA 95060http://802.11junk.com
> Skype: JeffLiebermann   AE6KS   831-336-2558

Yes. I know what hate is. I was in East London when the Stern Gang
terrorists were setting of bombs atcivilians at the end of the war!.
As well as when the Hotel King George was blown up by terrorists with
the loss of life.
I was also an evacuee . Same as the two train loads of children that
fled from Europe to the London when Jewish families could not bring
themselves to flee and leave their wealth
I am quite proud of the U.K and the Commonwealth. They took the lead.
It is so easy after the fact to point fingers and say I am better than
you. I also read the J'lem news daily wnere hate is being spread thru
out the World to this very day.Why do they hate Amnerica so much? Who
is without sin today?
Surely Jeff you are better than that. Yes the "phony war" did entice
people and children to go back to their homes in East London only to
die when the bombing started,
But England stood proud.
Art Unwin KB9MZ XG

1517. Re: ART vs. W8JI

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-02 19:49:00 UTC
From: Art Unwin <arthurunwin@gmail.com>
Message-ID: <99eeb25d-28c4-4354-9034-724788893f89@v36g2000yqv.googlegroups.com>
Source record: 13629

On Sep 2, 2:01 pm, "Dale Parfitt" <pari...@verizon.net> wrote:
> Arrt,
> I have repeatedly asked you to supply us with your original quote from
> W8JI's page concerning a straight radiator is the best. Will you please do
> so?
> Now, there's an entire thread on this and no where any foundation.
> Dale W4OP
And no real discussion here either! You did not contribute

Dale, you can cry and cry and moan as much as you want. I will not let
you bully me and I am not at your beck and call.
If you have a comment with respect to the advantages of a radiater
being straight or not then go ahead and speak .If you feel hurt send
an E mail to Tom. Failing that go to QRZ yourself where I told you to
go.
Sooner or later you will have to get up from your couch

1518. Re: September 3

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-02 20:23:34 UTC
From: tom <news4792@taring.org>
Message-ID: <4a9ed42b$0$28114$8046368a@newsreader.iphouse.net>
Source record: 13630

Roy Culley wrote:
> <0cc657d5-65a3-4995-8bc9-17755b64433e@a7g2000yqo.googlegroups.com>,
> Art Unwin <arthurunwin@gmail.com> writes:
>> Seventy years ago the U.K declared war on Germany And they were
>> alone !
>
> France also declared war on 3rd September.

Yes, but we know they weren't really serious.

1519. Re: September 3

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-02 20:48:51 UTC
From: Jeff Liebermann <jeffl@cruzio.com>
Message-ID: <0clt95197scjqltc6cm64psqjvbkou15ft@4ax.com>
Source record: 13631

On Wed, 2 Sep 2009 12:30:30 -0700 (PDT), Art Unwin
<arthurunwin@gmail.com> wrote:

>Yes. I know what hate is. I was in East London when the Stern Gang
>terrorists were setting of bombs atcivilians at the end of the war!.

Hmmm... as I recall, most of the Stern Gang (LEHI) activities were in
then Palestine and Egypt:
<http://en.wikipedia.org/wiki/Lehi_(group)>
I don't see any references to any bombing in London.

>As well as when the Hotel King George was blown up by terrorists with
>the loss of life.

Google doesn't show anything that refers to a King George Hotel
bombing. Perhaps you mean the Kind David Hotel in Israel in 1946?
<http://en.wikipedia.org/wiki/King_David_Hotel>

>I was also an evacuee . Same as the two train loads of children that
>fled from Europe to the London when Jewish families could not bring
>themselves to flee and leave their wealth

They were not allowed to leave. My parents spent most of the war in
various Polish concentration camps. By the late 1930's, most of the
alleged Jewish wealth had already been confiscated by Hitler. Poland
had barely recovered from WWI and the 1929 Depression. Wealthy Poland
is an oxymoron. If my parents could have left, and some country would
have welcomed them, they would not have hesitated.

>I am quite proud of the U.K and the Commonwealth. They took the lead.

After Sept 1, 1939, there were no "leaders" in the west. The number
of changes of government in England and France should offer a clue.
The only leading was done by Stalin, by invading Finland in 1940.

>It is so easy after the fact to point fingers and say I am better than
>you. I also read the J'lem news daily wnere hate is being spread thru
>out the World to this very day.Why do they hate Amnerica so much? Who
>is without sin today?

I'll give you credit for a good imagination, but methinks you're
reading far too much into what little I've said. Israel does not hate
the US. If anything it depends heavily on the US for military and
economic support. There have been some disagreements and incidents,
but in general, the relationship is quite stable.

What I was questioning is that you would celebrate starting a war, as
if this was some kind of event worth emulating and copying. Perhaps

it would be better to celebrate and end, such as Nov 11, 1918 for Armistice Day or VE Day, May 8, 1945 for WW 2.0.

>Surely Jeff you are better than that. Yes the "phony war" did entice
>people and children to go back to their homes in East London only to
>die when the bombing started,

It was 8 month between the invasion of Poland and the invasion of the Benelux countries. How long would you expect the kids to stay evacuated?

>But England stood proud.

True. They endured and then turned around and fought back. Without England, we would probably be speaking German today. There are plenty of other thing England should be proud of, but the muddle at the beginning of WW 2.0 is not one of them.

>Art Unwin KB9MZ XG

What's the XG mean?
<http://www.xgtechnology.com?

--
Jeff Liebermann jeffl@cruzio.com
150 Felker St #D http://www.LearnByDestroying.com
Santa Cruz CA 95060 http://802.11junk.com
Skype: JeffLiebermann AE6KS 831-336-2558

1520. Re: September 3

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-02 21:35:46 UTC
From: PH5E <callsign.ph5e-nospam-@gmail.com>
Message-ID: <4a9ee532$0$32504$703f8584@news.kpn.nl>
Source record: 13632

Art Unwin wrote:
> Seventy years ago the U.K declared war on Germany
> And they were alone !

Lets pray it doesn't happen again! Nothing, absolutely nothing justifies
war. It just costs too much for everyone involved.

--
RigReference.com - Reference guide for ham radio equipment
http://rigreference.com/

1521. Re: September 3

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-02 21:43:16 UTC
From: Art Unwin <arthurunwin@gmail.com>
Message-ID: <c21aa132-b122-4d3b-965c-52fc8e73b8ce@37g2000yqm.googlegroups.com>
Source record: 13633

On Sep 2, 3:48 pm, Jeff Liebermann <je...@cruzio.com> wrote:
> On Wed, 2 Sep 2009 12:30:30 -0700 (PDT), Art Unwin
>
> <arthurun...@gmail.com> wrote:
> >Yes. I know what hate is. I was in East London when the Stern Gang
> >terrorists were setting of bombs atcivilians at the end of the war!.
>
> Hmmm... as I recall, most of the Stern Gang (LEHI) activities were in
> then Palestine and Egypt:
> <http://en.wikipedia.org/wiki/Lehi_(group)>

That is bull. I was there. Stepney a mile away from me got hit.

> I don't see any references to any bombing in London.
>
> >As well as when the Hotel King George was blown up by terrorists with
> >the loss of life.
>
> Google doesn't show anything that refers to a King George Hotel
> bombing. Perhaps you mean the Kind David Hotel in Israel in 1946?
> <http://en.wikipedia.org/wiki/King_David_Hotel>
You may well be correct I thought it was King George before the
Israelis blew it up
and killed all those people.

>
> >I was also an evacuee . Same as the two train loads of children that
> >fled from Europe to the London when Jewish families could not bring
> >themselves to flee and leave their wealth
>
> They were not allowed to leave. My parents spent most of the war in
> various Polish concentration camps. By the late 1930's, most of the
> alleged Jewish wealth had already been confiscated by Hitler. Poland
> had barely recovered from WWI and the 1929 Depression. Wealthy Poland
> is an oxymoron. If my parents could have left, and some country would
> have welcomed them, they would not have hesitated.
And you think the U.K. was not broke after all the fighting and the
depression?
The Jewish bankers would not provide a penny to the U.K. in WW1 until
they got the pound of flesh from the UK (Balfour treaty) Yes there has
always been many Jews living in the U.K.
>
> >I am quite proud of the U.K and the Commonwealth. They took the lead.
>
> After Sept 1, 1939, there were no "leaders" in the west. The number

> of changes of government in England and France should offer a clue.
> The only leading was done by Stalin, by invading Finland in 1940.
>
> >It is so easy after the fact to point fingers and say I am better than
> >you. I also read the J'lem news daily wnere hate is being spread thru
> >out the World to this very day.Why do they hate Amnerica so much? Who
> >is without sin today?
>
> I'll give you credit for a good imagination, but methinks you're
> reading far too much into what little I've said.
You said I should be embarrassed when for me I feel proud.
You insulted my father who fought in that war and my Uncle who died
You think I should stay quiet while you thro insults?

 Israel does not hate
> the US.
Hmm They hate America even while they get billions.
You should read the Israeli news columns where Jews from around the
World write in
and call for the U.S. to get out of Israeli pockets. Any body around
the World who is against Zionism and writes in is censored. Probably
the same if they write in and mentioned the Stern gang.

 If anything it depends heavily on the US for military and
> economic support. There have been some disagreements and incidents,
> but in general, the relationship is quite stable.

I doubt that, they want us to go to war for them

>
> What I was questioning is that you would celebrate starting a war, as
> if this was some kind of event worth emulating and copying. Perhaps
> it would be better to celebrate and end, such as Nov 11, 1918 for
> Armistice Day or VE Day, May 8, 1945 for WW 2.0.
>
> >Surely Jeff you are better than that. Yes the "phony war" did entice
> >people and children to go back to their homes in East London only to
> >die when the bombing started,
>
> It was 8 month between the invasion of Poland and the invasion of the
> Benelux countries. How long would you expect the kids to stay
> evacuated?

I didn't count the years, went home and then the V2s and they scared
me came so I went back
total of 5 years plus and four different foster homes. Schooling a
joke

> >But England stood proud.
>
> True. They endured and then turned around and fought back. Without
> England, we would probably be speaking German today. There are plenty

> of other thing England should be proud of, but the muddle at the
> beginning of WW 2.0 is not one of them.

Nobody resisted Hitler all were waiting for some body else. It took
the U.K. to respond
even tho they were dead broke and Germany stopped 22 miles away from
England's shores.
Let us put this behind us. The British are fighting along side us in
the ME and in Afganistan
and you want to belittle them as they die by our side. They don't
deserve these kind of snears and nor do Canada and Australia and the
rest of the Commonwealth.
All I wanted to do was remind all what happened 70 years ago but I
sure did not think that insults would come the way of our allies from
the U.S.

>
> >Art Unwin KB9MZ XG
>
> What's the XG mean?
> <http://www.xgtechnology.com?
>
> --
> Jeff Liebermann   je...@cruzio.com
> 150 Felker St #D   http://www.LearnByDestroying.com
> Santa Cruz CA 95060http://802.11junk.com
> Skype: JeffLiebermann   AE6KS   831-336-2558

1522. Re: ART vs. W8JI

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-02 23:24:21 UTC
From: 'Doc <ltdoc@yahoo.com>
Message-ID: <beae0ecb-1f33-44e6-8714-3fcc968ce106@t13g2000yqn.googlegroups.com>
Source record: 13634

Dale,
You should know better than that. Asking Art to prove something? You
gotta be kidding.
- 'Doc

1523. Re: ART vs. W8JI

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-02 23:54:46 UTC
From: Art Unwin <arthurunwin@gmail.com>
Message-ID: <f1e37b98-85fc-46b8-940c-b0622bb82e27@y21g2000yqn.googlegroups.com>
Source record: 13635

On Sep 2, 6:24 pm, "'Doc" <lt...@yahoo.com> wrote:
> Dale,
> You should know better than that. Asking Art to prove something? You
> gotta be kidding.
> - 'Doc

And why not? This is a discussion group. Any one can concur or
challenge
the statement. If I supply the proof of anything then silly attacks
begin
I can handle them but it does not improve on my knoweledge.
I will state right now that overall size or straightness of a radiator
is not
implied in Maxwell's laws in any way. So I would like to know where
that notion came from.
Is that so bad?
So Doctor, what have you got to offer regarding radiator straightness
as a person skilled in the art ?

1524. Re: New antenna design

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-03 00:05:52 UTC
From: tom <news4792@taring.org>
Message-ID: <4a9f0845$0$28116$8046368a@newsreader.iphouse.net>
Source record: 13636

Art Unwin wrote:
>> It is possible to have a resonance at the match frequency, but unusual.
>> Run a couple yagis through Eznec and check the driven element impedence.
>> For instance, the NBS yagi that comes with Eznec. At 50.125 it's
>> 11.7+j5.9, not very resonant. I have a 222 yagi that has a DE longer
>> than the reflector, also unusual, but it works fine.
>>
>> tom
>> K0TAR
>
> My goodness. This is the silliest thing I have heard in years.
> A yagi has a bandwidth based around a resonant frequency which is the
> change over point
> around which the impedance is not measured by the resistance alone.
> If the feed radiator is devoid of any proximitry effect then its
> material length differs from that of an array where the proximetry
> actions exists. Thus a yagi driven element is resonant and different
> from a driven element alone because of the proximitry effect. If your
> radiator impedance is 11.7 +j5.9 then you are not at the point of
> resonance which must be solely resistive. Modify the proximetry effect
> to make it resonant.
> This is exactly what you did by using a short length reflector at a
> abnormal distance from the driven element. Methinks you regard only 50
> ohms as being resonant where anything different from that is not
> resonant. Tom you are nuts!

Well, let's take a look at some yagis from known companies, the US
National Bureau of Standards and some well known hams. This is a small
subset of the yagis I have models for. Almost all are HF or low VHF so
we don't have to get into an argument over proper boom correction
factors. Yes, something else you've never heard of, Art.

Cushcraft

Model Impedance at design frequency

215 23.9+j6.4
17B2 27.4+j8.3
20-3CD 17.9-12.0
20-4CD 18.7-j17.7
617-6B 36.4+j11.5
A147-11 24.9+j6.1
A50-5 28.6-j20.1
A50-5S 36.7-j10.9
A50-6S 25.2-j19.0

US NBS

NBS122 20.0-j4.8
NBS32 25.2-j7.6

HyGain

HG105BA 33.4-j26.0
HG155BA 20.1-j7.6
HG175CA 21.4-j27.0
HG204BA 25.8-j20.7
HG205CA 20.7-j22.4
HG215DX 27.7-j29.2

M Squared (or M^2)

2M5WL 24.9-j33.9
2M7 31.6-j10.4
6M2.5WL 40,2+j9.5

DL6WU (note this is the grandfather of the great 2m/70cm designs
like K2RIW, K1FO, and M^2 among others)

DL6WU 34.4-11.4

W1JR

W1JR3170 15.8-j17.7
W1JR66 29.2+j24.6

Note that none of these are particularly close to resonance at the
design frequency.

Art, you don't know what you're talking about. As usual.

tom
K0TAR

1525. Re: ART vs. W8JI

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-03 00:29:17 UTC
From: JIMMIE <JIMMIEDEE123@YAHOO.COM>
Message-ID: <54cf4dbd-8020-490f-96e1-77c941beeae1@w36g2000yqm.googlegroups.com>
Source record: 13637

On Sep 2, 7:54 pm, Art Unwin <arthurun...@gmail.com> wrote:
> On Sep 2, 6:24 pm, "'Doc" <lt...@yahoo.com> wrote:
>
> > Dale,
> > You should know better than that. Asking Art to prove something? You
> > gotta be kidding.
> > - 'Doc
>
> And why not? This is a discussion group. Any one can concur or
> challenge
> the statement. If I supply the proof of anything then silly attacks
> begin
> I can handle them but it does not improve on my knoweledge.
> I will state right now that overall size or straightness of a radiator
> is not
> implied in Maxwell's laws in any way. So I would like to know where
> that notion came from.
> Is that so bad?
> So Doctor, what have you got to offer regarding radiator straightness
> as a person skilled in the art ?

Art, you already conceded to an exercise in futility that was a very
good example of a bent antenna in its worst case. You would think you
would have learned your lesson.

Jimmie

1526. Re: New antenna design

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-03 00:34:04 UTC
From: tom <news4792@taring.org>
Message-ID: <4a9f0f46$0$42844$8046368a@newsreader.iphouse.net>
Source record: 13638

tom wrote:
>
> Model Impedance at design frequency
>

I should have said here

Model Driven Element Impedance at design frequency

Most probably understand that, but Art wouldn't.

And these are the whole yagis, not just the driven element standing
alone Art.

tom
K0TAR

1527. Re: ART vs. W8JI

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-03 00:34:26 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <PaEnm.128932$sC1.27453@newsfe17.iad>
Source record: 13639

Dale Parfitt wrote:
> I have repeatedly asked you to supply us with your original quote from
> W8JI's page concerning a straight radiator is the best.

Quoting W8JI's web page:
"How do we make a small antenna as efficient as possible?"
"... we make the antenna as large and straight as possible in a line.
We don't fold, bend, zigzag, or curve the antenna especially in the
high current areas."

I don't know what the fuss is all about. Transmission line
currents don't radiate (much) because they are out of phase.

Random folding of an antenna more often than not introduces
transmission line currents into the antenna itself - not
good for radiation purposes.

Transmission line currents cause destructive interference -
that's good for transferring power from one place to another
but not good for radiating RF.

There are certain special-case antennas where folding occurs
without introducing destructive interference, e.g. a 1/2WL
folded dipole or a full-wave quad where the wires are a
large enough percentage of a wavelength apart so they don't
cause near-field destructive interference.

Hint: RF radiation cannot be understood without understanding
constructive and destructive interference in the near, medium,
and far fields.
--
73, Cecil, IEEE, OOTC, http://www.w5dxp.com

1528. Re: ART vs. W8JI

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-03 00:41:29 UTC
From: tom <news4792@taring.org>
Message-ID: <4a9f1102$0$42840$8046368a@newsreader.iphouse.net>
Source record: 13640

Cecil Moore wrote:
> There are certain special-case antennas where folding occurs
> without introducing destructive interference, e.g. a 1/2WL
> folded dipole or a full-wave quad where the wires are a

Cecil, you should know by now that a half wave dipole of any type
couldn't be all that efficient or effective. Art says so.

tom
K0TAR

1529. Re: ART vs. W8JI

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-03 00:42:16 UTC
From: Dale Parfitt <parinc1@verizon.net>
Message-ID: <IhEnm.870$Jd7.595@nwrddc02.gnilink.net>
Source record: 13641

"Cecil Moore" <nospam@w5dxp.com> wrote in message
news:PaEnm.128932$sC1.27453@newsfe17.iad...
> Dale Parfitt wrote:
>> I have repeatedly asked you to supply us with your original quote from
>> W8JI's page concerning a straight radiator is the best.
>
> Quoting W8JI's web page:
> "How do we make a small antenna as efficient as possible?"
> "... we make the antenna as large and straight as possible in a line.
> We don't fold, bend, zigzag, or curve the antenna especially in the
> high current areas."
>
> I don't know what the fuss is all about. Transmission line
> currents don't radiate (much) because they are out of phase.
>
> Random folding of an antenna more often than not introduces
> transmission line currents into the antenna itself - not
> good for radiation purposes.
>
> Transmission line currents cause destructive interference -
> that's good for transferring power from one place to another
> but not good for radiating RF.
>
> There are certain special-case antennas where folding occurs
> without introducing destructive interference, e.g. a 1/2WL
> folded dipole or a full-wave quad where the wires are a
> large enough percentage of a wavelength apart so they don't
> cause near-field destructive interference.
>
> Hint: RF radiation cannot be understood without understanding
> constructive and destructive interference in the near, medium,
> and far fields.
> --
> 73, Cecil, IEEE, OOTC, http://www.w5dxp.com

Thank you Cecil,
That's all I was looking for.

Dale W4OP

1530. Re: New antenna design

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-03 02:06:33 UTC
From: tom <news4792@taring.org>
Message-ID: <4a9f24aa$0$28113$8046368a@newsreader.iphouse.net>
Source record: 13642

tom wrote:
> And these are the whole yagis, not just the driven element standing
> alone Art.
>
> tom
> K0TAR

So how could these possibly work? They aren't "resonant"!

What a horrible situation. They couldn't work, could they?

Enter the matching network. This transforms the awful unusable impedance into something the transmission line can handle. Usually 50 ohms nowadays.

You seem to have a problem with this concept Art.

Go back to school.

tom
K0TAR

1531. Corriolis force

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-03 02:15:38 UTC
From: Art Unwin <arthurunwin@gmail.com>
Message-ID: <cf5b3115-db1d-42a5-98cb-5c67260e1580@v36g2000yqv.googlegroups.com>
Source record: 13643

It seems that some do not understand what the Corriolis force is so
here goes
When the Big Bang ocurred all energy was in an arbitrary boundary
just like the Sun is. When the forces (four forces of the Standard
model) could not be contained with in the boundary the boundary broke
which as scientists state was the begining of our Universe. Before the
arbitrary boundary broke it is a state of equilibrium (This is also
duplicated by the Sun) You can visualize a ball which contains all
energy by placing vectors all around the inside where for every vector
on the inside there is an equal and opposite on the outside. Tho
energy cannot be created or destroyed, kinetic energy can occur at the
expense of potential energy such that the outside vectors are over
come. The boundary breaks and the excess forces are released until
the boundary is able to return to a state of equilibrium. Now when the
break occurs it is at the point of a particular vector such that the
breakage is created by a shearing action, as the forces in question
was not aligned, with spin. Thus when any energy,particles etc they
escaped with a spin action which force forces to balance requires an
equal and opposite reaction and the Corriolis force is that component.
Without the Corriolis component we could not remain on this Earth and
gravity could not exist. Thus to state spin or torque is not a force
is truly rediculous. Let the insults come.

1532. Re: Corriolis force

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-03 02:22:21 UTC
From: tom <news4792@taring.org>
Message-ID: <4a9f28c2$0$42841$8046368a@newsreader.iphouse.net>
Source record: 13644

Art Unwin wrote:
> It seems that some do not understand what the Corriolis force is so
> here goes
> When the Big Bang ocurred all energy was in an arbitrary boundary
> just like the Sun is. When the forces (four forces of the Standard
> model) could not be contained with in the boundary the boundary broke
> which as scientists state was the begining of our Universe. Before the
> arbitrary boundary broke it is a state of equilibrium (This is also
> duplicated by the Sun) You can visualize a ball which contains all
> energy by placing vectors all around the inside where for every vector
> on the inside there is an equal and opposite on the outside. Tho
> energy cannot be created or destroyed, kinetic energy can occur at the
> expense of potential energy such that the outside vectors are over
> come. The boundary breaks and the excess forces are released until
> the boundary is able to return to a state of equilibrium. Now when the
> break occurs it is at the point of a particular vector such that the
> breakage is created by a shearing action, as the forces in question
> was not aligned, with spin. Thus when any energy,particles etc they
> escaped with a spin action which force forces to balance requires an
> equal and opposite reaction and the Corriolis force is that component.
> Without the Corriolis component we could not remain on this Earth and
> gravity could not exist. Thus to state spin or torque is not a force
> is truly rediculous. Let the insults come.

Have you ever considered stand up comedy?

tom
K0TAR

1533. Re: ART vs. W8JI

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-03 02:37:13 UTC
From: Art Unwin <arthurunwin@gmail.com>
Message-ID: <0c8d0398-dbdf-4841-8819-65ff9101f513@o10g2000yqa.googlegroups.com>
Source record: 13645

On Sep 2, 7:34 pm, Cecil Moore <nos...@w5dxp.com> wrote:
> Dale Parfitt wrote:
> > I have repeatedly asked you to supply us with your original quote from
> > W8JI's page concerning a straight radiator is the best.
>
> Quoting W8JI's web page:
> "How do we make a small antenna as efficient as possible?"
> "... we make the antenna as large and straight as possible in a line.
> We don't fold, bend, zigzag, or curve the antenna especially in the
> high current areas."
>
> I don't know what the fuss is all about. Transmission line
> currents don't radiate (much) because they are out of phase.
>
> Random folding of an antenna more often than not introduces
> transmission line currents into the antenna itself - not
> good for radiation purposes.
>
> Transmission line currents cause destructive interference -
> that's good for transferring power from one place to another
> but not good for radiating RF.
>
> There are certain special-case antennas where folding occurs
> without introducing destructive interference, e.g. a 1/2WL
> folded dipole or a full-wave quad where the wires are a
> large enough percentage of a wavelength apart so they don't
> cause near-field destructive interference.

Cecil
It is not related to volume. It is because they are both closed
circuits thus all radiation
can be accounted for i.e. all the circuit wire contribute to
radiation. Any length less than 1WL does not !
If one introduces lumped loads then you have to cancel them, no
problem. Maxwell clearly stated that we are dealing with distributed
loads only, ie root L.C. The inclusion of volume is only because some
people cling to the magnetic field theory as opposed to the particle
theory. Equilibrium allows for multiple shapes and sizes for
achievement
Regards
Art

>
> Hint: RF radiation cannot be understood without understanding
> constructive and destructive interference in the near, medium,

> and far fields.
> --
> 73, Cecil, IEEE, OOTC, http://www.w5dxp.com

1534. Re: Corriolis force

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-03 02:55:20 UTC
From: Art Unwin <arthurunwin@gmail.com>
Message-ID: <5d503924-e8cd-4e4f-b809-20b3081334ba@y21g2000yqn.googlegroups.com>
Source record: 13646

On Sep 2, 9:22 pm, tom <news4...@taring.org> wrote:
> Art Unwin wrote:
> > It seems that some do not understand what the Corriolis force is so
> > here goes
> > When the Big Bang ocurred all energy was in an arbitrary boundary
> > just like the Sun is. When the forces (four forces of the Standard
> > model) could not be contained with in the boundary the boundary broke
> > which as scientists state was the begining of our Universe. Before the
> > arbitrary boundary broke it is a state of equilibrium (This is also
> > duplicated by the Sun) You can visualize a ball which contains all
> > energy by placing vectors all around the inside where for every vector
> > on the inside there is an equal and opposite on the outside. Tho
> > energy cannot be created or destroyed, kinetic energy can occur at the
> > expense of potential energy such that the outside vectors are over
> > come. The boundary breaks and the excess forces are released until
> > the boundary is able to return to a state of equilibrium. Now when the
> > break occurs it is at the point of a particular vector such that the
> > breakage is created by a shearing action, as the forces in question
> > was not aligned, with spin. Thus when any energy,particles etc they
> > escaped with a spin action which force forces to balance requires an
> > equal and opposite reaction and the Corriolis force is that component.
> > Without the Corriolis component we could not remain on this Earth and
> > gravity could not exist. Thus to state spin or torque is not a force
> > is truly rediculous. Let the insults come.
>
> Have you ever considered stand up comedy?
>
> tom
> K0TAR

Heh it is just standard classical physics. Just like saying a tornado
is not a force.
or a antenna cannot be resonant. Totally rediculous. If you want to
know more take a physics lesson maybe more than one in your case. Now
the Electroweak force is only called weak because it is the weakest of
all the initial forces created in the big bang. This
is the force created as a result of two forces acting towards each
other but not on the same plain where a boundary is broken. Plain
Classical Physics, nothing more.

e big b ang

1535. Re: Corriolis force

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-03 03:03:01 UTC
From: tom <news4792@taring.org>
Message-ID: <4a9f324b$0$42839$8046368a@newsreader.iphouse.net>
Source record: 13647

Art Unwin wrote:
>
> Heh it is just standard classical physics. Just like saying a tornado
> is not a force.
> or a antenna cannot be resonant. Totally rediculous. If you want to
> know more take a physics lesson maybe more than one in your case. Now
> the Electroweak force is only called weak because it is the weakest of
> all the initial forces created in the big bang. This
> is the force created as a result of two forces acting towards each
> other but not on the same plain where a boundary is broken. Plain
> Classical Physics, nothing more.
>
>
> e big b ang

As usual, a response that contains absolutely no information and some perfectly well done misspellings.

No acknowledgment of the previous posts or of the information presented.

Classic Art.

You really have to love his style.

tom
K0TAR

1536. Re: Corriolis force

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-03 03:49:41 UTC
From: Art Unwin <arthurunwin@gmail.com>
Message-ID: <c1f96337-3e5e-42b9-9c0d-c45cef0bc2c7@m38g2000yqd.googlegroups.com>
Source record: 13648

On Sep 2, 10:03 pm, tom <news4...@taring.org> wrote:
> Art Unwin wrote:
>
> > Heh it is just standard classical physics. Just like saying a tornado
> > is not a force.
> > or a antenna cannot be resonant. Totally rediculous. If you want to
> > know more take a physics lesson maybe more than one in your case. Now
> > the Electroweak force is only called weak because it is the weakest of
> > all the initial forces created in the big bang. This
> > is the force created as a result of two forces acting towards each
> > other but not on the same plain where a boundary is broken. Plain
> > Classical Physics, nothing more.
>
> > e big b ang
>
> As usual, a response that contains absolutely no information and some
> perfectly well done misspellings.
>
> No acknowledgment of the previous posts or of the information presented.
>
> Classic Art.
>
> You really have to love his style.
>
> tom
> K0TAR

But Tom your previous posts have not contained anything to respond to
unless you want retalatory sniping, but that is a waste of time. As
for no information presented, Einstein died
before Electroweak force was resolved tho he was convinced the answer
was related to radiation. Now I have identified it to you! Surely you
feel good. You now know something
that all the big boys have struggled after. The Electroweak force is
that which propells particles into free space so that it accelerates
in a straight line. In other words "point radiation". This being
similar to eddy current. Einstein concentrated on internal and
external forces without concern to the "hoop stress" that is part and
parcel of all boundaries. Just like that which surround a bubble.
These same two vectors that create a shearing force is equal to the
combination of gravity and the Coriolis force. This is the reason why
a vertical antenna must be tipped to form a isotropic radiation
pattern in equilibrium which computer programs confirm. No, the above
is not printed any where in the College books, but it will.

No information you say? It is just that you can't handle it so you depend on insults.
Yes, you did get information but you have not the grounding to understand what you read.

1537. Re: September 3

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-03 04:08:49 UTC
From: Jeff Liebermann <jeffl@cruzio.com>
Message-ID: <isfu955pdgf5g1j20so1d2a87u2pdr2ma8@4ax.com>
Source record: 13649

On Wed, 2 Sep 2009 14:43:16 -0700 (PDT), Art Unwin
<arthurunwin@gmail.com> wrote:

>You said I should be embarrassed when for me I feel proud.
>You insulted my father who fought in that war and my Uncle who died
>You think I should stay quiet while you thro insults?

Enough. So far, you have not addressed the basic orginal comment,
which was about your celebration of the beginning of a war, rather
than its end. If you cannot read what I wrote without
misinterpreting, expanding, eggagerating my comments, then I have no
interest in discussing this with you. To answer your question, yes,
you should stay quiet because this is an antenna newsgroup, not a
history or polticial newsgroup.

--
Jeff Liebermann 150 Felker St #D Santa Cruz CA 95060
831-336-2558
http://802.11junk.com jeffl@cruzio.com
http://www.LearnByDestroying.com AE6KS

1538. Re: Corriolis force

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-03 05:27:37 UTC
From: "Sal M. Onella" <salmonella@food.poisoning.org>
Message-ID: <etInm.11627$u76.5736@newsfe10.iad>
Source record: 13650

"Art Unwin" <arthurunwin@gmail.com> wrote in message
news:cf5b3115-db1d-42a5-98cb-5c67260e1580@v36g2000yqv.googlegroups.com...

< blather snipped >

> Without the Corriolis component we could not remain on this Earth and
> gravity could not exist. Thus to state spin or torque is not a force
> is truly rediculous. Let the insults come.

Before he tries to explain it further, perhaps he should learn to spell it.
(one "r")

1539. Re: September 3

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-03 06:10:59 UTC
From: "Helmut Wabnig"
Message-ID: <4enu95t02dsreh7lrvdah62okeubdctimf@4ax.com>
Source record: 13501

On Wed, 2 Sep 2009 10:08:05 -0700 (PDT), Art Unwin
<arthurunwin@gmail.com> wrote:

>Seventy years ago the U.K declared war on Germany
>And they were alone !

Churchill and Roosevelt had some telephone conversations before.

That much to "beeing alone"

w.

1540. Re: radiators

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-03 07:26:48 UTC
From: Jeff Liebermann <jeffl@cruzio.com>
Message-ID: <6gru955g2aplji2o2ls54f22uhgt15sed8@4ax.com>
Source record: 13502

On Mon, 31 Aug 2009 23:22:57 -0700, Jeff Liebermann <jeffl@cruzio.com>
wrote:

I replaced my previously posted copy of Art's Patent Application with
a new version that can be searched and cut-n-pastiched:
<http://802.11junk.com/jeffl/crud/11-655899.pdf>

--
Jeff Liebermann jeffl@cruzio.com
150 Felker St #D http://www.LearnByDestroying.com
Santa Cruz CA 95060 http://802.11junk.com
Skype: JeffLiebermann AE6KS 831-336-2558

1541. Re: September 3

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-03 08:20:33 UTC
From: Szczepan Białek <sz.bialek@wp.pl>
Message-ID: <h7njc4qmo1@node1.news.atman.pl>
Source record: 13503

"Jeff Liebermann" <jeffl@cruzio.com> wrote
news:efct95l85t2bo62687ni3f08jmif5jd5ml@4ax.com...
> On Wed, 2 Sep 2009 10:08:05 -0700 (PDT), Art Unwin
> <arthurunwin@gmail.com> wrote:
>
>>Seventy years ago the U.K declared war on Germany
>>And they were alone !
>
> WW 2.0 started on Sept 1, when Germany invaded Poland.
> <http://en.wikipedia.org/wiki/Invasion_of_Poland_(1939)>
> It took England and France 3 days to decide what to do next. They
> eventually declared war, then did nothing through the phoney war until
> May 10, 1940, when Germany reminded them that they were at war by
> invading the Benelux countries.
> <http://en.wikipedia.org/wiki/Phoney_war>

" In their hurry to re-arm, Britain and France had both begun buying large
amounts of weapons from manufacturers in the US at the outbreak of
hostilities, supplementing their own productions."

It was not the phoney war but the economic war.
S*
>

1542. Re: September 3

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-03 10:40:40 UTC
From: Mike <emce@iinet.net.au>
Message-ID: <4a9f9d2a$0$28395$5a62ac22@per-qv1-newsreader-01.iinet.net.au>
Source record: 13504

"Szczepan Bia&#65533;ek" <sz.bialek@wp.pl> wrote in message
news:h7njc4qmo1@node1.news.atman.pl...
>
> "Jeff Liebermann" <jeffl@cruzio.com> wrote
> news:efct95l85t2bo62687ni3f08jmif5jd5ml@4ax.com...
>> On Wed, 2 Sep 2009 10:08:05 -0700 (PDT), Art Unwin
>> <arthurunwin@gmail.com> wrote:
>>
>>>Seventy years ago the U.K declared war on Germany
>>>And they were alone !
>>
>> WW 2.0 started on Sept 1, when Germany invaded Poland.
>> <http://en.wikipedia.org/wiki/Invasion_of_Poland_(1939)>
>> It took England and France 3 days to decide what to do next. They
>> eventually declared war, then did nothing through the phoney war until
>> May 10, 1940, when Germany reminded them that they were at war by
>> invading the Benelux countries.
>> <http://en.wikipedia.org/wiki/Phoney_war>
>
> " In their hurry to re-arm, Britain and France had both begun buying large
> amounts of weapons from manufacturers in the US at the outbreak of
> hostilities, supplementing their own productions."
>
> It was not the phoney war but the economic war.
> S*
>>
>
Mind you. Until Pearl Harbour, Dec 7Th 1941, Britain did it alone as all the
European countries had succumbed. As an original Pom, a boy at the time,
I do thank the US for there help.
Regards Mike

1543. Re: ART vs. W8JI

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-03 11:19:00 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <4DNnm.7115$nP6.1524@newsfe25.iad>
Source record: 13505

tom wrote:
> Cecil, you should know by now that a half wave dipole of any type
> couldn't be all that efficient or effective. Art says so.

Art might be quick to point out that there is one
wavelength of wire in a 1/2WL folded dipole. :-)
--
73, Cecil, IEEE, OOTC, http://www.w5dxp.com

1544. Re: September 3

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-03 12:47:42 UTC
From: Gerard <pe1oud@amsat.org>
Message-ID: <4a9fbbfe$0$75035$dbd4d001@news.wanadoo.nl>
Source record: 13506

"Mike" <emce@iinet.net.au> schreef in bericht
news:4a9f9d2a$0$28395$5a62ac22@per-qv1-newsreader-01.iinet.net.au...
>
> Mind you. Until Pearl Harbour, Dec 7Th 1941, Britain did it
> alone as all the European countries had succumbed. As an
> original Pom, a boy at the time, I do thank the US for there
> help.
>
The British have paid through their noses for that help.
I believe the last payment on the 'Lend-and-lease' act
took place in the late 1980's.
The US also seized the opportunity to establish 'dollar-rule'
and look where that got us!
Then there's the energy waste the US is 'famous' for.

And now some of them speak of 'national embarrassment'....
Sure.....................

Gerard - PE1OUD

1545. Re: September 3

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-03 13:31:17 UTC
From: Art Unwin <arthurunwin@gmail.com>
Message-ID: <8a63bb45-1477-4d1c-a9dc-ba478b1a4166@l13g2000yqb.googlegroups.com>
Source record: 13507

On Sep 3, 7:47 am, "Gerard" <pe1...@amsat.org> wrote:
> "Mike" <e...@iinet.net.au> schreef in
berichtnews:4a9f9d2a$0$28395$5a62ac22@per-qv1-newsreader-01.iinet.net.au...
>
> > Mind you. Until Pearl Harbour, Dec 7Th 1941, Britain did it
> > alone as all the European countries had succumbed. As an
> > original Pom, a boy at the time, I do thank the US for there
> > help.
>
> The British have paid through their noses for that help.
> I believe the last payment on the 'Lend-and-lease' act
> took place in the late 1980's.
> The US also seized the opportunity to establish 'dollar-rule'
> and look where that got us!
> Then there's the energy waste the US is 'famous' for.
>
> And now some of them speak of 'national embarrassment'....
> Sure.....................
>
> Gerard - PE1OUD

This release of hate is not good
Let's move on

1546. Re: Corriolis force

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-03 13:34:45 UTC
From: JIMMIE <JIMMIEDEE123@YAHOO.COM>
Message-ID: <39206315-dade-4cb0-be47-613e7d5b406a@w10g2000yqf.googlegroups.com>
Source record: 13508

On Sep 2, 11:49 pm, Art Unwin <arthurun...@gmail.com> wrote:
> On Sep 2, 10:03 pm, tom <news4...@taring.org> wrote:
>
>
>
> > Art Unwin wrote:
>
> > > Heh it is just standard classical physics. Just like saying a tornado
> > > is not a force.
> > > or a antenna cannot be resonant. Totally rediculous. If you want to
> > > know more take a physics lesson maybe more than one in your case. Now
> > > the Electroweak force is only called weak because it is the weakest of
> > > all the initial forces created in the big bang. This
> > > is the force created as a result of two forces acting towards each
> > > other but not on the same plain where a boundary is broken. Plain
> > > Classical Physics, nothing more.
>
> > > e big b ang
>
> > As usual, a response that contains absolutely no information and some
> > perfectly well done misspellings.
>
> > No acknowledgment of the previous posts or of the information presented.
>
> > Classic Art.
>
> > You really have to love his style.
>
> > tom
> > K0TAR
>
> But Tom your previous posts have not contained anything to respond to
> unless you want retalatory sniping, but that is a waste of time. As
> for no information presented, Einstein died
> before Electroweak force was resolved tho he was convinced the answer
> was related to radiation. Now I have identified it to you! Surely you
> feel good. You now know something
> that all the big boys have struggled after. The Electroweak force is
> that which propells particles into free space so that it accelerates
> in a straight line. In other words "point radiation". This being
> similar to eddy current. Einstein concentrated on internal and
> external forces without concern to the "hoop stress" that is part and
> parcel of all boundaries. Just like that which surround a bubble.
> These same two vectors that create a shearing force is equal to the

> combination of gravity and the Coriolis force. This is the reason why
> a vertical antenna must be tipped to form a isotropic radiation
> pattern in equilibrium which computer programs confirm. No, the above
> is not printed any where in the College books, but it will.
> No information you say? It is just that you can't handle it so you
> depend on insults.
> Yes, you did get information but you have not the grounding to
> understand what you read.

Whether Art is a troll or a blithering old coot he isn't here to learn anything , he just wants to be entertained.

Jimmie

1547. Re: September 3

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-03 14:08:11 UTC
From: Gerard <pe1oud@amsat.org>
Message-ID: <4a9fd12d$0$51856$dbd43001@news.wanadoo.nl>
Source record: 13510

"Art Unwin" <arthurunwin@gmail.com> schreef in bericht
news:8a63bb45-1477-4d1c-a9dc-
>
> This release of hate is not good
> Let's move on
For the record: I do not hate Americans.

They are in dire need of self reflection, that's all.

Gerard - PE1OUD

1548. Re: ART vs. W8JI

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-03 14:13:47 UTC
From: Richard Fry <rfry@adams.net>
Message-ID: <c4003ef9-6e41-49cc-99c4-9a97a5b59d72@j19g2000yqk.googlegroups.com>
Source record: 13509

> Art might be quick to point out that there is one
> wavelength of wire in a 1/2WL folded dipole. :-)
_____-

But does Art realize that a 1/2-wave dipole is a fractional wavelength radiator that couldn't possibly have his definition of "equilibrium," yet it has the same measured pattern and gain as a 1/2-wave folded dipole?

RF

1549. Re: ART vs. W8JI

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-03 15:26:42 UTC
From: Art Unwin <arthurunwin@gmail.com>
Message-ID: <aee746cb-d458-4629-90ad-48b7439c7f96@w10g2000yqf.googlegroups.com>
Source record: 13511

On Sep 3, 9:13 am, Richard Fry <r...@adams.net> wrote:
> > Art might be quick to point out that there is one
> > wavelength of wire in a 1/2WL folded dipole. :-)
>
> _____-
>
> But does Art realize that a 1/2-wave dipole is a fractional wavelength
> radiator that couldn't possibly have his definition of "equilibrium,"
> yet it has the same measured pattern and gain as a 1/2-wave folded
> dipole?
>
> RF

Yes, that is correct, but the power used on a 1/2 wave dipole is half
that of a full wave.
A closely folded dipole radiates the same as a Quad . View Cebik's
comments on this

1550. Re: Corriolis force

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-03 15:33:44 UTC
From: Art Unwin <arthurunwin@gmail.com>
Message-ID: <dba87699-35bd-487c-8b92-4403060cf0fc@y9g2000yqn.googlegroups.com>
Source record: 13512

On Sep 3, 8:34 am, JIMMIE <JIMMIEDEE...@YAHOO.COM> wrote:
> On Sep 2, 11:49 pm, Art Unwin <arthurun...@gmail.com> wrote:
>
>
>
> > On Sep 2, 10:03 pm, tom <news4...@taring.org> wrote:
>
> > > Art Unwin wrote:
>
> > > > Heh it is just standard classical physics. Just like saying a tornado
> > > > is not a force.
> > > > or a antenna cannot be resonant. Totally rediculous. If you want to
> > > > know more take a physics lesson maybe more than one in your case. Now
> > > > the Electroweak force is only called weak because it is the weakest of
> > > > all the initial forces created in the big bang. This
> > > > is the force created as a result of two forces acting towards each
> > > > other but not on the same plain where a boundary is broken. Plain
> > > > Classical Physics, nothing more.
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> > > > e big b ang
>
> > > As usual, a response that contains absolutely no information and some
> > > perfectly well done misspellings.
>
> > > No acknowledgment of the previous posts or of the information presented.
>
> > > Classic Art.
>
> > > You really have to love his style.
>
> > > tom
> > > K0TAR
>
> > But Tom your previous posts have not contained anything to respond to
> > unless you want retalatory sniping, but that is a waste of time. As
> > for no information presented, Einstein died
> > before Electroweak force was resolved tho he was convinced the answer
> > was related to radiation. Now I have identified it to you! Surely you
> > feel good. You now know something
> > that all the big boys have struggled after. The Electroweak force is
> > that which propells particles into free space so that it accelerates
> > in a straight line. In other words "point radiation". This being
> > similar to eddy current. Einstein concentrated on internal and
> > external forces without concern to the "hoop stress" that is part and

> > parcel of all boundaries. Just like that which surround a bubble.
> > These same two vectors that create a shearing force is equal to the
> > combination of gravity and the Coriolis force. This is the reason why
> > a vertical antenna must be tipped to form a isotropic radiation
> > pattern in equilibrium which computer programs confirm. No, the above
> > is not printed any where in the College books, but it will.
> > No information you say? It is just that you can't handle it so you
> > depend on insults.
> > Yes, you did get information but you have not the grounding to
> > understand what you read.
>
> Whether Art is a troll or a blithering old coot he isn't here to learn
> anything , he just wants to be entertained.
>
> Jimmie

No. I am just exposing the so called self perceived experts on this
group to the outside world and I enjoy every bit of it. The talking
heads have no idea of the silent readers
that are laughing at you and your ignorance.

1551. Re: ART vs. W8JI

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-03 15:58:10 UTC
From: Richard Fry <rfry@adams.net>
Message-ID: <61e4e0b5-452b-44e5-b2ad-c41778741b5e@j19g2000yqk.googlegroups.com>
Source record: 13513

On Sep 3, 10:26 am, Art Unwin <arthurun...@gmail.com> wrote:

> Yes, that is correct, but the power used on a 1/2 wave dipole is
> half that of a full wave.

A full wave what? Are you calling a folded 1/2-wave dipole a full-wave antenna?

For equal, matched power applied either to a 1/2-wave dipole or to a folded 1/2-wave dipole, and although their feedpoint currents will be different, both configurations will generate the same values of field intensity.

Also how do you explain this, given that the 1/2-wave dipole by your definition does not have "equilibrium?"

RF

1552. Re: Corriolis force

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-03 17:36:07 UTC
From: Mike Luther <mike.luther@ziplog.com>
Message-ID: <4a9ffe83$0$23784$bbae4d71@news.suddenlink.net>
Source record: 13514

Hi Unwin!

Art Unwin wrote:

> No. I am just exposing the so called self perceived experts on this
> group to the outside world and I enjoy every bit of it. The talking
> heads have no idea of the silent readers
> that are laughing at you and your ignorance.

The things even skilled observers of this force seem to understand can be even more subtle than at first thought! Most of us tend to 'view' things and 'solve' problems in two dimensions. That person is in my face or I'll just flank attack this, said in humor here. But even a very skilled and observant person, for example, gains a really more interesting perspective of life and everything around them when .. for the first time .. they solo fly an airplane!

The average person takes about six to eight hours of dual instruction to get to the level of awareness at which it is safe for the flight instructor to let the student go it alone. Just before takeoff when at the practicing takeoff and landing routine is going on, just before takeoff, "Well, your good enough at this to do it on your own! Take it around the pattern by yourself!" And the flight instructor pops off his seat belt, opens that right side door of the aircraft in a Cessna 140 or 150, for example. Gets out and slams the door shut and walks away!

The average student is so thrilled and whatever at this he or she just jams in the throttle and away it goes! But then even the most capable candidate suddenly has a different perspective of things when as the get set for their first solo landing. as they are looking down into the whole space between them and the approach end of the runway, it hits!

It's the first time they ever have really had to make a life or death decision in more than two dimensions! Height is totally involved here too. Suddenly, even though they don't realize it, they are dealing with the third level of infinities. You can have an infinite number of points in a line. But since you can have an infinitive number of lines in a plane that means the second order of infinity is so defined! And .. surprise .. you can have in an infinite number of planes in a cube or sphere, so there is, for the first time, life or death, the experience of their total involvement in level three of infinity. Plus since time is the fourth level of infinity, when the wheels touch the pavement and the student completes this once in a life time experience, their life will NEVER be the same again.

For the rest of their life they will begin solving problems and understanding what is said, displayed, posted in a discussion, all by looking down into the scenario. And once this is done, you can NEVER go back again to the person you

were before this event.

And no, computer games and flight simulators don't do it, unless the simulator can kill you if you make a mistake, grin! It has to be the real thing. Every Peregrine Falcon knows when to turn lose in the dive of love, as far as I've ever known, chuckle.

But that also doesn't mean you know everything about force problems to which you are presented, grin! Yes, I was the Chief Flight Instructor for Texas Airmotive Company at Easterwood Airport in College Station, Texas, during much of Viet Nam. And I had to ride at least once with all the Texas Aggies who were trying to become pilots as part of their path into the future of life. Which, incidentally included such people as Robert Barr, one of the pilots for the US Air Force One and what became some 47 US generals. In my humble view all because they jumped forward to multi-dimension problem solving.

But .. that doesn't mean even at this level of perspective you see all that confronts you, grin.

I never realized for more than a decade later, how this issue of Coriolis Force is far more important to all living things than I suspect even many of us here have understood. As, much later at this, the CEO for the manufacturer of Hanover Trailers here in Bryan, Texas, the actual marketing main vector for the introduction of all the gooseneck cattle and small utility trailers in all the USA, I learned lots more, I think. Notice I said, "I think." No, the original gooseneck small utility trailer was originally created by James Batchler of Throckmorton, Texas, in 1936. But even as it vectored out into the Hanover Trailer in the 1940's and mushroomed into tons of other manufacturers, it was the custom horse trailer versions of this which revealed something else to me about Coriolis Force.

Yes, I knew the toilet water runs around the bowl one way on the North side of the Equator up here in the USA. And the other direction down in Australia. But I kept getting asked to build trailers for horse owners for more than two horses with stalls at an angle! The head of the horse was asked to be toward the left side of the trailer. The stall gate was angled back on the right side so the horses were stalled all with their heads forward and to the left! Teir rear ends behind them and to the right. I asked, "Why?" I was told, "It's simple, Mike! A normal horse is right footed. If they go to fall, they always start to put their right front hoof out first to give then the best chance of handling the situation."

Hmmmmmmmmm. Interesting. As a human, do a little research. I think you will find that, just as most humans are right-handed, we tend to start walking or running with our right foot also! Hmmmmmm. Interesting. So I started looking down into the problem and yes, dogs and cats do to! Why? Well, if you peek down into all this, all vertebrates seem to be right sided, I think.

Duhh .. then why? I speculate. Well, if all vertebrate life is somehow related over all these eons, is this because all current life forms sort of focus on evolution on the planet from one side of the Equator? And they swim looking for food kind of right sided so they don't have to fight the average

Coriolis Force against it for the best chance at eating easiest? And so on? And does this really mean that this is really all 'proof' that even the humans came from what was most efficiently evolving in the march of life traveling the the fourth dimension that we need? Even for huge numbers of generations?

And might be even more of an explanation why there is still so much fuss going on between even very brilliant and skilled engineers who may not even ever see the real issues of why things seem to be different between them, or the need to do everything we can to go forward with the least confusion and flanking amongst us all?

For what is going to become of all this Coriolis Force issue, perhaps, on December 21, 2012, and who will be in the right doing what for all us humans and so on at that time?

Chortle!

--

--> Sleep well; OS2's still awake! ;)

Mike Luther

1553. Re: Corriolis force

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-03 17:47:16 UTC
From: John Passaneau <jxp16@psu.edu>
Message-ID: <h7ovf5$sg4s$1@tr22n12.aset.psu.edu>
Source record: 13515

Mike Luther wrote:
> Hi Unwin!
>
> Art Unwin wrote:
>
>> No. I am just exposing the so called self perceived experts on this
>> group to the outside world and I enjoy every bit of it. The talking
>> heads have no idea of the silent readers
>> that are laughing at you and your ignorance.
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> be even more subtle than at first thought! Most of us tend to 'view'
> things and 'solve' problems in two dimensions. That person is in my
> face or I'll just flank attack this, said in humor here. But even a
> very skilled and observant person, for example, gains a really more
> interesting perspective of life and everything around them when .. for
> the first time .. they solo fly an airplane!
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> The average person takes about six to eight hours of dual instruction to
> get to the level of awareness at which it is safe for the flight
> instructor to let the student go it alone. Just before takeoff when at
> the practicing takeoff and landing routine is going on, just before
> takeoff, "Well, your good enough at this to do it on your own! Take it
> around the pattern by yourself!" And the flight instructor pops off his
> seat belt, opens that right side door of the aircraft in a Cessna 140 or
> 150, for example. Gets out and slams the door shut and walks away!
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> The average student is so thrilled and whatever at this he or she just
> jams in the throttle and away it goes! But then even the most capable
> candidate suddenly has a different perspective of things when as the get
> set for their first solo landing. as they are looking down into the
> whole space between them and the approach end of the runway, it hits!
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> It's the first time they ever have really had to make a life or death
> decision in more than two dimensions! Height is totally involved here
> too. Suddenly, even though they don't realize it, they are dealing with
> the third level of infinities. You can have an infinite number of
> points in a line. But since you can have an infinitive number of lines
> in a plane that means the second order of infinity is so defined! And
> .. surprise .. you can have in an infinite number of planes in a cube or
> sphere, so there is, for the first time, life or death, the experience
> of their total involvement in level three of infinity. Plus since time
> is the fourth level of infinity, when the wheels touch the pavement and
> the student completes this once in a life time experience, their life

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> For the rest of their life they will begin solving problems and
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> back again to the person you were before this event.
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> simulator can kill you if you make a mistake, grin! It has to be the
> real thing. Every Peregrine Falcon knows when to turn lose in the dive
> of love, as far as I've ever known, chuckle.
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> for Texas Airmotive Company at Easterwood Airport in College Station,
> Texas, during much of Viet Nam. And I had to ride at least once with
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> as Robert Barr, one of the pilots for the US Air Force One and what
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> that confronts you, grin.
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> even many of us here have understood. As, much later at this, the CEO
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> right front hoof out first to give then the best chance of handling the
> situation."
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> start walking or running with our right foot also! Hmmmmmm.
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> on December 21, 2012, and who will be in the right doing what for all us
> humans and so on at that time?
>
> Chortle!
>

Oh my Goodness, is this Art's Doppelganger?

John W3JXP

1554. Re: Corriolis force

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-03 17:50:21 UTC
From: Mike Luther <mike.luther@ziplog.com>
Message-ID: <4aa001d8$0$23769$bbae4d71@news.suddenlink.net>
Source record: 13516

No, grin ..

John Passaneau wrote:
> Mike Luther wrote:

>>
>
> Oh my Goodness, is this Art's Doppelganger?
>
> John W3JXP

W5WQN since 1952

--

--> Sleep well; OS2's still awake! ;)

Mike Luther

1555. Re: Corriolis force

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-03 18:34:48 UTC
From: Art Unwin <arthurunwin@gmail.com>
Message-ID: <99cffe86-1550-4191-a823-5d8a30f70dd8@q7g2000yqi.googlegroups.com>
Source record: 13517

On Sep 3, 12:36 pm, Mike Luther <mike.lut...@ziplog.com> wrote:
> Hi Unwin!
>
> Art Unwin wrote:
> > No. I am just exposing the so called self perceived experts on this
> > group to the outside world and I enjoy every bit of it. The talking
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> more subtle than at first thought! Most of us tend to 'view' things and
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> everything around them when .. for the first time .. they solo fly an airplane!
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> the level of awareness at which it is safe for the flight instructor to let the
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> landing routine is going on, just before takeoff, "Well, your good enough at
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> aircraft in a Cessna 140 or 150, for example. Gets out and slams the door shut
> and walks away!
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> The average student is so thrilled and whatever at this he or she just jams in
> the throttle and away it goes! But then even the most capable candidate
> suddenly has a different perspective of things when as the get set for their
> first solo landing. as they are looking down into the whole space between them
> and the approach end of the runway, it hits!
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> It's the first time they ever have really had to make a life or death decision
> in more than two dimensions! Height is totally involved here too. Suddenly,
> even though they don't realize it, they are dealing with the third level of
> infinities. You can have an infinite number of points in a line. But since
> you can have an infinitive number of lines in a plane that means the second
> order of infinity is so defined! And .. surprise .. you can have in an
> infinite number of planes in a cube or sphere, so there is, for the first time,
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> touch the pavement and the student completes this once in a life time
> experience, their life will NEVER be the same again.
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> For the rest of their life they will begin solving problems and understanding

> what is said, displayed, posted in a discussion, all by looking down into the
> scenario. And once this is done, you can NEVER go back again to the person you
> were before this event.
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> And no, computer games and flight simulators don't do it, unless the simulator
> can kill you if you make a mistake, grin! It has to be the real thing. Every
> Peregrine Falcon knows when to turn lose in the dive of love, as far as I've
> ever known, chuckle.
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> But that also doesn't mean you know everything about force problems to which
> you are presented, grin! Yes, I was the Chief Flight Instructor for Texas
> Airmotive Company at Easterwood Airport in College Station, Texas, during much
> of Viet Nam. And I had to ride at least once with all the Texas Aggies who
> were trying to become pilots as part of their path into the future of life.
> Which, incidentally included such people as Robert Barr, one of the pilots for
> the US Air Force One and what became some 47 US generals. In my humble view
> all because they jumped forward to multi-dimension problem solving.
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> But .. that doesn't mean even at this level of perspective you see all that
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> I never realized for more than a decade later, how this issue of Coriolis Force
> is far more important to all living things than I suspect even many of us here
> have understood. As, much later at this, the CEO for the manufacturer of
> Hanover Trailers here in Bryan, Texas, the actual marketing main vector for the
> introduction of all the gooseneck cattle and small utility trailers in all the
> USA, I learned lots more, I think. Notice I said, "I think." No, the original
> gooseneck small utility trailer was originally created by James Batchler of
> Throckmorton, Texas, in 1936. But even as it vectored out into the Hanover
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> Yes, I knew the toilet water runs around the bowl one way on the North side of
> the Equator up here in the USA. And the other direction down in Australia.
> But I kept getting asked to build trailers for horse owners for more than two
> horses with stalls at an angle! The head of the horse was asked to be toward
> the left side of the trailer. The stall gate was angled back on the right side
> so the horses were stalled all with their heads forward and to the left! Teir
> rear ends behind them and to the right. I asked, "Why?" I was told, "It's
> simple, Mike! A normal horse is right footed. If they go to fall, they always
> start to put their right front hoof out first to give then the best chance of
> handling the situation."
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> Hmmmmmmmmm. Interesting. As a human, do a little research. I think you will
> find that, just as most humans are right-handed, we tend to start walking or
> running with our right foot also! Hmmmmmm. Interesting. So I started
> looking down into the problem and yes, dogs and cats do to! Why? Well, if you
> peek down into all this, all vertebrates seem to be right sided, I think.
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> Duhh .. then why? I speculate. Well, if all vertebrate life is somehow
> related over all these eons, is this because all current life forms sort of
> focus on evolution on the planet from one side of the Equator? And they swim
> looking for food kind of right sided so they don't have to fight the average
> Coriolis Force against it for the best chance at eating easiest? And so on?
> And does this really mean that this is really all 'proof' that even the humans
> came from what was most efficiently evolving in the march of life traveling the
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> For what is going to become of all this Coriolis Force issue, perhaps, on
> December 21, 2012, and who will be in the right doing what for all us humans
> and so on at that time?
>
> Chortle!
>
> --
>
> --> Sleep well; OS2's still awake! ;)
>
> Mike Luther

Mike I agree. A bullet has a three dimensional force so that it can
attain a straight line trajectory, the same that a radiated partical
must have for a straight line trajectory.The bottom line is that every
action has an equal and opposite reaction per Newton which means that
one must turn to the breakaway from equilibrium in the Big Bang. to
determine
the number of forces that are available when one considers what we as
humans must determine as what can be equal and opposite. With in the
earth's boundary we must recognise the existance and the impact of the
Coriolis force in our every day life including the need for spin on a
projectile so that it may attain a straight line trajectory. A space
rocket succumbs to the Coriolis effect by turning slowly while it is
attaining height as well as when it escapes from earths boundary where
it uses centrifugal force or spin. The boundary rules I consider the
greatest reasoning of all to human kind and that is a true picture as
to the laws of Newton.
Radio is in the stage of two dimension the same as the human race when
they stated man was never meant to fly purely because they object to
change of the existing perspectives
as Gallilao found out to his cost among others. If one considers the
std model one knows that the strong force is atom related via
separation which has unlimited energy and yet many blithly believe
that the matrics of a radiator is torn apart to produce radiation.

If this were true, nobody would pick up a microphone or even use a CRT when assuming
the beam particle came from the matrics and not on a particle that came to rest from outside our boundary. It all emphasises that the human race is resistance to change because of the fear it can generate such that they rather not want to know, At the moment true radiation is not fully understood and on this newsgroup they don't want to know unless they can read it in a book in college Are they going to alter radiation computer programs that support the impact of the Coriolis effect or go ahead and still use them despite the so called errors that they supply?
Best regards
Art Unwin KB9MZ xg(UK)

1556. Re: Corriolis force

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-03 19:50:00 UTC
From: Bill <k4wge@arrl.net>
Message-ID: <07b6b080-c6dc-46e4-aa08-e3aa7deaad1f@x38g2000yqb.googlegroups.com>
Source record: 13518

On Sep 3, 11:33 am, Art Unwin <arthurun...@gmail.com> wrote:

>
> I am ... exposing the so called self perceived experts on this
> group to the outside world and I enjoy every bit of it. The talking
> heads have no idea of the silent readers
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At least Chip Cohen's imaginary supporters would actually post from
AOL.
Is Art or Chip the crazier one?

1557. Re: Corriolis force

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-03 20:29:19 UTC
From: Michael Coslo <mjc5@psu.edu>
Message-ID: <h7p8uv$dk1o$1@tr22n12.aset.psu.edu>
Source record: 13519

Art Unwin wrote:
> On Sep 3, 12:36 pm, Mike Luther <mike.lut...@ziplog.com> wrote:
>> Hi Unwin!
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>> Art Unwin wrote:
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>> And does this really mean that this is really all 'proof' that even the humans
>> came from what was most efficiently evolving in the march of life traveling the
>> the fourth dimension that we need? Even for huge numbers of generations?
>>
>> And might be even more of an explanation why there is still so much fuss going
>> on between even very brilliant and skilled engineers who may not even ever see
>> the real issues of why things seem to be different between them, or the need to
>> do everything we can to go forward with the least confusion and flanking
>> amongst us all?
>>
>> For what is going to become of all this Coriolis Force issue, perhaps, on
>> December 21, 2012, and who will be in the right doing what for all us humans
>> and so on at that time?
>>
>> Chortle!
>>
>> --
>>
>> --> Sleep well; OS2's still awake! ;)
>>
>> Mike Luther
>
> Mike I agree. A bullet has a three dimensional force so that it can
> attain a straight line trajectory, the same that a radiated partical
> must have for a straight line trajectory.

Bullets arc, they don't go in a straight line. A bullet shot straight
and level will hit the ground at the same time as a bullet dropped from
the same height. That describes an arc that is proportional to the
velocity of the bullet.

While we're at it, the coriolis force water down the drain difference
between southern and northern hemisphere is an urban myth. While there
can be some effect on the rotation, frictional and initial conditions
are so much greater that the coriolis effect is measurable, but it isn't
the reason the water is going down a certain way.

> humans must determine as what can be equal and opposite. With in the
> earth's boundary we must recognise the existance and the impact of the
> Coriolis force in our every day life including the need for spin on a
> projectile so that it may attain a straight line trajectory.

Most people believe that the spin on a bullet acts as a Gyroscopic
stabilization. It's not a demonstration of coriolis force. If the bullet
actually were to use the coriolis force, would it not have to be
rotating at a rate equal but opposite? Which of course means that the

rifling on a rifle would need to be opposite between southern and
northern hemispheres, and at the equator would need to have no rifling
at all, or if you used a gun from one of the other hemisphere, the
bullet would have a tendency to either oppose gravity by traveling up,
or would almost immediately slam into the ground.

> A space
> rocket succumbs to the Coriolis effect by turning slowly while it is
> attaining height as well as when it escapes from earths boundary where
> it uses centrifugal force or spin.

We turned, not the rocket.

> Radio is in the stage of two dimension the same as the human race when
> they stated man was never meant to fly purely because they object to
> change of the existing perspectives
> as Gallilao found out to his cost among others.

Most folks believe that the coriolis force is applied in instances of
inertia, and not from an identifiable source, so an antenna, which is
radiating a non-accelerating EM radiation with an inertial point of
reference, isn't affected by such.

- 73 de Mike -

1558. Re: Corriolis force

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-03 21:31:02 UTC
From: Art Unwin <arthurunwin@gmail.com>
Message-ID: <e1306450-f7ae-46a7-9fa6-c1cbd9b64e46@m38g2000yqd.googlegroups.com>
Source record: 13520

On Sep 3, 3:29 pm, Michael Coslo <m...@psu.edu> wrote:
> Art Unwin wrote:
> > On Sep 3, 12:36 pm, Mike Luther <mike.lut...@ziplog.com> wrote:
> >> Hi Unwin!
>
> >> Art Unwin wrote:
> >>> No. I am just exposing the so called self perceived experts on this
> >>> group to the outside world and I enjoy every bit of it. The talking
> >>> heads have no idea of the silent readers
> >>> that are laughing at you and your ignorance.
> >> The things even skilled observers of this force seem to understand can be even
> >> more subtle than at first thought! Most of us tend to 'view' things and
> >> 'solve' problems in two dimensions. That person is in my face or I'll just
> >> flank attack this, said in humor here. But even a very skilled and observant
> >> person, for example, gains a really more interesting perspective of life and
> >> everything around them when .. for the first time .. they solo fly an airplane!
>
> >> The average person takes about six to eight hours of dual instruction to get to
> >> the level of awareness at which it is safe for the flight instructor to let the
> >> student go it alone. Just before takeoff when at the practicing takeoff and
> >> landing routine is going on, just before takeoff, "Well, your good enough at
> >> this to do it on your own! Take it around the pattern by yourself!" And the
> >> flight instructor pops off his seat belt, opens that right side door of the
> >> aircraft in a Cessna 140 or 150, for example. Gets out and slams the door shut
> >> and walks away!
>
> >> The average student is so thrilled and whatever at this he or she just jams in
> >> the throttle and away it goes! But then even the most capable candidate
> >> suddenly has a different perspective of things when as the get set for their
> >> first solo landing. as they are looking down into the whole space between them
> >> and the approach end of the runway, it hits!
>
> >> It's the first time they ever have really had to make a life or death decision
> >> in more than two dimensions! Height is totally involved here too. Suddenly,
> >> even though they don't realize it, they are dealing with the third level of
> >> infinities. You can have an infinite number of points in a line. But since
> >> you can have an infinitive number of lines in a plane that means the second
> >> order of infinity is so defined! And .. surprise .. you can have in an
> >> infinite number of planes in a cube or sphere, so there is, for the first time,
> >> life or death, the experience of their total involvement in level three of
> >> infinity. Plus since time is the fourth level of infinity, when the wheels
> >> touch the pavement and the student completes this once in a life time
> >> experience, their life will NEVER be the same again.
>

> >> For the rest of their life they will begin solving problems and understanding
> >> what is said, displayed, posted in a discussion, all by looking down into the
> >> scenario. And once this is done, you can NEVER go back again to the person you
> >> were before this event.
>
> >> And no, computer games and flight simulators don't do it, unless the simulator
> >> can kill you if you make a mistake, grin! It has to be the real thing. Every
> >> Peregrine Falcon knows when to turn lose in the dive of love, as far as I've
> >> ever known, chuckle.
>
> >> But that also doesn't mean you know everything about force problems to which
> >> you are presented, grin! Yes, I was the Chief Flight Instructor for Texas
> >> Airmotive Company at Easterwood Airport in College Station, Texas, during much
> >> of Viet Nam. And I had to ride at least once with all the Texas Aggies who
> >> were trying to become pilots as part of their path into the future of life.
> >> Which, incidentally included such people as Robert Barr, one of the pilots for
> >> the US Air Force One and what became some 47 US generals. In my humble view
> >> all because they jumped forward to multi-dimension problem solving.
>
> >> But .. that doesn't mean even at this level of perspective you see all that
> >> confronts you, grin.
>
> >> I never realized for more than a decade later, how this issue of Coriolis Force
> >> is far more important to all living things than I suspect even many of us here
> >> have understood. As, much later at this, the CEO for the manufacturer of
> >> Hanover Trailers here in Bryan, Texas, the actual marketing main vector for the
> >> introduction of all the gooseneck cattle and small utility trailers in all the
> >> USA, I learned lots more, I think. Notice I said, "I think." No, the original
> >> gooseneck small utility trailer was originally created by James Batchler of
> >> Throckmorton, Texas, in 1936. But even as it vectored out into the Hanover
> >> Trailer in the 1940's and mushroomed into tons of other manufacturers, it was
> >> the custom horse trailer versions of this which revealed something else to me
> >> about Coriolis Force.
>
> >> Yes, I knew the toilet water runs around the bowl one way on the North side of
> >> the Equator up here in the USA. And the other direction down in Australia.
> >> But I kept getting asked to build trailers for horse owners for more than two
> >> horses with stalls at an angle! The head of the horse was asked to be toward
> >> the left side of the trailer. The stall gate was angled back on the right side
> >> so the horses were stalled all with their heads forward and to the left! Teir
> >> rear ends behind them and to the right. I asked, "Why?" I was told, "It's
> >> simple, Mike! A normal horse is right footed. If they go to fall, they always
> >> start to put their right front hoof out first to give then the best chance of
> >> handling the situation."
>
> >> Hmmmmmmmmm. Interesting. As a human, do a little research. I think you will
> >> find that, just as most humans are right-handed, we tend to start walking or
> >> running with our right foot also! Hmmmmmm. Interesting. So I started
> >> looking down into the problem and yes, dogs and cats do to! Why? Well, if you
> >> peek down into all this, all vertebrates seem to be right sided, I think.

>
> >> Duhh .. then why? I speculate. Well, if all vertebrate life is somehow
> >> related over all these eons, is this because all current life forms sort of
> >> focus on evolution on the planet from one side of the Equator? And they swim
> >> looking for food kind of right sided so they don't have to fight the average
> >> Coriolis Force against it for the best chance at eating easiest? And so on?
> >> And does this really mean that this is really all 'proof' that even the humans
> >> came from what was most efficiently evolving in the march of life traveling the
> >> the fourth dimension that we need? Even for huge numbers of generations?
>
> >> And might be even more of an explanation why there is still so much fuss going
> >> on between even very brilliant and skilled engineers who may not even ever see
> >> the real issues of why things seem to be different between them, or the need to
> >> do everything we can to go forward with the least confusion and flanking
> >> amongst us all?
>
> >> For what is going to become of all this Coriolis Force issue, perhaps, on
> >> December 21, 2012, and who will be in the right doing what for all us humans
> >> and so on at that time?
>
> >> Chortle!
>
> >> --
>
> >> --> Sleep well; OS2's still awake! ;)
>
> >> Mike Luther
>
> > Mike I agree. A bullet has a three dimensional force so that it can
> > attain a straight line trajectory, the same that a radiated partical
> > must have for a straight line trajectory.
>
> Bullets arc, they don't go in a straight line. A bullet shot straight
> and level will hit the ground at the same time as a bullet dropped from
> the same height. That describes an arc that is proportional to the
> velocity of the bullet.
,
Correct ,but without spin it will tumble thus a spin force must be
exerted by the rifle barrel
as well as the powder charge

>
> While we're at it, the coriolis force water down the drain difference
> between southern and northern hemisphere is an urban myth. While there
> can be some effect on the rotation, frictional and initial conditions
> are so much greater that the coriolis effect is measurable, but it isn't
> the reason the water is going down a certain way.

That is not pertinent to what I have said so I do not want to respond
to that.
Tho I suggest that Einsteins laws of Relativity would shed light on

the matter.
He moved towards relativity because of his failure to determine the
Weak force
when studying radiation.

>
> > humans must determine as what can be equal and opposite. With in the
> > earth's boundary we must recognise the existance and the impact of the
> > Coriolis force in our every day life including the need for spin on a
> > projectile so that it may attain a straight line trajectory.
>
> Most people believe that the spin on a bullet acts as a Gyroscopic
> stabilization. It's not a demonstration of coriolis force. If the bullet
> actually were to use the coriolis force, would it not have to be
> rotating at a rate equal but opposite? Which of course means that the
> rifling on a rifle would need to be opposite between southern and
> northern hemispheres, and at the equator would need to have no rifling
> at all, or if you used a gun from one of the other hemisphere, the
> bullet would have a tendency to either oppose gravity by traveling up,
> or would almost immediately slam into the ground.
>
> > A space
> > rocket succumbs to the Coriolis effect by turning slowly while it is
> > attaining height as well as when it escapes from earths boundary where
> > it uses centrifugal force or spin.
>
> We turned, not the rocket.

Einsteins laws of relativity apply to that, ie who and where is the
observer?

What I am saying that the spin applied in the Big Bang is present in
any arbitary boundary
which you wish to make in this Universe. If the boundary encircles
earth then the external forces must equal the internal forces. In the
case of earth the outer forces consists of both gravity and the
Coriolis force the latter being one of spin.One cannot survive in this
Universe without the other. Thus if you zoom in to a smaller boundary
there must always be a component (vector) of shear (spin) inside that
smaller boundary
to neutralize the Coriolis force per the laws of Newton. If one wishes
to draw a boundary around a accelerating charge as in radiation then
again one must apply both a straight vector and one of spin. This is
exactly the boundary case when a particle at rest on a diamagnetic
surface for the acceleration of charge which are consistent with the
vectors outside the boundary otherwise equilibrium is not in place.

>
> > Radio is in the stage of two dimension the same as the human race when
> > they stated man was never meant to fly purely because they object to
> > change of the existing perspectives

> > as Gallilao found out to his cost among others.
>
> Most folks believe that the coriolis force is applied in instances of
> inertia, and not from an identifiable source, so an antenna, which is
> radiating a non-accelerating EM radiation with an inertial point of
> reference, isn't affected by such.
>
>   - 73 de Mike -

1559. Re: Corriolis force

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-03 23:14:14 UTC
From: Dave <noone@nowhere.com>
Message-ID: <a5Ynm.1033$Jd7.485@nwrddc02.gnilink.net>
Source record: 13521

"Art Unwin" <arthurunwin@gmail.com> wrote in message
news:cf5b3115-db1d-42a5-98cb-5c67260e1580@v36g2000yqv.googlegroups.com...
> It seems that some do not understand what the Corriolis force is so
> here goes
> When the Big Bang ocurred all energy was in an arbitrary boundary

that's enough... the rest is just more blabbering. first, spell it right,
its Coriolis with one r.
next, its not even a 'real' force, and is often called the Coriolis 'effect'
instead of force to make that clear. and it is not linked to gravity, its
linked to rotation. if the earth or any other body didn't rotate there
would be no Coriolis effect on it's surface and it would still have gravity.
I'm not even going to try to address the electro-weak babble, that is
totally non-sequitar.

1560. Re: Corriolis force

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-03 23:17:21 UTC
From: Art Unwin <arthurunwin@gmail.com>
Message-ID: <50ed4c7a-bc8b-4d51-b8b1-9c4f4f1e4bea@s31g2000yqs.googlegroups.com>
Source record: 13522

On Sep 3, 2:50 pm, Bill <k4...@arrl.net> wrote:
> On Sep 3, 11:33 am, Art Unwin <arthurun...@gmail.com> wrote:
>
>
>
> > I am ... exposing the so called self perceived experts on this
> > group to the outside world and I enjoy every bit of it. The talking
> > heads have no idea of the silent readers
> > that are laughing at you and your ignorance.
>
> At least Chip Cohen's imaginary supporters would actually post from
> AOL.
> Is Art or Chip the crazier one?

Well Dr Cohen (chip) gave up in trying educate the psuedo experts of
his findings because
this group was not interested in change. So he took of and started a
company, obtained contracts from the military and is making money.
Crazy like a fox I would say. Same went
with a lot of experts who were driven away from this group in the
past. For me I am having a great time putting the so called experts on
stage so the world can judge their contents.

1561. Re: Corriolis force

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-04 02:32:20 UTC
From: tom <news4792@taring.org>
Message-ID: <4aa07c32$0$28118$8046368a@newsreader.iphouse.net>
Source record: 13523

nm5k@wt.net wrote:

>
> And visa versa I have no doubt whatsoever..
> I actually believe you have more cult followers
> than you realize. You are a hoot.
> Might as well just "sticky" a permanent thread
> called "The Art Unwin Show" so everyone can
> keep on the same page with the latest state of
> the Art.
>

The unseen readers are laughing at your ignorance. And mine. And almost everyone else's on this list. Because we don't know kaka despite education and experience.

Yep, he's a hoot. Doesn't understand a whit about what he says, but boy can he say it.

I hope someone is keeping a record of what he's saying so that it can be analyzed and turned into a babblegaff generator.

tom
K0TAR

1562. Re: Corriolis force

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-04 02:37:15 UTC
From: tom <news4792@taring.org>
Message-ID: <4aa07dbc$0$42843$8046368a@newsreader.iphouse.net>
Source record: 13524

tom wrote:
>
> I hope someone is keeping a record of what he's saying so that it can be
> analyzed and turned into a babblegaff generator.
>

Yes, babblegaff, bafflegab has nothing to compare.

tom
K0TAR

1563. Re: Corriolis force

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-04 03:29:31 UTC
From: Jeff Liebermann <jeffl@cruzio.com>
Message-ID: <5711a5915d3old9mqage031pi0i2960gs4@4ax.com>
Source record: 13525

On Thu, 3 Sep 2009 19:11:42 -0700 (PDT), nm5k@wt.net wrote:

>How in the heck are you going to
>get **ANY** vertical radiator to have a truly isotropic pattern?
>It's impossible. An isotropic pattern is a theoretical pattern
>in which radiation is equal in all directions. Such a pattern
>does not exist with real antennas.

A real isotropic radiator may not exist, but one can get fairly close.
If you believe the model, the total error is 0.44 db. See:
<http://802.11junk.com/jeffl/antennas/isotropic/index.html>
The NEC2 deck is under the photo labeled "main".

I once built one of these antennas on roughly 444MHz out of cardboard
and magnet wire. The oscillator was a small crystal can oscillator
running from a 9V battery to avoid having the feed coax wrecking the
pattern. The impedance was nowhere near 50 ohms and required a bit of
matching to get the VSWR down. I'm now digging for the photos.

I used a piece of string to maintain a constant radius, a tiny pickup
loop at the end of a length of coax cable running inline with the
string, and eventually going to my antique HP spectrum analyzer. On
the 2dB/div scale, it was a fairly good approximation of an isotropic
radiator with errors mostly caused by indoor reflections and
interference with the bench.

--
Jeff Liebermann 150 Felker St #D Santa Cruz CA 95060
831-336-2558
http://802.11junk.com jeffl@cruzio.com
http://www.LearnByDestroying.com AE6KS

1564. Re: Corriolis force

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-04 04:01:30 UTC
From: tom <news4792@taring.org>
Message-ID: <4aa0917b$0$42839$8046368a@newsreader.iphouse.net>
Source record: 13526

Jeff Liebermann wrote:
> On Thu, 3 Sep 2009 19:11:42 -0700 (PDT), nm5k@wt.net wrote:
>
>> How in the heck are you going to
>> get **ANY** vertical radiator to have a truly isotropic pattern?
>> It's impossible. An isotropic pattern is a theoretical pattern
>> in which radiation is equal in all directions. Such a pattern
>> does not exist with real antennas.
>
> A real isotropic radiator may not exist, but one can get fairly close.
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> <http://802.11junk.com/jeffl/antennas/isotropic/index.html>
> The NEC2 deck is under the photo labeled "main".
>
> I once built one of these antennas on roughly 444MHz out of cardboard
> and magnet wire. The oscillator was a small crystal can oscillator
> running from a 9V battery to avoid having the feed coax wrecking the
> pattern. The impedance was nowhere near 50 ohms and required a bit of
> matching to get the VSWR down. I'm now digging for the photos.
>
> I used a piece of string to maintain a constant radius, a tiny pickup
> loop at the end of a length of coax cable running inline with the
> string, and eventually going to my antique HP spectrum analyzer. On
> the 2dB/div scale, it was a fairly good approximation of an isotropic
> radiator with errors mostly caused by indoor reflections and
> interference with the bench.
>
>

Nice. The 3d pic is impressive.

tom
K0TAR

1565. Re: Corriolis force

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-04 04:09:37 UTC
From: Art Unwin <arthurunwin@gmail.com>
Message-ID: <cfa5acd4-a17d-4dd5-8053-7fae0084a8e4@j39g2000yqh.googlegroups.com>
Source record: 13527

On Sep 3, 10:29 pm, Jeff Liebermann <je...@cruzio.com> wrote:
> On Thu, 3 Sep 2009 19:11:42 -0700 (PDT), n...@wt.net wrote:
> >How in the heck are you going to
> >get **ANY** vertical radiator to have a truly isotropic pattern?
> >It's impossible. An isotropic pattern is a theoretical pattern
> >in which radiation is equal in all directions. Such a pattern
> >does not exist with real antennas.
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> A real isotropic radiator may not exist, but one can get fairly close.
> If you believe the model, the total error is 0.44 db. See:
> <http://802.11junk.com/jeffl/antennas/isotropic/index.html>
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>
> I once built one of these antennas on roughly 444MHz out of cardboard
> and magnet wire. The oscillator was a small crystal can oscillator
> running from a 9V battery to avoid having the feed coax wrecking the
> pattern. The impedance was nowhere near 50 ohms and required a bit of
> matching to get the VSWR down. I'm now digging for the photos.
>
> I used a piece of string to maintain a constant radius, a tiny pickup
> loop at the end of a length of coax cable running inline with the
> string, and eventually going to my antique HP spectrum analyzer. On
> the 2dB/div scale, it was a fairly good approximation of an isotropic
> radiator with errors mostly caused by indoor reflections and
> interference with the bench.
>
> --
> # Jeff Liebermann 150 Felker St #D Santa Cruz CA 95060
> # 831-336-2558
> #http://802.11junk.com   je...@cruzio.com
> #http://www.LearnByDestroying.com   AE6KS

You cannot assume that one who makes an accusation has the status of
education to match his veracity. The person who stated that it is an
impossibility does not even posses a high school diploma. Climbing on
the back of his statements puts you back on the stage again!

1566. Re: Corriolis force

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-04 04:18:48 UTC
From: Art Unwin <arthurunwin@gmail.com>
Message-ID: <1b6ba75c-7893-4c58-88a7-370941ab1102@z16g2000yqe.googlegroups.com>
Source record: 13528

On Sep 3, 6:14 pm, "Dave" <no...@nowhere.com> wrote:
> "Art Unwin" <arthurun...@gmail.com> wrote in message
>
> news:cf5b3115-db1d-42a5-98cb-5c67260e1580@v36g2000yqv.googlegroups.com...
>
> > It seems that some do not understand what the Corriolis force is so
> an find the> here goes
> > When the Big Bang ocurred all energy was in an arbitrary boundary
>
> that's enough... the rest is just more blabbering. first, spell it right,
> its Coriolis with one r.
> next, its not even a 'real' force, and is often called the Coriolis 'effect'
> instead of force to make that clear. and it is not linked to gravity, its
> linked to rotation. if the earth or any other body didn't rotate there
> would be no Coriolis effect on it's surface and it would still have gravity.
> I'm not even going to try to address the electro-weak babble, that is
> totally non-sequitar.

David, you can find the famous "exclusion principle" by Wolfgang Pauli
in any
book on Quantum Mechanics. You should write a paper on where he weny
wrong based on your intuition. That gun you are firing is getting
lower and lower that I fear for your foot !

1567. Re: Corriolis force

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-04 07:31:59 UTC
From: Jeff Liebermann <jeffl@cruzio.com>
Message-ID: <8ue1a5h6lf69nks7p7jqgibi524ieh6i2u@4ax.com>
Source record: 13529

On Thu, 03 Sep 2009 23:01:30 -0500, tom <news4792@taring.org> wrote:

>> <http://802.11junk.com/jeffl/antennas/isotropic/index.html>

>Nice. The 3d pic is impressive.
>tom
>K0TAR

Thanks, but the design is not mine. I think it came with a 4NEC2 samples collection, MiniNEC, or possibly with one of the other antenna modeling packages. I've got them all muddled together so I can't easily determine the source. I don't think I made any changes to the model. Mostly, all I did was package the results into something presentable on a web page. (Note: I tried to convince Ari to add a web page creation feature to 4NEC2, but failed).

Incidentally, I has some illusion of using the isotropic approximation antenna as a gain reference antenna. I know there are other reference antenna designs that are more suitable, but I thought it would be an interesting exercise. I also built one for 2.4GHz, which was a total failure.

Drivel: Isotropic antenna patents:

"Spherical antennas having isotropic radiation patterns"
<http://www.google.com/patents?id=--I2AAAAEBAJ>

"Isotropic antenna system and notebook computer"
<http://www.google.com/patents/about?id=M2UOAAAAEBAJ>
Using multiple antennas to get a reasonably hemispherical pattern on a laptop.

"Omnidirectional isotropic antenna"
<http://www.google.com/patents?id=VQcYAAAAEBAJ>
Uses a microwave lens fed by wavguide. Pattern is roughly hemispherical.

"Near-isotropic low-profile microstrip radiator especially suited for use as mobile vehicle antenna"
<http://www.google.com/patents?id=wNE5AAAAEBAJ>

"Near isotropic circularly polarized antenna"
<http://www.google.com/patents?id=saMgAAAAEBAJ>

etc.... plenty more found with a search for "isotropic antenna". Of course, isotropic antennas don't really exist. Therefore all the patents must be science fiction.

Incidentally, I'm still scratching my rapidly depilating head about your answers to my question about antenna resonance. However, I wanna do some more reading before demonstrating my ignorance on the subject and making a fool of myself. Real-soon-now.

--
Jeff Liebermann jeffl@cruzio.com
150 Felker St #D http://www.LearnByDestroying.com
Santa Cruz CA 95060 http://802.11junk.com
Skype: JeffLiebermann AE6KS 831-336-2558

1568. Re: Corriolis force

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-04 07:49:24 UTC
From: Jeff Liebermann <jeffl@cruzio.com>
Message-ID: <4lg1a5ti09bc0lu5uqn03qda77qph5q9qk@4ax.com>
Source record: 13530

On Thu, 3 Sep 2009 21:09:37 -0700 (PDT), Art Unwin
<arthurunwin@gmail.com> wrote:

>You cannot assume that one who makes an accusation has the status of
>education to match his veracity. The person who stated that it is an
>impossibility does not even posses a high school diploma. Climbing on
>the back of his statements puts you back on the stage again!

Hint: Please feel free to attack a persons ideas, logic, conclusions,
data, information, assertions, assumptions, pontifications, judgment,
and numbers. This is proper for a technical discussion. However,
attacking a persons background, education, personality, appearance,
and wallpaper is little better than a character assassination and
should be avoided. Discuss the ideas, not the person.

That being said, I've learned as much from those without the proper
credentials, than from those with the requisite degrees and
certifications. Hands on experience and Learn By Destroying(tm) are
amazingly good teachers.

Also, I judge people mostly by their willingness and ability to learn.
When learning stops, one rots in place and eventually withers. What
have you learned from this discussion on your Gaussian Radiative
Cluster?

--
Jeff Liebermann jeffl@cruzio.com
150 Felker St #D http://www.LearnByDestroying.com
Santa Cruz CA 95060 http://802.11junk.com
Skype: JeffLiebermann AE6KS 831-336-2558

1569. Re: Corriolis force

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-04 08:37:36 UTC
From: Szczepan Białek <sz.bialek@wp.pl>
Message-ID: <h7q8nh$6mf$1@node1.news.atman.pl>
Source record: 13531

Uďż˝ytkownik <nm5k@wt.net> napisaďż˝ w wiadomoďż˝ci
news:2115e95d-887c-488d-899e-0fbc773e9991@x5g2000prf.googlegroups.com...
On Sep 3, 10:29 pm, Jeff Liebermann <je...@cruzio.com> wrote:
>> On Thu, 3 Sep 2009 19:11:42 -0700 (PDT), n...@wt.net wrote:
> >How in the heck are you going to
> >get **ANY** vertical radiator to have a truly isotropic pattern?
> >It's impossible. An isotropic pattern is a theoretical pattern
> >in which radiation is equal in all directions. Such a pattern
> >does not exist with real antennas.
>
>> A real isotropic radiator may not exist, but one can get fairly close.
> If you believe the model, the total error is 0.44 db. See:
> <http://802.11junk.com/jeffl/antennas/isotropic/index.html>
> The NEC2 deck is under the photo labeled "main".
>
>> I once built one of these antennas on roughly 444MHz out of cardboard
> and magnet wire. The oscillator was a small crystal can oscillator
> running from a 9V battery to avoid having the feed coax wrecking the
> pattern. The impedance was nowhere near 50 ohms and required a bit of
> matching to get the VSWR down. I'm now digging for the photos.
>
>> I used a piece of string to maintain a constant radius, a tiny pickup
> loop at the end of a length of coax cable running inline with the
> string, and eventually going to my antique HP spectrum analyzer. On
> the 2dB/div scale, it was a fairly good approximation of an isotropic
> radiator with errors mostly caused by indoor reflections and
> interference with the bench.
>

>Sure, you can get fairly close to isotropic with the right
system, but how are you going to do it by tipping a
vertical? The likely results do not fit my idea of isotropic.

"An isotropic radiator is a theoretical point source of waves which exhibits
the same magnitude or properties when measured in all directions".
The only way to make the real point source is the proper tipping. Of course
it must be a monopole.
S*

1570. Re: Corriolis force

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-04 11:06:06 UTC
From: Mike <emce@iinet.net.au>
Message-ID: <4aa0f49e$0$28352$5a62ac22@per-qv1-newsreader-01.iinet.net.au>
Source record: 13532

<nm5k@wt.net> wrote in message
news:4baaf9b2-4c84-4d1f-aa85-62f0ec8822ec@x5g2000prf.googlegroups.com...
> On Sep 3, 11:09 pm, Art Unwin <arthurun...@gmail.com> wrote:
>
>>
>> You cannot assume that one who makes an accusation has the status of
>> education to match his veracity. The person who stated that it is an
>> impossibility does not even posses a high school diploma. Climbing on
>> the back of his statements puts you back on the stage again!
>
> Does not matter what education I started out with. They don't
> teach antenna theory until college level anyway.
> Being as you didn't take those courses in college either,
> being a mechanical engineer, I don't see how you have any
> real leg up on me at all as far as antenna theory.
> You had to learn it on your own, same as I did.
> You probably had a decent leg up in math at one time,
> but you seem so senile now, I doubt it does you any good. :/
> You don't seem to exercise the skill.. You hardly ever give out
> any math to support any of your theories.
>
> All of my antenna education has been self administered, and for all
> you know, I might have eclipsed you years ago. You have no way of
> really knowing unless someone gave us a test.
> Heck, you went to college, and I was expelled from high school,
> but as I general rule, I spell better than you do.
> Not perfect, but I bet my rate of error is a good bit lower than
> yours.
>
> How do you explain that? And if that is the case, how can we be
> sure that your lofty college education in mechanical engineering is
> actually helping you to rise above that nasty ole dumbass NM5K
> when it comes to antenna talk?
>
> There are many here that know much more than I do, but as
> far as I can tell, you ain't one of them. :/
> You can telling a fetching yarn to reel em in, but when it comes to
> producing the real goods, you vanish every time after a mind numbing
> barrage of pure baffle gab.
>
> Most of my antenna work is with real antennas in the real world.
> I don't spend much time letting modeling programs run wild, and
> then proclaim that the resulting designs they spit out require new
> baffle gab theory to explain their operation.

>
> So it's not really required that I be some rocket scientist here.
> I'm not the one having to defend baffle gab.
>
> But you on the other hand propose that you are going to rewrite the
> books with your new theories.
> And that most everyone here, except you of course, is a dribbling
> idiot
> not to swallow everything you say, hook, equilibrium, and weak force.
> Being that is the case, I'd be a lot more worried about your education
> than mine if I were you.
> You are the one that needs to prove your case, not I.

Well put.

1571. Re: Corriolis force

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-04 11:28:27 UTC
From: Jeff Liebermann <jeffl@cruzio.com>
Message-ID: <0lt1a5dqc7ggakmgilf2l0nu69bampf5tk@4ax.com>
Source record: 13533

On Fri, 4 Sep 2009 00:56:39 -0700 (PDT), nm5k@wt.net wrote:

>Sure, you can get fairly close to isotropic with the right
>system, but how are you going to do it by tipping a
>vertical? The likely results do not fit my idea of isotropic.

I forgot to connect my comments to the original question. Sorry(tm).
You're correct. There's no way to get a good isotropic radiator
pattern with a simple vertical radiator. However, you can still get
fairly close if you make the antenna sufficiently small relative to
the operating wavelength. As the physical antenna size approaches a
point radiator, the pattern starts to look rather spherical.
Unfortunately, the gain drops, efficiency drops, and feed point
impedance drops, resulting in a rather inferior antenna.

There's also a question of how close to perfection does the spherical
pattern need to become? Within 0.1dB, 1dB, 3dB, etc???? Offhand, I
would guess anything within a few dB of spherical could be considered
isotropic, as in all the patents I noted.

--
Jeff Liebermann jeffl@cruzio.com
150 Felker St #D http://www.LearnByDestroying.com
Santa Cruz CA 95060 http://802.11junk.com
Skype: JeffLiebermann AE6KS 831-336-2558

1572. Re: ART vs. W8JI

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-04 12:04:05 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <on7om.5667$4t6.1013@newsfe06.iad>
Source record: 13534

Dale Parfitt wrote:
> Thank you Cecil,
> That's all I was looking for.

You're welcome and I agree with 95% of what W8JI says.
(For instance, he is mistaken about the delay through
a 100T, 10TPI, 2" diameter 75m loading coil.)

Some may or may not understand why random folding
of antenna radiators tends to change the radiating
conductors into non-radiating conductors. (The same
effect is at work in loading coils.)

When two conductors are carrying differential coherent
currents with no common-mode current, there is negligible
radiation when the two conductors are parallel to
each other and the spacing is a very small fraction of
a wavelength. It's called a transmission line and most
of the losses at HF are I^2*R. Usually, one of the goals
of a transmission line is not to radiate. Transmission line
fields tend to cancel in the near field due to destructive
interference.

A single straight wire in free space is a very efficient
radiator because interference occurs mostly in the far
field. Fold it back upon itself and unless the
second conductor is positioned perfectly, there will exist
differential currents between the two conductors which
will tend to cancel the radiation - leaving mostly I^2*R
losses at HF.

Small folded/loaded antennas tend to cancel the radiating
fields. The only other avenue for a lot of the energy is
conversion to heat.
--
73, Cecil, IEEE, OOTC, http://www.w5dxp.com

1573. Re: ART vs. W8JI

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-04 12:23:33 UTC
From: Richard Fry <rfry@adams.net>
Message-ID: <7d681cb7-733b-4bbe-b12e-49e9384ffa47@s39g2000yqj.googlegroups.com>
Source record: 13535

On Sep 3, 10:26 am, Art Unwin <arthurun...@gmail.com> wrote:

> Yes, that is correct, but the power used on a 1/2 wave dipole
> is half that of a full wave.

On the chance that you meant a full-wave dipole in your quote above, I did a quick comparison of one with a 1/2-wave dipole (linked below).

The peak, intrinsic gain of the full-wave is about 1.6 dB greater than the 1/2-wave -- which is due to the narrower lobe it produces. This has nothing to do with "equilibrium."

The 2,082 -j583 ohm input Z of the full-wave version is not user friendly. But if zero-loss matching networks are used at the feedpoint of both antennas, then for EQUAL applied power to each, the peak field intensity produced by the full-wave dipole would be about 1.6 dB (20%) greater than from the 1/2-wave version.

If the power applied to the full wave dipole was 1.6 dB less than applied to the 1/2-wave dipole, then their measured peak fields would be identical. But that is not a power reduction of one half (3 dB), as in your statement, Art.

http://i62.photobucket.com/albums/h85/rfry-100/DipoleCompareArt.jpg

RF

1574. Re: ART vs. W8JI

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-04 13:34:18 UTC
From: Michael Coslo <mjc5@psu.edu>
Message-ID: <h7r50q$m42u$1@tr22n12.aset.psu.edu>
Source record: 13536

Cecil Moore wrote:
> Dale Parfitt wrote:
>> Thank you Cecil,
>> That's all I was looking for.
>
> You're welcome and I agree with 95% of what W8JI says.
> (For instance, he is mistaken about the delay through
> a 100T, 10TPI, 2" diameter 75m loading coil.)
>
> Some may or may not understand why random folding
> of antenna radiators tends to change the radiating
> conductors into non-radiating conductors. (The same
> effect is at work in loading coils.)

Any relation to the loosely wrapped "coils" of shortened verticals like
bug catchers?

- 73 de Mike N3LI -

1575. Re: Corriolis force

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-04 13:36:26 UTC
From: Dave <noone@nowhere.com>
Message-ID: <uJ8om.1092$Jd7.95@nwrddc02.gnilink.net>
Source record: 13537

<nm5k@wt.net> wrote in message
news:cb4af2d2-b178-4419-940f-a12fc627e2bd@d15g2000prc.googlegroups.com...
On Sep 3, 10:33 am, Art Unwin <arthurun...@gmail.com> wrote:
>And I imagine that there are still many readers world wide
>who are still wondering what constitutes "equilibrium" in
>an antenna system. :(

not any more, he defined it just the other day, equilibrium==isotropic.

1576. Re: Corriolis force

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-04 13:39:58 UTC
From: Dave <noone@nowhere.com>
Message-ID: <OM8om.1093$Jd7.578@nwrddc02.gnilink.net>
Source record: 13538

"Szczepan Bialek" <sz.bialek@wp.pl> wrote in message
news:h7q8nh$6mf$1@node1.news.atman.pl...

> "An isotropic radiator is a theoretical point source of waves which
> exhibits the same magnitude or properties when measured in all
> directions".
> The only way to make the real point source is the proper tipping. Of
> course it must be a monopole.

another blabbering idiot chiming in... a monopole can't have the same
properties in all directions since it is linear, no matter how much you tip
it!

1577. Re: Corriolis force

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-04 13:42:07 UTC
From: Dave <noone@nowhere.com>
Message-ID: <PO8om.1094$Jd7.251@nwrddc02.gnilink.net>
Source record: 13539

"Art Unwin" <arthurunwin@gmail.com> wrote in message
news:1b6ba75c-7893-4c58-88a7-370941ab1102@z16g2000yqe.googlegroups.com...
On Sep 3, 6:14 pm, "Dave" <no...@nowhere.com> wrote:
>David, you can find the famous "exclusion principle" by Wolfgang Pauli
>in any book on Quantum Mechanics.

ah, bringing the Pauli Exclusion Principle in on the discusion now, that is
a new one i think... can we now not have any of your magical levitating
diamagnetic neutrinos on an antenna in the same quantum states??

1578. Re: ART vs. W8JI

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-04 13:54:51 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <8%8om.129681$O23.36802@newsfe11.iad>
Source record: 13540

Richard Fry wrote:
> If the power applied to the full wave dipole was 1.6 dB less than
> applied to the 1/2-wave dipole, then their measured peak fields would
> be identical. But that is not a power reduction of one half (3 dB),

Increase the length of the one wavelength dipole to a
1.25WL EDZ and the maximum gain indeed does increase by
~3dB over a 1/2WL dipole. Consider that the highest gain
for a single-wire antenna with a figure-8 radiation pattern
occurs with a feedpoint impedance of ~175-j1000 ohms, i.e.
the antenna wire, by itself, is *non-resonant*. A parasitic
element 1.25WL long would have a negligible effect on an
antenna system. :-0

Consider that if one disconnects the feedline from a 1/2WL
center-fed dipole, the two remaining 1/4WL wires separated
by an insulator are *non-resonant*. Breaking guy wires into
1/4WL separated by insulators is one way of avoiding
resonance. :-)
--
73, Cecil, IEEE, OOTC, http://www.w5dxp.com

1579. Re: ART vs. W8JI

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-04 14:30:20 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <uw9om.18695$Y83.4382@newsfe21.iad>
Source record: 13541

Michael Coslo wrote:
> Any relation to the loosely wrapped "coils" of shortened verticals like
> bug catchers?

Take a look at the geometry. Assuming that the current on one
side of a turn on the coil is equal to the current on the
opposite side of the coil but traveling in the opposite direction,
one can see why those two currents per turn resemble transmission
line currents (differential) rather than antenna currents (common-
mode). (A 10" coil wound with 1/2WL of wire radiates roughly the
same amount of energy as a 10" straight wire.)

Physically large air-core loading coils can be modeled as a
transmission line with a Z0 and VF (delay).

http://hamwaves.com/antennas/inductance.html

The delay through the coil can be calculated by knowing the
Beta = _____ rad/m "Axial propagation factor of n=0 sheath
helix waveguide mode at the design frequency"

The VF of W8JI's 100T, 10TPI, 2" dia test coil calculates
out to be ~0.03 resulting in a ~25 nS (~37 deg) delay
through the coil at 4 MHz.
--
73, Cecil, IEEE, OOTC, http://www.w5dxp.com

1580. Re: Corriolis force

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-04 14:33:35 UTC
From: Michael Coslo <mjc5@psu.edu>
Message-ID: <h7r8g1$m432$1@tr22n12.aset.psu.edu>
Source record: 13542

Dave wrote:
>
> "Art Unwin" <arthurunwin@gmail.com> wrote in message
> news:1b6ba75c-7893-4c58-88a7-370941ab1102@z16g2000yqe.googlegroups.com...
> On Sep 3, 6:14 pm, "Dave" <no...@nowhere.com> wrote:
>> David, you can find the famous "exclusion principle" by Wolfgang Pauli
>> in any book on Quantum Mechanics.
>
> ah, bringing the Pauli Exclusion Principle in on the discusion now, that
> is a new one i think... can we now not have any of your magical
> levitating diamagnetic neutrinos on an antenna in the same quantum states??

Drum roll........

From the department of everything you knew about physics is wrong
department......

The Coriolis effect upon RF radiation has some interesting other
ramifications.
Since Coriolis affects radio waves, it follows that gravity also affects
radio waves. This bring up a new and much simplified explanation for
radio propagation. As the RF spins away from the antenna, the coriolis
effect and gravity eventually pull the signal back to earth far away
from the originating point. I always thought that that silly stuff about
atmospheric layers and ionization was kind of dum anyhow.

Each time the RF hits the earth, a new point of reference is made, and
the signal bounces up with a new twist to it.

We're still working on why UHF + signals don't do this. Maybe their
twist is going the other way, so instead of coming back down, they spin
upwards never to be seen again.

- 73 de Mike N3LI -

1581. Re: ART vs. W8JI

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-04 15:10:41 UTC
From: Michael Coslo <mjc5@psu.edu>
Message-ID: <h7ralh$m43g$1@tr22n12.aset.psu.edu>
Source record: 13543

Cecil Moore wrote:
> Michael Coslo wrote:
>> Any relation to the loosely wrapped "coils" of shortened verticals
>> like bug catchers?

Ack! I meant to write Hamsticks, not bug catchers! Sum daze I am in a daze!

- 73 de Mike N3LI -

1582. Re: true or... ?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-04 15:28:07 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <nvb2a5t4rdq92bcpco7s3procvplbnppuu@4ax.com>
Source record: 13544

On Tue, 1 Sep 2009 00:23:31 +0200, "-.-. --.-" <a@a.com> wrote:

>Like the precedent post on underground antennas systems, i'm just curious
>and happy if someone *demostrate* me that a strange antenna have a
>incredible efficiency.

Hi OM,

Demonstrate is not possible. The antenna radiation is not correctly
described.

Consider: a commercial AM quarterwave, vertical antenna is probably
95% to 99% efficient. To have an incredible efficiency would add only
4% more to a very simple design that has been around for 100 years.

+0.2dB or less is not incredible efficiency.

You cannot hear 0.2dB difference in sound, you cannot measure 0.2dB RF
difference except with great difficulty.

73's
Richard Clark, KB7QHC

1583. Re: Corriolis force

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-04 15:41:17 UTC
From: Art Unwin <arthurunwin@gmail.com>
Message-ID: <05b2c4f5-82da-431e-b2c6-aa1495c61259@r9g2000yqa.googlegroups.com>
Source record: 13545

On Sep 4, 3:37 am, Szczepan Białek <sz.bia...@wp.pl> wrote:
> U¿ytkownik <n...@wt.net> napisa³ w
wiadomo¶cinews:2115e95d-887c-488d-899e-0fbc773e9991@x5g2000prf.googlegroups.com...
> On Sep 3, 10:29 pm, Jeff Liebermann <je...@cruzio.com> wrote:
>
>
>
> >> On Thu, 3 Sep 2009 19:11:42 -0700 (PDT), n...@wt.net wrote:
> > >How in the heck are you going to
> > >get **ANY** vertical radiator to have a truly isotropic pattern?
> > >It's impossible. An isotropic pattern is a theoretical pattern
> > >in which radiation is equal in all directions. Such a pattern
> > >does not exist with real antennas.
>
> >> A real isotropic radiator may not exist, but one can get fairly close.
> > If you believe the model, the total error is 0.44 db. See:
> > <http://802.11junk.com/jeffl/antennas/isotropic/index.html>
> > The NEC2 deck is under the photo labeled "main".
>
> >> I once built one of these antennas on roughly 444MHz out of cardboard
> > and magnet wire. The oscillator was a small crystal can oscillator
> > running from a 9V battery to avoid having the feed coax wrecking the
> > pattern. The impedance was nowhere near 50 ohms and required a bit of
> > matching to get the VSWR down. I'm now digging for the photos.
>
> >> I used a piece of string to maintain a constant radius, a tiny pickup
> > loop at the end of a length of coax cable running inline with the
> > string, and eventually going to my antique HP spectrum analyzer. On
> > the 2dB/div scale, it was a fairly good approximation of an isotropic
> > radiator with errors mostly caused by indoor reflections and
> > interference with the bench.
>
> >Sure, you can get fairly close to isotropic with the right
>
> system, but how are you going to do it by tipping a
> vertical? The likely results do not fit my idea of isotropic.
>
> "An isotropic radiator is a theoretical point source of waves which exhibits
> the same magnitude or properties when measured in all directions".
> The only way to make the real point source is the proper tipping. Of course
> it must be a monopole.
> S*

Excellent. I am so happy that somebody out there is not following the
pied pipers of denial.
Thanks for your input.

1584. Re: Corriolis force

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-04 15:44:48 UTC
From: christofire <christofire@btinternet.com>
Message-ID: <VOKdnS9ft5xrqDzXnZ2dnUVZ8kGdnZ2d@bt.com>
Source record: 13546

"Jeff Liebermann" <jeffl@cruzio.com> wrote in message
news:0lt1a5dqc7ggakmgilf2l0nu69bampf5tk@4ax.com...
> On Fri, 4 Sep 2009 00:56:39 -0700 (PDT), nm5k@wt.net wrote:
>
>>Sure, you can get fairly close to isotropic with the right
>>system, but how are you going to do it by tipping a
>>vertical? The likely results do not fit my idea of isotropic.
>
> I forgot to connect my comments to the original question. Sorry(tm).
> You're correct. There's no way to get a good isotropic radiator
> pattern with a simple vertical radiator. However, you can still get
> fairly close if you make the antenna sufficiently small relative to
> the operating wavelength. As the physical antenna size approaches a
> point radiator, the pattern starts to look rather spherical.

That doesn't sound right. The directivity gain of an infinitesimal electric doublet (i.e. a dipole with infinitesimal length) is about 0.4 dB less than that of a half-wave dipole. Its similar lemniscate-of-rotation radiation pattern results from the symmetry about its axis. The results for monopoles derived from these forms of dipole won't be too different. It is rather obvious that a receiving dipole of any polarisation won't receive much signal from the end of a transmitting dipole or monopole, however it's oriented - there's no apparent length over which unopposed current is flowing so there's no 'moment' in that direction.

One solution to spherical radiation is the Lindenblad array (and variants that others have chosen to re-name) which presents finite resolved components of the lengths of some of its dipoles in all directions ... but the tilt of the elements has nothing at all to do with Art Unwin's 'theory', it's simply a matter of making sure there's a resolved component in each direction. Of course, a Lindenblad designed for a near-omni pattern achieves this in respect of circular polarisation so it would be ineffiecient in a system where a linearly polarised antenna is used at the other end of the link.

I was once told a true isotropic radiator would have to be circularly polarised because it would be so small that it could contain nothing with a defined axis of symmetry ... that is, the antenna would have the form of an infinitesimal sphere. The question then is 'which sense of circular polarisation' ... which undoubtedly has nothing at all to do with Coriolis force! The real answer is that it doesn't matter because, as you mentioned (below) such an antenna has an infinitesimally small radiation resistance and cannot be made to radiate.

Chris

> Unfortunately, the gain drops, efficiency drops, and feed point
> impedance drops, resulting in a rather inferior antenna.
>
> There's also a question of how close to perfection does the spherical
> pattern need to become? Within 0.1dB, 1dB, 3dB, etc???? Offhand, I
> would guess anything within a few dB of spherical could be considered
> isotropic, as in all the patents I noted.
>
> --
> Jeff Liebermann jeffl@cruzio.com
> 150 Felker St #D http://www.LearnByDestroying.com
> Santa Cruz CA 95060 http://802.11junk.com
> Skype: JeffLiebermann AE6KS 831-336-2558

1585. Re: Corriolis force

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-04 16:10:22 UTC
From: Art Unwin <arthurunwin@gmail.com>
Message-ID: <69691779-b379-45d5-b594-545cf8fb69d3@q7g2000yqi.googlegroups.com>
Source record: 13547

On Sep 4, 9:33 am, Michael Coslo <m...@psu.edu> wrote:
> Dave wrote:
>
> > "Art Unwin" <arthurun...@gmail.com> wrote in message
> >news:1b6ba75c-7893-4c58-88a7-370941ab1102@z16g2000yqe.googlegroups.com...
> > > On Sep 3, 6:14 pm, "Dave" <no...@nowhere.com> wrote:
> > >> David, you can find the famous "exclusion principle" by Wolfgang Pauli
> > >> in any book on Quantum Mechanics.
>
> > ah, bringing the Pauli Exclusion Principle in on the discusion now, that
> > is a new one i think... can we now not have any of your magical
> > levitating diamagnetic neutrinos on an antenna in the same quantum states??
>
> Drum roll........
>
> From the department of everything you knew about physics is wrong
> department......
>
> The Coriolis effect upon RF radiation has some interesting other
> ramifications.
> Since Coriolis affects radio waves, it follows that gravity also affects
> radio waves. This bring up a new and much simplified explanation for
> radio propagation. As the RF spins away from the antenna, the coriolis
> effect and gravity eventually pull the signal back to earth far away
> from the originating point. I always thought that that silly stuff about
> atmospheric layers and ionization was kind of dum anyhow.
>
> Each time the RF hits the earth, a new point of reference is made, and
> the signal bounces up with a new twist to it.
>
> We're still working on why UHF + signals don't do this. Maybe their
> twist is going the other way, so instead of coming back down, they spin
> upwards never to be seen again.
>
>   - 73 de Mike N3LI -

Mike you forget.
I do not subscribe to the wave theory over the particle aproach.
I cannot see any other way to fit that "radiation is from the
acceleration of a charge". And I can not find any explanation of this
in any books. Only mass is able to have spin and at the same time
transport energy, at least to my mind. Therefore accelaration is the
creation of two forces that are not in the same plain ala a shear
action where the combination of gravity and the Coriolis force are the

weakest forces known in the std model. I would remind you that spin is a result of a force applied where the reaction force is not in the same plane, otherwise referred to as torque ala force times distance. It is quite easy to show that current flow consists of a direct vector and a circular vector
within a boundary and where a direct vector and a circular vector on the outside of the boundary creats a condition of equilibrium. This is just physics per our Universe and now many want to deny physics by intuition alone. I would also remind everybody that engineering, electrical, mechanical or what ever is a subset of the subject of physics where concentration of learning is of a niche of the physics .

1586. Re: Corriolis force

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-04 16:22:27 UTC
From: wood@itd.nrl.navy.mil
Message-ID: <wood-0409091222270001@jbw-mac.itd.nrl.navy.mil>
Source record: 13548

In article
<cf5b3115-db1d-42a5-98cb-5c67260e1580@v36g2000yqv.googlegroups.com>, Art
Unwin <arthurunwin@gmail.com> wrote:

> It seems that some do not understand what the Corriolis force is so
> here goes
> When the Big Bang ocurred all energy was in an arbitrary boundary
> just like the Sun is. When the forces (four forces of the Standard
> model) could not be contained with in the boundary the boundary broke
> which as scientists state was the begining of our Universe. Before the
> arbitrary boundary broke it is a state of equilibrium (This is also
> duplicated by the Sun) You can visualize a ball which contains all
> energy by placing vectors all around the inside where for every vector
> on the inside there is an equal and opposite on the outside. Tho
> energy cannot be created or destroyed, kinetic energy can occur at the
> expense of potential energy such that the outside vectors are over
> come. The boundary breaks and the excess forces are released until
> the boundary is able to return to a state of equilibrium. Now when the
> break occurs it is at the point of a particular vector such that the
> breakage is created by a shearing action, as the forces in question
> was not aligned, with spin. Thus when any energy,particles etc they
> escaped with a spin action which force forces to balance requires an
> equal and opposite reaction and the Corriolis force is that component.
> Without the Corriolis component we could not remain on this Earth and
> gravity could not exist. Thus to state spin or torque is not a force
> is truly rediculous. Let the insults come.

Art,

Since there is no "re:" on the subject line I assume you are the initiator
of this post and I have to ask how it's relevant to this newsgroup. You
have also attempted to initiate other off-topic threads. Can't you find a
more appropriate ng or forum for these posts rather than show a disregard
for those coming here to seek info on ham antennas and related issues? At
the very least I would appreciate including the standard "OT:" prefix on
the subject lines of off-topic posts. These kinds of posts illustrate why
moderated newsgroups become necessary. Sincerely, and 73s from N4GGO,

John Wood (Code 5550) e-mail: wood@itd.nrl.navy.mil
Naval Research Laboratory
4555 Overlook Avenue, SW
Washington, DC 20375-5337

1587. Re: Corriolis force

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-04 16:24:54 UTC
From: Art Unwin <arthurunwin@gmail.com>
Message-ID: <328ba938-513e-47dc-8c41-b70b7e116f02@m38g2000yqd.googlegroups.com>
Source record: 13549

On Sep 4, 2:49 am, Jeff Liebermann <je...@cruzio.com> wrote:
> On Thu, 3 Sep 2009 21:09:37 -0700 (PDT), Art Unwin
>
> <arthurun...@gmail.com> wrote:
> >You cannot assume that one who makes an accusation has the status of
> >education to match his veracity. The person who stated that it is an
> >impossibility does not even posses a high school diploma. Climbing on
> >the back of his statements puts you back on the stage again!
>
> Hint: Please feel free to attack a persons ideas, logic, conclusions,
> data, information, assertions, assumptions, pontifications, judgment,
> and numbers. This is proper for a technical discussion. However,
> attacking a persons background, education, personality, appearance,
> and wallpaper is little better than a character assassination and
> should be avoided. Discuss the ideas, not the person.
>
> That being said, I've learned as much from those without the proper
> credentials, than from those with the requisite degrees and
> certifications. Hands on experience and Learn By Destroying(tm) are
> amazingly good teachers.
>
> Also, I judge people mostly by their willingness and ability to learn.
> When learning stops, one rots in place and eventually withers. What
> have you learned from this discussion on your Gaussian Radiative
> Cluster?
>
> --
> Jeff Liebermann   je...@cruzio.com
> 150 Felker St #D   http://www.LearnByDestroying.com
> Santa Cruz CA 95060http://802.11junk.com
> Skype: JeffLiebermann   AE6KS   831-336-2558

I replied to the assertion that my homeland was guilty of embarassment
or shame.

What sort of man is one who does not stand up on behalf of his
homeland where presently their soldiers are standing and dying along
side ours of the U.S.
I am attacked personally daily, but to attack the U.K and the
Commonwealth for declaring war on the German menace, a consequence of
which many gave their lives, is a totally different situation to me.
Hopefully you can understand that and thus allow the matter to drop
without loss of stature
Regards
Art

1588. Re: true or... ?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-04 17:03:02 UTC
From: "-.-. --.-" <a@a.com>
Message-ID: <h7rh84$f99$1@nnrp-beta.newsland.it>
Source record: 13550

"Richard Clark" <kb7qhc@comcast.net> ha scritto nel messaggio
news:nvb2a5t4rdq92bcpco7s3procvplbnppuu@4ax.com...

> Consider: a commercial AM quarterwave, vertical antenna is probably
> 95% to 99% efficient. To have an incredible efficiency would add only
> 4% more to a very simple design that has been around for 100 years.
>
> +0.2dB or less is not incredible efficiency.
>
> You cannot hear 0.2dB difference in sound, you cannot measure 0.2dB RF
> difference except with great difficulty.
>
> 73's
> Richard Clark, KB7QHC

Thanks for reply, Richard.
Take also into account that, although i don't know much mathematic, i don't have any doubt that is impossible that this kind of antenna can have a great or also medium efficiency.

Considering your 1/4 wave AM broadcast antenna example, is not an accident that nor military nor broadcast installations used in the past a type of antenna like the EH/HZ...
... and military brains have knowledges that we in the "civilian" world can use maybe after 20-30 years.

And, if this really works, one don't waste time writing PDF. He start working in radio with this antenna, and if the antenna is *really* what he claim, he will be in a very short time a rich man.

-.-. --.-

1589. Re: ART vs. W8JI

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-04 17:14:33 UTC
From: Art Unwin <arthurunwin@gmail.com>
Message-ID: <a932da2e-9561-4178-b9d3-7494396990ae@m38g2000yqd.googlegroups.com>
Source record: 13551

On Sep 4, 7:04 am, Cecil Moore <nos...@w5dxp.com> wrote:
> Dale Parfitt wrote:
> > Thank you Cecil,
> > That's all I was looking for.
>
> You're welcome and I agree with 95% of what W8JI says.
> (For instance, he is mistaken about the delay through
> a 100T, 10TPI, 2" diameter 75m loading coil.)
>
> Some may or may not understand why random folding
> of antenna radiators tends to change the radiating
> conductors into non-radiating conductors. (The same
> effect is at work in loading coils.)
>
> When two conductors are carrying differential coherent
> currents with no common-mode current, there is negligible
> radiation when the two conductors are parallel to
> each other and the spacing is a very small fraction of
> a wavelength. It's called a transmission line and most
> of the losses at HF are I^2*R. Usually, one of the goals
> of a transmission line is not to radiate. Transmission line
> fields tend to cancel in the near field due to destructive
> interference.
>
> A single straight wire in free space is a very efficient
> radiator because interference occurs mostly in the far
> field. Fold it back upon itself and unless the
> second conductor is positioned perfectly, there will exist
> differential currents between the two conductors which
> will tend to cancel the radiation - leaving mostly I^2*R
> losses at HF.
>
> Small folded/loaded antennas tend to cancel the radiating
> fields. The only other avenue for a lot of the energy is
> conversion to heat.
> --
> 73, Cecil, IEEE, OOTC, http://www.w5dxp.com

Cecil I must respectively disagree. Your arguement is based on the
presence of common mode current. When there is a state of equilibrium
there is no vector that represents common mode. Since the radiator is
a full WL that represents a period it is of closed circuit form. In
such a case any radiator bend is accompanied by a bend that is equal
and opposite per Newtons laws. The moment you introduce common mode

currents you have strayed from the concepts of equilibrium, where all forces are accounted for. Maxwells laws are based on the position that all forces involved are accounted for where the summation of such equals zero.
Regards

1590. Re: ART vs. W8JI

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-04 17:27:20 UTC
From: Art Unwin <arthurunwin@gmail.com>
Message-ID: <37b0374e-f101-4017-a524-fda63902bf83@k39g2000yqe.googlegroups.com>
Source record: 13552

On Sep 4, 8:54 am, Cecil Moore <nos...@w5dxp.com> wrote:
> Richard Fry wrote:
> > If the power applied to the full wave dipole was 1.6 dB less than
> > applied to the 1/2-wave dipole, then their measured peak fields would
> > be identical. But that is not a power reduction of one half (3 dB),
>
> Increase the length of the one wavelength dipole to a
> 1.25WL EDZ and the maximum gain indeed does increase by
> ~3dB over a 1/2WL dipole. Consider that the highest gain
> for a single-wire antenna with a figure-8 radiation pattern
> occurs with a feedpoint impedance of ~175-j1000 ohms, i.e.
> the antenna wire, by itself, is *non-resonant*. A parasitic
> element 1.25WL long would have a negligible effect on an
> antenna system. :-0
>
> Consider that if one disconnects the feedline from a 1/2WL
> center-fed dipole, the two remaining 1/4WL wires separated
> by an insulator are *non-resonant*. Breaking guy wires into
> 1/4WL separated by insulators is one way of avoiding
> resonance. :-)
> --
> 73, Cecil, IEEE, OOTC, http://www.w5dxp.com

Cecil you misunderstood what I was saying .
When you use a fractional WL then some of the wire cannot radiate,
thus the impedance is reduced from that of a full WL. Power is still
I sqd R Cos phi. where there is a varience. with the R in this case of
a approx 1/2. Gain is not involved, only energy dissipated.
Regards

1591. Re: true or... ?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-04 17:33:49 UTC
From: christofire <christofire@btinternet.com>
Message-ID: <BaKdnfUuDKAZ0jzXnZ2dnUVZ8h6dnZ2d@bt.com>
Source record: 13553

"-.-. --.-" <a@a.com> wrote in message
news:h7rh84$f99$1@nnrp-beta.newsland.it...
>
> "Richard Clark" <kb7qhc@comcast.net> ha scritto nel messaggio
> news:nvb2a5t4rdq92bcpco7s3procvplbnppuu@4ax.com...
>
>> Consider: a commercial AM quarterwave, vertical antenna is probably
>> 95% to 99% efficient. To have an incredible efficiency would add only
>> 4% more to a very simple design that has been around for 100 years.
>>
>> +0.2dB or less is not incredible efficiency.
>>
>> You cannot hear 0.2dB difference in sound, you cannot measure 0.2dB RF
>> difference except with great difficulty.
>>
>> 73's
>> Richard Clark, KB7QHC
>
> Thanks for reply, Richard.
> Take also into account that, although i don't know much mathematic, i
> don't
> have any doubt that is impossible that this kind of antenna can have a
> great
> or also medium efficiency.
>
> Considering your 1/4 wave AM broadcast antenna example, is not an accident
> that nor military nor broadcast installations used in the past a type of
> antenna like the EH/HZ...
> ... and military brains have knowledges that we in the "civilian" world
> can
> use maybe after 20-30 years.
>

... if the first 'nor' should be interpreted as 'neither' then I'd agree.
In the UK, 5/8 wavelength vertical radiators have been popular for AM radio
broadcasting, singly (e.g. used for some BBC services) and in arrays (for
commercial radio, eg. Saffron Green, north London) usually with _very_
extensive earth mats. The Isle of Man International Broadcasting company
made a big deal about ten years ago about their intention to use a CFA for
broadcasting on 279 kHz, initially from the island, and latterly from a
modified oil rig in IOM water (e.g.
http://www2.hard-core-dx.com/archive/1999/msg01127.html). However, this
still isn't on the air so one may speculate.

Chris

1592. Re: ART vs. W8JI

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-04 17:39:24 UTC
From: Art Unwin <arthurunwin@gmail.com>
Message-ID: <4f67c341-48d9-4703-8fd0-27dc7e7e8311@w36g2000yqm.googlegroups.com>
Source record: 13554

On Sep 4, 7:23 am, Richard Fry <r...@adams.net> wrote:
> On Sep 3, 10:26 am, Art Unwin <arthurun...@gmail.com> wrote:
>
> > Yes, that is correct, but the power used on a 1/2 wave dipole
> > is half that of a full wave.
>
> On the chance that you meant a full-wave dipole in your quote above, I
> did a quick comparison of one with a 1/2-wave dipole (linked below).
>
> The peak, intrinsic gain of the full-wave is about 1.6 dB greater than
> the 1/2-wave -- which is due to the narrower lobe it produces. This
> has nothing to do with "equilibrium."
>
> The 2,082 -j583 ohm input Z of the full-wave version is not user
> friendly. But if zero-loss matching networks are used at the
> feedpoint of both antennas, then for EQUAL applied power to each, the
> peak field intensity produced by the full-wave dipole would be about
> 1.6 dB (20%) greater than from the 1/2-wave version.
>
> If the power applied to the full wave dipole was 1.6 dB less than
> applied to the 1/2-wave dipole, then their measured peak fields would
> be identical. But that is not a power reduction of one half (3 dB),
> as in your statement, Art.
>
> http://i62.photobucket.com/albums/h85/rfry-100/DipoleCompareArt.jpg
>
> RF

Gain has nothing to do with energy expended from a radiator. A folded
dipole is of a full WL with an overall dimension of 1/2 WL.

1593. Re: Corriolis force

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-04 17:48:45 UTC
From: Michael Coslo <mjc5@psu.edu>
Message-ID: <h7rjtt$884m$1@tr22n12.aset.psu.edu>
Source record: 13555

Art Unwin wrote:

> Mike you forget.
> I do not subscribe to the wave theory over the particle aproach.
> I cannot see any other way to fit that "radiation is from the
> acceleration of a charge". And I can not find any explanation of this
> in any books. Only mass is able to have spin and at the same time
> transport energy, at least to my mind.

So are you saying that FR energy has mass, or that it doesn't have spin?

> Therefore accelaration is the
> creation of two forces that are not in the same plain ala a shear
> action where the combination of gravity and the Coriolis force are the
> weakest forces known in the std model.

What is the acceleration of RF?

- 73 de Mike N3LI -

1594. Re: ART vs. W8JI

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-04 17:53:20 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <Qucom.195515$vp.145943@newsfe12.iad>
Source record: 13556

Art Unwin wrote:
> Since the radiator is
> a full WL that represents a period it is of closed circuit form.

My comments were about a one-wavelength straight
wire dipole in free space. The reflections from
the ends are what result in that large resonant
resistance at the center.

<--Vf
Open <--If
----------------------fp----------------------
Circuit Vr-->
Ir-->

Zfp - feedpoint impedance, Vf - forward voltage,
Vr - reflected voltage, If - forward current,
Ir - reflected current

Zfp = (Vf+Vr)/(If-Ir) = thousands of ohms

However, if we fold the 1WL dipole into a circular
1WL loop it is still a standing-wave antenna but
the phase of the reflections is reversed.

Zfp = (Vf-Vr)/(If+Ir) = ~100 ohms.

Where are those reflections coming from in a
circular 1 WL loop? Why is the phase of the
reflections reversed?
--
73, Cecil, IEEE, OOTC, http://www.w5dxp.com

1595. Re: true or... ?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-04 17:57:49 UTC
From: "-.-. --.-" <a@a.com>
Message-ID: <h7rkfjhfr1@nnrp-beta.newsland.it>
Source record: 13557

"christofire" <christofire@btinternet.com> ha scritto nel messaggio
news:BaKdnfUuDKAZ0jzXnZ2dnUVZ8h6dnZ2d@bt.com...

> ... if the first 'nor' should be interpreted as 'neither' then I'd agree.

neither, neither :)

just the result of the last minutes of a very busy week with 2 of my radius
servers going down for mysql accounting DB flops.
Some flops for me writing in english, too :)

73,
-.-. --.-

1596. Re: ART vs. W8JI

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-04 18:11:24 UTC
From: Art Unwin <arthurunwin@gmail.com>
Message-ID: <56fc022c-bab6-4955-9cba-88da0ebaf4ac@j19g2000yqk.googlegroups.com>
Source record: 13558

On Sep 4, 12:53 pm, Cecil Moore <nos...@w5dxp.com> wrote:
> Art Unwin wrote:
> > Since the radiator is
> > a full WL that represents a period it is of closed circuit form.
>
> My comments were about a one-wavelength straight
> wire dipole in free space. The reflections from
> the ends are what result in that large resonant
> resistance at the center.
>
>   <--Vf
> Open   <--If
> ----------------------fp----------------------
> Circuit   Vr-->
>   Ir-->
>
> Zfp - feedpoint impedance, Vf - forward voltage,
> Vr - reflected voltage, If - forward current,
> Ir - reflected current
>
> Zfp = (Vf+Vr)/(If-Ir) = thousands of ohms
>
> However, if we fold the 1WL dipole into a circular
> 1WL loop it is still a standing-wave antenna but
> the phase of the reflections is reversed.
>
> Zfp = (Vf-Vr)/(If+Ir) = ~100 ohms.
>
> Where are those reflections coming from in a
> circular 1 WL loop? Why is the phase of the
> reflections reversed?
> --
> 73, Cecil, IEEE, OOTC, http://www.w5dxp.com

Equilibrium means equilibrium thus there are no reflections. Actions
have an equal and opposite reaction. What are you going to draw upon
for an equalizing vector?

1597. Re: Corriolis force

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-04 18:14:59 UTC
From: dplatt@radagast.org
Message-ID: <3228n6-0bl.ln1@radagast.org>
Source record: 13560

In article <0lt1a5dqc7ggakmgilf2l0nu69bampf5tk@4ax.com>,
Jeff Liebermann <jeffl@cruzio.com> wrote:

>I forgot to connect my comments to the original question. Sorry(tm).
>You're correct. There's no way to get a good isotropic radiator
>pattern with a simple vertical radiator. However, you can still get
>fairly close if you make the antenna sufficiently small relative to
>the operating wavelength. As the physical antenna size approaches a
>point radiator, the pattern starts to look rather spherical.

The difference in pattern between a half-wavelength dipole,
and an infinitesimally-short dipole (i.e. one whose length
approaches a point source) is actually quite small. Both are
torus-shaped patterns, with a deep null along the axis of the antenna
(theoretically, the null is infinitely deep directly along the axis).

An infinitesimally-short dipole has a maximum gain of 1.76 dBi.

A half-wavelength dipole has a gain of 2.15 dBi.

There really isn't much to distinguish the two, as far as the pattern
and gain go.

>Unfortunately, the gain drops, efficiency drops, and feed point
>impedance drops, resulting in a rather inferior antenna.

Yeah, the low radiation resistance and high reactance of the short
dipole are its biggest drawbacks.

--
Dave Platt <dplatt@radagast.org> AE6EO
Friends of Jade Warrior home page: http://www.radagast.org/jade-warrior
I do _not_ wish to receive unsolicited commercial email, and I will
boycott any company which has the gall to send me such ads!

1598. Re: Corriolis force

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-04 18:21:02 UTC
From: Jeff Liebermann <jeffl@cruzio.com>
Message-ID: <lsk2a5tnf1kvgmlehbam0tse8nmjleokid@4ax.com>
Source record: 13559

On Fri, 4 Sep 2009 16:44:48 +0100, "christofire"
<christofire@btinternet.com> wrote:

>"Jeff Liebermann" <jeffl@cruzio.com> wrote in message
>news:0lt1a5dqc7ggakmgilf2l0nu69bampf5tk@4ax.com...
>> However, you can still get
>> fairly close if you make the antenna sufficiently small relative to
>> the operating wavelength. As the physical antenna size approaches a
>> point radiator, the pattern starts to look rather spherical.

>That doesn't sound right. The directivity gain of an infinitesimal electric
>doublet (i.e. a dipole with infinitesimal length) is about 0.4 dB less than
>that of a half-wave dipole.

I'll plug a series of shortened dipoles, possibly with loading coils,
into 4NEC2 and see what happens. You may be right.

As I recall, the big holes in the pattern, that are inline with the
elements gets smaller is diameter as the antenna gets electrically
smaller. The rounded circular donut pattern tends to flatten. I
wanna play with the models to be sure. This still begs the question
of how close to spherical does the pattern need to be in order to call
it isotropic? Dunno.

>I was once told a true isotropic radiator would have to be circularly
>polarised

"Near isotropic circularly polarized antenna"
<http://www.google.com/patents?id=saMgAAAAEBAJ>
CP satellite antenna used on Intelsat V. I've been looking at the
patent for a while trying to figure out how it works.

Yeah, it should be CP because that would correctly fit the definition
of the field being identical along the sphere, in all possible
measurement antenna orientations. Note that the isotropic simulator I
posted is *NOT* circularly polarized. If you plug the deck into 4NEC2
and instead of looking at the total gain in the 3D window, look at the
vertical and horizontal gains individually, you'll see something
really ummm.... interesting.
<http://802.11junk.com/jeffl/antennas/isotropic/isotrop2-vert.jpg>
<http://802.11junk.com/jeffl/antennas/isotropic/isotrop2-horiz.jpg>
Needless to say, that the polarization is not even close to being
uniform over the sphere. (I'll add these to the menu as soon as I can
figure out what the latest JAlbum update broke in my photo
collection).

Drivel: Just got 4NEC2 setup on my new computah (Dell Optiplex 755 E8500 with 4GB). A messy tower and antenna simulation, that took over an hour on my old PIII/1GHz clunker, now takes about 4 minutes. I'm happy (for now).

--
Jeff Liebermann jeffl@cruzio.com
150 Felker St #D http://www.LearnByDestroying.com
Santa Cruz CA 95060 http://802.11junk.com
Skype: JeffLiebermann AE6KS 831-336-2558

1599. Re: ART vs. W8JI

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-04 18:25:03 UTC
From: Richard Fry <rfry@adams.net>
Message-ID: <c02a3649-8390-4145-a0ca-612a462d9ff0@g31g2000yqc.googlegroups.com>
Source record: 13561

On Sep 4, 12:39 pm, Art Unwin <arthurun...@gmail.com> wrote:
>
> Gain has nothing to do with energy expended from a radiator. A folded
> dipole is of a full WL with an overall dimension of 1/2 WL.

And for equal, matched power applied to their feedpoints, the total of
the energy "expended" (radiated) by both them is identical.

//

1600. Re: true or... ?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-04 18:48:48 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <j2n2a59je11to2ip75uckngf3e465issm8@4ax.com>
Source record: 13562

On Fri, 4 Sep 2009 19:03:02 +0200, "-.-. --.-" <a@a.com> wrote:

>Thanks for reply, Richard.
>Take also into account that, although i don't know much mathematic, i don't
>have any doubt that is impossible that this kind of antenna can have a great
>or also medium efficiency.

Hi OM,

Efficiency in percent (%) is simple math: 100 * PowerOut/PowerIn

In decibels, I won't show the math, I will give some example:
100% is 0dB
95% is -0.22dB
90% is -0.46dB
80% is -0.97dB
50% is -3dB
10% is -10dB

Look at your S-Meter. If any station added 5% efficiency, going from
95% to 100%, then your S-Meter would shift 0.22dB. The needle of your
S-Meter is probably more than 1dB thick when you look at it. The
needle would then move 1/5th of its thickness when a station adds 5%
efficiency.

>Considering your 1/4 wave AM broadcast antenna example, is not an accident
>that nor military nor broadcast installations used in the past a type of
>antenna like the EH/HZ...
>... and military brains have knowledges that we in the "civilian" world can
>use maybe after 20-30 years.

I have been in the military - antennas work the same there too. I was
a teacher of RF Systems (LF/MF/HF/VHF/UHF/SHF). There is no magic
knowledge hidden by the government.

>And, if this really works, one don't waste time writing PDF. He start
>working in radio with this antenna, and if the antenna is *really* what he
>claim, he will be in a very short time a rich man.

A very short time needs to be defined. This "antenna" has been around
for a long time and no one has gotten rich (and the buyers have lost
money, time, and signal).

Anyone can write a useless PDF. Anyone can get a useless patent too.
I have observed patent holders who post here that have forgotten their
own patent numbers, their own patent claims, their own URLs, their own
email addresses, and their own theory. Talk about a waste of time,

but it is wasted with the vigor of a seven year old. It would seem that wasting time, money, and signal power was equivalent to earning a PhD in Einsteinomics and advanced Gaussology.

73's
Richard Clark, KB7QHC

1601. Re: Corriolis force

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-04 19:04:51 UTC
From: Art Unwin <arthurunwin@gmail.com>
Message-ID: <7c37b5ef-2482-4118-be66-64c6eab3eb60@37g2000yqm.googlegroups.com>
Source record: 13563

On Sep 4, 12:48 pm, Michael Coslo <m...@psu.edu> wrote:
> Art Unwin wrote:
> > Mike you forget.
> > I do not subscribe to the wave theory over the particle aproach.
> > I cannot see any other way to fit that "radiation is from the
> > acceleration of a charge". And I can not find any explanation of this
> > in any books. Only mass is able to have spin and at the same time
> > transport energy, at least to my mind.
>
> So are you saying that FR energy has mass, or that it doesn't have spin?
>
> > Therefore accelaration is the
> > creation of two forces that are not in the same plain ala a shear
> > action where the combination of gravity and the Coriolis force are the
> > weakest forces known in the std model.
>
> What is the acceleration of RF?
>
>   - 73 de Mike N3LI -

The speed of light.

1602. Re: Corriolis force

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-04 19:51:31 UTC
From: tom <news4792@taring.org>
Message-ID: <4aa16fbc$0$28114$8046368a@newsreader.iphouse.net>
Source record: 13564

Dave wrote:
>
> <nm5k@wt.net> wrote in message
> news:cb4af2d2-b178-4419-940f-a12fc627e2bd@d15g2000prc.googlegroups.com...
> On Sep 3, 10:33 am, Art Unwin <arthurun...@gmail.com> wrote:
>> And I imagine that there are still many readers world wide
>> who are still wondering what constitutes "equilibrium" in
>> an antenna system. :(
>
> not any more, he defined it just the other day, equilibrium==isotropic.

And again today in response to Cecil concerning a full wave loop versus
full wave dipole, equilibrium == no reflections.

I don't think he's sure what equilibrium is except that it's his trump
card in an argument.

1603. Re: ART vs. W8JI

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-04 20:00:26 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <Sleom.129737$O23.13855@newsfe11.iad>
Source record: 13565

Art Unwin wrote:
> Equilibrium means equilibrium thus there are no reflections.

No reflections on a standing-wave antenna?
Where do the standing waves come from?
--
73, Cecil, IEEE, OOTC, http://www.w5dxp.com

1604. Re: Corriolis force

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-04 20:03:32 UTC
From: Mike Coslo <mjc5@psu.edu>
Message-ID: <h7rrqb$nc5u$1@tr22n12.aset.psu.edu>
Source record: 13566

Art Unwin wrote:
> On Sep 4, 12:48 pm, Michael Coslo <m...@psu.edu> wrote:
>> Art Unwin wrote:
>>> Mike you forget.
>>> I do not subscribe to the wave theory over the particle aproach.
>>> I cannot see any other way to fit that "radiation is from the
>>> acceleration of a charge". And I can not find any explanation of this
>>> in any books. Only mass is able to have spin and at the same time
>>> transport energy, at least to my mind.
>> So are you saying that FR energy has mass, or that it doesn't have spin?
>>
>>> Therefore accelaration is the
>>> creation of two forces that are not in the same plain ala a shear
>>> action where the combination of gravity and the Coriolis force are the
>>> weakest forces known in the std model.
>> What is the acceleration of RF?
>>
>> - 73 de Mike N3LI -
>
> The speed of light.

Acceleration isn't expressed as C.

Does RF energy have mass?

1605. Re: Corriolis force

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-04 20:09:15 UTC
From: kb9rqz@yahoooo.com
Message-ID: <tts2a5lg6plba9dabslqgvach6b32t5pjp@4ax.com>
Source record: 13567

On Fri, 04 Sep 2009 16:03:32 -0400, Mike Coslo <mjc5@psu.edu> wrote:

>Art Unwin wrote:
>> On Sep 4, 12:48 pm, Michael Coslo <m...@psu.edu> wrote:
>>> Art Unwin wrote:
>>>> Mike you forget.
>>>> I do not subscribe to the wave theory over the particle aproach.
>>>> I cannot see any other way to fit that "radiation is from the
>>>> acceleration of a charge". And I can not find any explanation of this
>>>> in any books. Only mass is able to have spin and at the same time
>>>> transport energy, at least to my mind.
>>> So are you saying that FR energy has mass, or that it doesn't have spin?
>>>
>>>> Therefore accelaration is the
>>>> creation of two forces that are not in the same plain ala a shear
>>>> action where the combination of gravity and the Coriolis force are the
>>>> weakest forces known in the std model.
>>> What is the acceleration of RF?
>>>
>>> - 73 de Mike N3LI -
>>
>> The speed of light.
>
>Acceleration isn't expressed as C.
>
>Does RF energy have mass?

yes it does but not rest mass the mass of energy wave relates to
enegery carried

"one useless man is disgrace 2 become a law firm 3 or more become a congress"
adams

woger you are a Congress all in your own head
"http://www.3ix.org/sys/aff.php?aff=7439" target="_blank"

altopia is never used by KB9RQZ
http://kb9rqz.cc.cc
http://kd8ctl.com
nor is Konstans@hotmail.com ever
btw i can be found at
17366 N River Rd
Chassel Mi

but the cowards asking lack the gut to act

1606. Re: Corriolis force

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-04 20:13:54 UTC
From: tom <news4792@taring.org>
Message-ID: <4aa1755f$0$42841$8046368a@newsreader.iphouse.net>
Source record: 13568

Mike Coslo wrote:
>>
>> The speed of light.
>
> Acceleration isn't expressed as C.
>
> Does RF energy have mass?
>

If it does that could explain the weight gain over my years as a ham.

tom
K0TAR

1607. Re: Corriolis force

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-04 20:29:15 UTC
From: Dave <noone@nowhere.com>
Message-ID: <vMeom.1133$Jd7.472@nwrddc02.gnilink.net>
Source record: 13569

"Art Unwin" <arthurunwin@gmail.com> wrote in message
news:7c37b5ef-2482-4118-be66-64c6eab3eb60@37g2000yqm.googlegroups.com...
On Sep 4, 12:48 pm, Michael Coslo <m...@psu.edu> wrote:
>> What is the acceleration of RF?
>The speed of light.

and you call yourself a mechanical engineer?? how are speed and
acceleration related in your mechanical world?

1608. Re: ART vs. W8JI

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-04 20:40:02 UTC
From: Art Unwin <arthurunwin@gmail.com>
Message-ID: <6b080f52-9a1d-4aca-8076-6718a96617cd@38g2000yqr.googlegroups.com>
Source record: 13570

On Sep 4, 3:00 pm, Cecil Moore <nos...@w5dxp.com> wrote:
> Art Unwin wrote:
> > Equilibrium means equilibrium thus there are no reflections.
>
> No reflections on a standing-wave antenna?
> Where do the standing waves come from?
> --
> 73, Cecil, IEEE, OOTC, http://www.w5dxp.com

There are no standing waves either

1609. Re: ART vs. W8JI

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-04 20:41:36 UTC
From: Art Unwin <arthurunwin@gmail.com>
Message-ID: <75c79c73-d0af-42be-91c8-47da747a4dcd@r5g2000yqi.googlegroups.com>
Source record: 13571

On Sep 4, 3:40 pm, Art Unwin <arthurun...@gmail.com> wrote:
> On Sep 4, 3:00 pm, Cecil Moore <nos...@w5dxp.com> wrote:
>
> > Art Unwin wrote:
> > > Equilibrium means equilibrium thus there are no reflections.
>
> > No reflections on a standing-wave antenna?
> > Where do the standing waves come from?
> > --
> > 73, Cecil, IEEE, OOTC, http://www.w5dxp.com
>
> There are no standing waves either

Remember my WL is a closed circuit

1610. Re: Corriolis force

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-04 20:43:11 UTC
From: Art Unwin <arthurunwin@gmail.com>
Message-ID: <acec376f-0a86-4b51-a076-aa342dd291a5@38g2000yqr.googlegroups.com>
Source record: 13572

On Sep 4, 3:03 pm, Mike Coslo <m...@psu.edu> wrote:
> Art Unwin wrote:
> > On Sep 4, 12:48 pm, Michael Coslo <m...@psu.edu> wrote:
> >> Art Unwin wrote:
> >>> Mike you forget.
> >>> I do not subscribe to the wave theory over the particle aproach.
> >>> I cannot see any other way to fit that "radiation is from the
> >>> acceleration of a charge". And I can not find any explanation of this
> >>> in any books. Only mass is able to have spin and at the same time
> >>> transport energy, at least to my mind.
> >> So are you saying that FR energy has mass, or that it doesn't have spin?
>
> >>> Therefore accelaration is the
> >>> creation of two forces that are not in the same plain ala a shear
> >>> action where the combination of gravity and the Coriolis force are the
> >>> weakest forces known in the std model.
> >> What is the acceleration of RF?
>
> >>   - 73 de Mike N3LI -
>
> > The speed of light.
>
> Acceleration isn't expressed as C.
>
> Does RF energy have mass?

Yes if you see it as a particle and not a electromagnetic wave.

1611. Re: Corriolis force

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-04 20:50:24 UTC
From: Art Unwin <arthurunwin@gmail.com>
Message-ID: <e2be91e1-525f-43de-8ae0-3895fff70b60@t13g2000yqn.googlegroups.com>
Source record: 13573

On Sep 4, 3:29 pm, "Dave" <no...@nowhere.com> wrote:
> "Art Unwin" <arthurun...@gmail.com> wrote in message
>
> news:7c37b5ef-2482-4118-be66-64c6eab3eb60@37g2000yqm.googlegroups.com...
> On Sep 4, 12:48 pm, Michael Coslo <m...@psu.edu> wrote:
>
> >> What is the acceleration of RF?
> >The speed of light.
>
> and you call yourself a mechanical engineer?? how are speed and
> acceleration related in your mechanical world?

Because acceleration is following a parabolic curve beyond which it
has attained the speed of light. I cannot determine the acceleration
as that is a determinate of. L. and C As it happens the speed of
light was determined after radiation which to my mind puts it firmly
into the particle arena

1612. Re: Corriolis force

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-04 20:53:54 UTC
From: Art Unwin <arthurunwin@gmail.com>
Message-ID: <e03eeef5-ef93-4f4f-b41d-8340afb3db97@q7g2000yqi.googlegroups.com>
Source record: 13574

On Sep 4, 3:13 pm, tom <news4...@taring.org> wrote:
> Mike Coslo wrote:
>
> >> The speed of light.
>
> > > Acceleration isn't expressed as C.
>
> > > Does RF energy have mass?
>
> If it does that could explain the weight gain over my years as a ham.
>
> tom
> K0TAR

Weight gain is all in your head

1613. Re: Corriolis force

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-04 21:02:12 UTC
From: Art Unwin <arthurunwin@gmail.com>
Message-ID: <b9e6f99b-865b-411a-b213-820eb33ff0d8@x38g2000yqb.googlegroups.com>
Source record: 13575

On Sep 4, 11:22 am, w...@itd.nrl.navy.mil (J. B. Wood) wrote:
> In article
> <cf5b3115-db1d-42a5-98cb-5c67260e1...@v36g2000yqv.googlegroups.com>, Art
>
>
>
> Unwin <arthurun...@gmail.com> wrote:
> > It seems that some do not understand what the Corriolis force is so
> > here goes
> > When the Big Bang ocurred all energy was in an arbitrary boundary
> > just like the Sun is. When the forces (four forces of the Standard
> > model) could not be contained with in the boundary the boundary broke
> > which as scientists state was the begining of our Universe. Before the
> > arbitrary boundary broke it is a state of equilibrium (This is also
> > duplicated by the Sun) You can visualize a ball which contains all
> > energy by placing vectors all around the inside where for every vector
> > on the inside there is an equal and opposite on the outside. Tho
> > energy cannot be created or destroyed, kinetic energy can occur at the
> > expense of potential energy such that the outside vectors are over
> > come. The boundary breaks and the excess forces are released until
> > the boundary is able to return to a state of equilibrium. Now when the
> > break occurs it is at the point of a particular vector such that the
> > breakage is created by a shearing action, as the forces in question
> > was not aligned, with spin. Thus when any energy,particles etc they
> > escaped with a spin action which force forces to balance requires an
> > equal and opposite reaction and the Corriolis force is that component.
> > Without the Corriolis component we could not remain on this Earth and
> > gravity could not exist. Thus to state spin or torque is not a force
> > is truly rediculous. Let the insults come.
>
> Art,
>
> Since there is no "re:" on the subject line I assume you are the initiator
> of this post and I have to ask how it's relevant to this newsgroup. You
> have also attempted to initiate other off-topic threads. Can't you find a
> more appropriate ng or forum for these posts rather than show a disregard
> for those coming here to seek info on ham antennas and related issues? At
> the very least I would appreciate including the standard "OT:" prefix on
> the subject lines of off-topic posts. These kinds of posts illustrate why
> moderated newsgroups become necessary. Sincerely, and 73s from N4GGO,
>
> John Wood (Code 5550)   e-mail: w...@itd.nrl.navy.mil
> Naval Research Laboratory
> 4555 Overlook Avenue, SW

> Washington, DC 20375-5337

Oh shut up. there is nothing sincere in your posts

1614. Re: Corriolis force

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-04 21:15:14 UTC
From: Art Unwin <arthurunwin@gmail.com>
Message-ID: <ad0fa93b-753c-48a6-8082-ab68c99168be@z16g2000yqe.googlegroups.com>
Source record: 13576

On Sep 4, 8:36 am, "Dave" <no...@nowhere.com> wrote:
> <n...@wt.net> wrote in message
>
> news:cb4af2d2-b178-4419-940f-a12fc627e2bd@d15g2000prc.googlegroups.com...
> On Sep 3, 10:33 am, Art Unwin <arthurun...@gmail.com> wrote:
>
> >And I imagine that there are still many readers world wide
> >who are still wondering what constitutes "equilibrium" in
> >an antenna system. :(
>
> not any more, he defined it just the other day, equilibrium==isotropic.

No David, I just went along with your interpretation of same in the
U.S.
For my self I will stick to equilibrium as stated in any dictionary.
So I accept your terms as one to use in the US electrical arena
because you get upset as it may sometimes be equivalent to
equilibrium. But I am not going to fight that battle.
Personally, I am beginning to think hams mix the terms resonant and
equilibrium or is it just the U.S. One day some body is going to say
gottcha that is inevitable with so many hits
but that is not one of them.

1615. Re: Corriolis force

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-04 21:17:04 UTC
From: tom <news4792@taring.org>
Message-ID: <4aa183c8$0$28116$8046368a@newsreader.iphouse.net>
Source record: 13577

Art Unwin wrote:
> On Sep 4, 3:13 pm, tom <news4...@taring.org> wrote:
>> Mike Coslo wrote:
>>
>>>> The speed of light.
>>> Acceleration isn't expressed as C.
>>> Does RF energy have mass?
>> If it does that could explain the weight gain over my years as a ham.
>>
>> tom
>> K0TAR
>
> Weight gain is all in your head

For someone who complains about criticism you sure are being an ass lately.

tom
K0TAR

1616. Re: Corriolis force

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-04 22:00:32 UTC
From: Dave <noone@nowhere.com>
Message-ID: <46gom.1138$Jd7.679@nwrddc02.gnilink.net>
Source record: 13578

"Art Unwin" <arthurunwin@gmail.com> wrote in message
news:e2be91e1-525f-43de-8ae0-3895fff70b60@t13g2000yqn.googlegroups.com...
On Sep 4, 3:29 pm, "Dave" <no...@nowhere.com> wrote:
> "Art Unwin" <arthurun...@gmail.com> wrote in message
>
> news:7c37b5ef-2482-4118-be66-64c6eab3eb60@37g2000yqm.googlegroups.com...
> On Sep 4, 12:48 pm, Michael Coslo <m...@psu.edu> wrote:
>
>> >> What is the acceleration of RF?
>> >The speed of light.
>>
>> and you call yourself a mechanical engineer?? how are speed and
>> acceleration related in your mechanical world?
>
>Because acceleration is following a parabolic curve beyond which it
>has attained the speed of light. I cannot determine the acceleration
>as that is a determinate of. L. and C As it happens the speed of
>light was determined after radiation which to my mind puts it firmly
>into the particle arena

i asked about pure mechanical relationship, what is the relationship between
speed and acceleration??

1617. Re: Corriolis force

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-04 22:03:28 UTC
From: Dave <noone@nowhere.com>
Message-ID: <Q8gom.1139$Jd7.978@nwrddc02.gnilink.net>
Source record: 13579

"Art Unwin" <arthurunwin@gmail.com> wrote in message
news:ad0fa93b-753c-48a6-8082-ab68c99168be@z16g2000yqe.googlegroups.com...
On Sep 4, 8:36 am, "Dave" <no...@nowhere.com> wrote:
> <n...@wt.net> wrote in message
>
> news:cb4af2d2-b178-4419-940f-a12fc627e2bd@d15g2000prc.googlegroups.com...
> On Sep 3, 10:33 am, Art Unwin <arthurun...@gmail.com> wrote:
>
>> >And I imagine that there are still many readers world wide
>> >who are still wondering what constitutes "equilibrium" in
>> >an antenna system. :(
>>
>> not any more, he defined it just the other day, equilibrium==isotropic.
>
>No David, I just went along with your interpretation of same in the
>U.S.
>For my self I will stick to equilibrium as stated in any dictionary.
>So I accept your terms as one to use in the US electrical arena
>because you get upset as it may sometimes be equivalent to
>equilibrium. But I am not going to fight that battle.
>Personally, I am beginning to think hams mix the terms resonant and
>equilibrium or is it just the U.S. One day some body is going to say
>gottcha that is inevitable with so many hits
>but that is not one of them.

there is no reference for 'equilibrium' to be applied to electromagnetic
radiation. is just doesn't exist. so you have now given up all your
credibility by not sticking with what you admitted was an equivalent of your
term 'equilibium' in 'isotropic'.

1618. Re: Corriolis force

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-04 22:14:06 UTC
From: Art Unwin <arthurunwin@gmail.com>
Message-ID: <7d69616f-69f5-412e-a5b8-4fcfc0d4e58f@z30g2000yqz.googlegroups.com>
Source record: 13580

On Sep 4, 4:17 pm, tom <news4...@taring.org> wrote:
> Art Unwin wrote:
> > On Sep 4, 3:13 pm, tom <news4...@taring.org> wrote:
> >> Mike Coslo wrote:
>
> >>>> The speed of light.
> >>> Acceleration isn't expressed as C.
> >>> Does RF energy have mass?
> >> If it does that could explain the weight gain over my years as a ham.
>
> >> tom
> >> K0TAR
>
> > Weight gain is all in your head
>
> For someone who complains about criticism you sure are being an ass lately.
>
> tom
> K0TAR

No. I just not going to let you push me around. If the group want to
act like an arse then I am happy to follow suit. When civility returns
to this group I will be happy to reciprocate.
Just a question of choices taken

If I say sincerely yours does that get me off the hook?

1619. Re: Corriolis force

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-04 22:25:42 UTC
From: Art Unwin <arthurunwin@gmail.com>
Message-ID: <3b7ece3c-d262-4b5f-ad42-5003d33366b8@o41g2000yqb.googlegroups.com>
Source record: 13581

On Sep 4, 5:00 pm, "Dave" <no...@nowhere.com> wrote:
> "Art Unwin" <arthurun...@gmail.com> wrote in message
>
> news:e2be91e1-525f-43de-8ae0-3895fff70b60@t13g2000yqn.googlegroups.com...
> On Sep 4, 3:29 pm, "Dave" <no...@nowhere.com> wrote:
>
>
>
> > "Art Unwin" <arthurun...@gmail.com> wrote in message
>
> >news:7c37b5ef-2482-4118-be66-64c6eab3eb60@37g2000yqm.googlegroups.com...
> > On Sep 4, 12:48 pm, Michael Coslo <m...@psu.edu> wrote:
>
> >> >> What is the acceleration of RF?
> >> >The speed of light.
>
> >> and you call yourself a mechanical engineer?? how are speed and
> >> acceleration related in your mechanical world?
>
> >Because acceleration is following a parabolic curve beyond which it
> >has attained the speed of light. I cannot determine the acceleration
> >as that is a determinate of. L. and C As it happens the speed of
> >light was determined after radiation which to my mind puts it firmly
> >into the particle arena
>
> i asked about pure mechanical relationship, what is the relationship between
> speed and acceleration??

The applicable law by Newton states ut +ft sq/2. Without a value for
time acceleration cannot be stated. The circuit is one of a tank
circuit so one has to state the frequency as well.Acceleration is the
ratio between root W.L.as well as frequency so again acceleration
cannot be stated without all the facts. Time is measured by the time
two fields are interacting after which the particle maintaines a
straight line projection. The interaction is parabolic in nature in
all cases. The fields are electrical by the way tho all mechanical
movements can be expressed in electrical terms

1620. Re: ART vs. W8JI

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-04 23:03:19 UTC
From: Richard Fry <rfry@adams.net>
Message-ID: <d9a4886f-5443-4812-97b3-f0d2783c53b6@j19g2000yqk.googlegroups.com>
Source record: 13582

On Sep 4, 1:25 pm, Richard Fry <r...@adams.net> wrote:
> And for equal, matched power applied to their feedpoints, the total of
> the energy "expended" (radiated) by both them is identical.

For clarity I should have included the fact that the total of the energy "expended" (radiated) when equal and matched powers are applied to any and all elemental radiators, of whatever form, essentially is identical.

What is NOT identical across these various radiator forms is the field intensity in specific directions in the radiation volume.

THAT depends on the design of the radiating structure(s), and the installation+propagation environment.

This is the reason for the 1.6 dB advantage in the intrinsic, free-space, peak gain of the full-wave dipole over the 1/2-wave dipole in the NEC analysis I posted earlier today. Both of these configurations radiate the same total energy (somewhere).

But along their axes of maximum radiation, the full-wave antenna produces the greater field intensity of the two, for a given applied (and matched) power source.

//

1621. Re: true or... ?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-04 23:14:36 UTC
From: "-.-. --.-" <A@A.COM>
Message-ID: <h7s70rsga1@nnrp-beta.newsland.it>
Source record: 13583

"Richard Clark" <kb7qhc@comcast.net> ha scritto nel messaggio
news:j2n2a59je11to2ip75uckngf3e465issm8@4ax.com...
> Hi OM,
>
> Efficiency in percent (%) is simple math: 100 * PowerOut/PowerIn
>
> In decibels, I won't show the math, I will give some example:
> 100% is 0dB
> 95% is -0.22dB
> 90% is -0.46dB
> 80% is -0.97dB
> 50% is -3dB
> 10% is -10dB
>
> Look at your S-Meter. If any station added 5% efficiency, going from
> 95% to 100%, then your S-Meter would shift 0.22dB. The needle of your
> S-Meter is probably more than 1dB thick when you look at it. The
> needle would then move 1/5th of its thickness when a station adds 5%
> efficiency.

Straight and clear. Well, maybe my knowledge of physics and mathematic can
go a bit far, including understand e.g. ground losses, path loss in free
space, takeoff angle, feed point impedance and other silly things regarding
antenna world :) but sorry, Maxwell equations are a bit harder for me :)

> I have been in the military - antennas work the same there too. I was
> a teacher of RF Systems (LF/MF/HF/VHF/UHF/SHF). There is no magic
> knowledge hidden by the government.

Well, i'm ever a optimistic mind... i just think that maybe tomorrow i can
use something better antenna thanks to MIL research ... like a trick to
build a 160m yagi in the same space of a 40 m yagi :) of course, just
joking... OTH radar DUGA-3 in Prypiat, ex USSR now Ukraine, is a good
example for me, MIL also need big antenna system.

> Anyone can write a useless PDF. Anyone can get a useless patent too.
> I have observed patent holders who post here that have forgotten their
> own patent numbers, their own patent claims, their own URLs, their own
> email addresses, and their own theory. Talk about a waste of time,
> but it is wasted with the vigor of a seven year old. It would seem
> that wasting time, money, and signal power was equivalent to earning a
> PhD in Einsteinomics and advanced Gaussology.

Well, let say that *today* is more obvious and easy that this total waste
happen. Globalization and the internet make very easy for timewasters to get
a large public for the things they are saying/writing/claiming. And the

same, in a reverse way, happens to the skilled people, that have occasions to read tons of wrong assertions on the internet. Many years ago the worst case is to listen to timewasters on a local repeater or on a 40/75/80 meters net.
When i don't understand something, the first thing i do is ask, ask and ever ask.

Unfortunately, today is easy in the same manner both turning on a computer and turning on a radio to communicate with other people.
Unless you don't have a wireless connection, the computer have as a bonus that don't need any kind of antenna.

Thanks for your time,

-.-. --.-, Cristiano, Italy.

1622. Re: Corriolis force

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-04 23:38:02 UTC
From: tom <news4792@taring.org>
Message-ID: <4aa1a538$0$42839$8046368a@newsreader.iphouse.net>
Source record: 13584

Art Unwin wrote:
>
> No. I just not going to let you push me around. If the group want to
> act like an arse then I am happy to follow suit. When civility returns
> to this group I will be happy to reciprocate.
> Just a question of choices taken
>
> If I say sincerely yours does that get me off the hook?

Nope. You're still an ass. I believe the term the current geek
generation uses is "asshat".

And your mistaking criticism for being pushed around. You are the one
calling pretty much everyone, including those that have managed to make
a living designing and installing antenna systems, idiots. Expect to
get hard pushback when you do that, especially since you haven't managed
to produce one solid provable fact or testable hypothesis for the group.

Bafflegab is just bafflegab, Art, and that's all anyone's seen to date.

tom
K0TAR

1623. Re: ART vs. W8JI

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-04 23:57:47 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <oQhom.129749$O23.114238@newsfe11.iad>
Source record: 13585

Art Unwin wrote:
> There are no standing waves either

If there were no standing waves, a current pickup would
read a constant current when moved up and down the conductor,
but it doesn't. A current pickup proves there are standing
waves. You can see it with your own eyes using RF current
meters available from MFJ. If your theory rests on "no standing
waves" being present, it can easily be disproved.
--
73, Cecil, IEEE, OOTC, http://www.w5dxp.com

1624. Re: ART vs. W8JI

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-05 00:06:12 UTC
From: Art Unwin <arthurunwin@gmail.com>
Message-ID: <62abd5b1-02cd-45e4-b4c9-69bd672c844a@38g2000yqr.googlegroups.com>
Source record: 13586

On Sep 4, 6:57 pm, Cecil Moore <nos...@w5dxp.com> wrote:
> Art Unwin wrote:
> > There are no standing waves either
>
> If there were no standing waves, a current pickup would
> read a constant current when moved up and down the conductor,
> but it doesn't. A current pickup proves there are standing
> waves. You can see it with your own eyes using RF current
> meters available from MFJ. If your theory rests on "no standing
> waves" being present, it can easily be disproved.
> --
> 73, Cecil, IEEE, OOTC, http://www.w5dxp.com

I will wait for that day.
Regards

1625. Re: ART vs. W8JI

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-05 00:07:08 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <9Zhom.129752$O23.44500@newsfe11.iad>
Source record: 13587

Art Unwin wrote:
> Remember my WL is a closed circuit

Believe it or not, there are reflections at the
feedpoint caused by the Z0 physical impedance
discontinuity. You would be correct only if your
"closed circuit" was a traveling wave antenna.
But if it was a traveling wave antenna, its
feedpoint impedance would be in the hundreds
of ohms which, I assume, it is not. The fact that
your antenna doesn't have a feedpoint impedance
equal to the Z0 of the antenna wire proves that
reflections are present.

W8JI made essentially the same mistake in his loading
coil delay measurements so don't feel bad about it.
--
73, Cecil, IEEE, OOTC, http://www.w5dxp.com

1626. Re: ART vs. W8JI

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-05 00:16:15 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <I5iom.129756$O23.25434@newsfe11.iad>
Source record: 13588

Art Unwin wrote:
> I will wait for that day.

No need to wait. It's easy to make the measurements
for yourself. I have already done it to prove that
standing wave current, with its unchanging phase
relative to the feedpoint current, cannot be used
to measure the phase delay through a loading coil.

If a current probe is used to measure a traveling
wave, the amplitude will be constant. If the amplitude
changes from point to point, it contains a standing wave.
--
73, Cecil, IEEE, OOTC, http://www.w5dxp.com

1627. Re: Corriolis force

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-05 00:21:15 UTC
From: Gordon <gonzo@alltomyself.com>
Message-ID: <Xns9C7CB07F227Agreederxprtnet@194.177.98.144>
Source record: 13589

Art Unwin <arthurunwin@gmail.com> wrote in news:cf5b3115-db1d-42a5-98cb-5c67260e1580@v36g2000yqv.googlegroups.com:

> Thus to state spin or torque is not a force
> is truly rediculous. Let the insults come.
>

Of course torque is a force. Ask any auto mechanic.

I am more familier with the Corriolis force as
it applies to weather. IE: the spin of huricanes,
the rotation of weather around low pressure systems.

1628. Re: ART vs. W8JI

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-05 00:31:27 UTC
From: tom <news4792@taring.org>
Message-ID: <4aa1b1bb$0$42840$8046368a@newsreader.iphouse.net>
Source record: 13590

Cecil Moore wrote:
> Art Unwin wrote:
>> I will wait for that day.
>
> No need to wait. It's easy to make the measurements
> for yourself. I have already done it to prove that
> standing wave current, with its unchanging phase
> relative to the feedpoint current, cannot be used
> to measure the phase delay through a loading coil.
>
> If a current probe is used to measure a traveling
> wave, the amplitude will be constant. If the amplitude
> changes from point to point, it contains a standing wave.

Art? Measure something? You must be kidding.

Next you'll expect him to tell us how to build one of his antennas.
Then we'd all know for sure what a fraud he is.

tom
K0TAR

1629. Art - prove it or go away

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-05 00:39:15 UTC
From: tom <news4792@taring.org>
Message-ID: <4aa1b391$0$42839$8046368a@newsreader.iphouse.net>
Source record: 13591

I am unaware of a single regular contributor to this newsgroup that would refuse to give an example, however simple or complex, of an antenna that PROVES that what they are claiming is true.

Usually they are correct, sometimes it is arguable, seldom is anyone wrong. But I've never seen anyone not step up.

Until Art Unwin.

Who refuses to prove anything.

Give us something to test or shut the hell up. You are boring.

tom
K0TAR

1630. Re: Corriolis force

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-05 00:49:07 UTC
From: "Sal M. Onella" <salmonella@food.poisoning.org>
Message-ID: <5Aiom.129757$O23.127476@newsfe11.iad>
Source record: 13592

"Jeff Liebermann" <jeffl@cruzio.com> wrote in message
news:4lg1a5ti09bc0lu5uqn03qda77qph5q9qk@4ax.com...

> ... attacking a persons background, education, personality, appearance,
> and wallpaper is little better than a character assassination and
> should be avoided. Discuss the ideas, not the person.

Nonsense. Personal attacks are the surest way to victory. Study any
successful politician and you will have no need for me to explain further.

Examine the dreck that fills up your mailbox on Friday and Saturday before
any election day. It's not pro-candidate; it's not pro-anything; it's all
god-damn-my-opponent -- and they're called "hit pieces" for good reason.

Saint Edward of Massachusetts, aka Teddy Kennedy, was civil when it suited
him but he engaged in the vilest of character assassination* the rest of the
time. It didn't matter as long as he could cast his target upon the trash
heap.

*Bork was a man's name. Senator Kennedy made it a verb.

Sal

==========

The Federal Government had nothing to do with creating the American health
care system, the best in the world. Yet, they have the temerity to think
they have the right to wreck it. Stop them, for they are misguided -- or
worse.

1631. Re: true or... ?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-05 00:50:34 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <1vc3a55cf2n7estqim89dla0ccajpfimkh@4ax.com>
Source record: 13593

On Sat, 5 Sep 2009 01:14:36 +0200, "-.-. --.-" <A@A.COM> wrote:

>Straight and clear. Well, maybe my knowledge of physics and mathematic can
>go a bit far, including understand e.g. ground losses, path loss in free
>space, takeoff angle, feed point impedance and other silly things regarding
>antenna world :) but sorry, Maxwell equations are a bit harder for me :)

Hi Cristiano,

The only people that rely on things like Maxwell's equations, or
Gauss' Law are those who don't know the math.

You don't need that math to discuss 99% of the art of design. That
math might be mentioned, but whoever is trying to use it as their sole
point of discussion is someone who is lost.

>> I have been in the military - antennas work the same there too. I was
>> a teacher of RF Systems (LF/MF/HF/VHF/UHF/SHF). There is no magic
>> knowledge hidden by the government.
>
>Well, i'm ever a optimistic mind... i just think that maybe tomorrow i can
>use something better antenna thanks to MIL research ... like a trick to
>build a 160m yagi in the same space of a 40 m yagi :) of course, just
>joking... OTH radar DUGA-3 in Prypiat, ex USSR now Ukraine, is a good
>example for me, MIL also need big antenna system.

Military designs and commercial designs did lead the way for practical
antennas .... 70 years ago. If you want to build an 160M version of a
RADAR antenna you might get more argument from your neighbors than you
will find here. That huge antenna will show every characteristic at
160M as it does at SHF, but you better be pointed in the right
direction.

73's
Richard Clark, KB7QHC

1632. Re: ART vs. W8JI

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-05 01:26:41 UTC
From: Art Unwin <arthurunwin@gmail.com>
Message-ID: <3311df56-59b4-419c-afc5-5d78eeff2fba@l9g2000yqi.googlegroups.com>
Source record: 13594

On Sep 4, 7:31 pm, tom <news4...@taring.org> wrote:
> Cecil Moore wrote:
> > Art Unwin wrote:
> >> I will wait for that day.
>
> > No need to wait. It's easy to make the measurements
> > for yourself. I have already done it to prove that
> > standing wave current, with its unchanging phase
> > relative to the feedpoint current, cannot be used
> > to measure the phase delay through a loading coil.
>
> > If a current probe is used to measure a traveling
> > wave, the amplitude will be constant. If the amplitude
> > changes from point to point, it contains a standing wave.
>
> Art? Measure something? You must be kidding.
>
> Next you'll expect him to tell us how to build one of his antennas.
> Then we'd all know for sure what a fraud he is.
>
> tom
> K0TAR

Tom You are losing it and getting worse. Why don't you block my posts?
That way you will not lose any sleep. I just smile when you post but
in return
you get so angry you don't make much sense it terms of a response
Right from the get go all denied that adding a time varying field to
Gaussian static theorem provides mathematics of radiation as taught by
Maxwell. Until this group recognises this it is pointless to proceed.
You will just have to live with that until all can come to terms with
that statement.You will not read it in any book so you have to go back
to first principles for yourself. If your learning in life is based on
rote or memorizing books then you are out of luck. If you can't come
to terms on that then it is you who is the fraud
Failing that you will just have to rely on intuition instead of
mathematical facts

1633. Re: ART vs. W8JI

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-05 01:40:21 UTC
From: tom <news4792@taring.org>
Message-ID: <4aa1c1e1$0$42841$8046368a@newsreader.iphouse.net>
Source record: 13595

Art Unwin wrote:
>
> Tom You are losing it and getting worse. Why don't you block my posts?
> That way you will not lose any sleep. I just smile when you post but

If you think that I, or anyone else, loses sleep over you, you need to
cut your ego down to size.

tom
K0TAR

1634. Re: ART vs. W8JI

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-05 02:00:01 UTC
From: jimp@specsol.spam.sux.com
Message-ID: <nos8n6-lmi.ln1@mail.specsol.com>
Source record: 13596

Art Unwin <arthurunwin@gmail.com> wrote:
> On Sep 4, 7:31 pm, tom <news4...@taring.org> wrote:
>> Cecil Moore wrote:
>> > Art Unwin wrote:
>> >> I will wait for that day.
>>
>> > No need to wait. It's easy to make the measurements
>> > for yourself. I have already done it to prove that
>> > standing wave current, with its unchanging phase
>> > relative to the feedpoint current, cannot be used
>> > to measure the phase delay through a loading coil.
>>
>> > If a current probe is used to measure a traveling
>> > wave, the amplitude will be constant. If the amplitude
>> > changes from point to point, it contains a standing wave.
>>
>> Art? Measure something? You must be kidding.
>>
>> Next you'll expect him to tell us how to build one of his antennas.
>> Then we'd all know for sure what a fraud he is.
>>
>> tom
>> K0TAR
>
> Tom You are losing it and getting worse.

"The camel cannot see the crookedness of its own neck."

Old Arabic saying.

--
Jim Pennino

Remove .spam.sux to reply.

1635. Re: Corriolis force

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-05 02:45:20 UTC
From: Art Unwin <arthurunwin@gmail.com>
Message-ID: <58ff82c9-a4f0-461c-92da-074255fd451a@37g2000yqm.googlegroups.com>
Source record: 13597

On Sep 4, 7:21 pm, Gordon <go...@alltomyself.com> wrote:
> Art Unwin <arthurun...@gmail.com> wrote in news:cf5b3115-db1d-42a5-98cb-
> 5c67260e1...@v36g2000yqv.googlegroups.com:
>
> > > Thus to state spin or torque is not a force
> > > is truly rediculous. Let the insults come.
>
> Of course torque is a force. Ask any auto mechanic.
>
> I am more familier with the Corriolis force as
> it applies to weather. IE: the spin of huricanes,
> the rotation of weather around low pressure systems.

Excellent Gordon and the particles are connected to the weather
When particles arrive from outer space they reside on diamagnetic
substances and water is one. So when there is an updraft clinging to
the water droplets are these particles which gather a charge with
elevation until the moisture cools and there is no room for them to
stay. These particles are now electrically static charged where when
broken loose move to ground or the other side of the capacitor. Thus
we all see a lightning strike which is an electical static field. This
same charge circulates the earth one way above the equator and and ony
way below the equator such that the shearing action occurs which is
the circular motions that we see everywhere in life. These same
charges cling to space suits in outer space because the human body is
mainly water. NASA has had some luck by discharging the suits to a
ground as one would do with a capacitor so the abrasive particles do
not enter a ship. Without charge the particles are basically inert
like a unbound electron'
For the life of me I do not understand this stance that a shearing
action does not create spin or torque. A real crazy group of experts.
As far as pressure deviations in weather this is exacty the force we
see in eddy currents of electricity as well as mechanical things such
as tornadoes. All four forces involved in the Big Bang are the only
forces involved in the Universe because of the Newtonian laws so use
of the boundary laws are indispensible
with respect to all that happens, chemical, electrical, mechanical or
what every where energy units such as volts etc are inter convertible
metrics. And the electrostatic field is a isolated phenomina that has
zero connections to laws of this Universe
Thanks for your involvement on this issue.
Regards
Art

1636. Re: Corriolis force

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-05 03:00:46 UTC
From: Art Unwin <arthurunwin@gmail.com>
Message-ID: <587ea2f1-535c-429f-9f19-1b7f4a9572c9@v36g2000yqv.googlegroups.com>
Source record: 13598

On Sep 4, 7:49 pm, "Sal M. Onella" <salmone...@food.poisoning.org>
wrote:
> "Jeff Liebermann" <je...@cruzio.com> wrote in message
>
> news:4lg1a5ti09bc0lu5uqn03qda77qph5q9qk@4ax.com...
>
> > ... attacking a persons background, education, personality, appearance,
> > and wallpaper is little better than a character assassination and
> > should be avoided. Discuss the ideas, not the person.
>
> Nonsense. Personal attacks are the surest way to victory. Study any
> successful politician and you will have no need for me to explain further.
>
> Examine the dreck that fills up your mailbox on Friday and Saturday before
> any election day. It's not pro-candidate; it's not pro-anything; it's all
> god-damn-my-opponent -- and they're called "hit pieces" for good reason.
>
> Saint Edward of Massachusetts, aka Teddy Kennedy, was civil when it suited
> him but he engaged in the vilest of character assassination* the rest of the
> time. It didn't matter as long as he could cast his target upon the trash
> heap.
>
> *Bork was a man's name. Senator Kennedy made it a verb.
>
> Sal
>
> ==
>
> The Federal Government had nothing to do with creating the American health
> care system, the best in the world. Yet, they have the temerity to think
> they have the right to wreck it. Stop them, for they are misguided -- or
> worse.

Sadly true, But that does not follow the edicts that demands care of
our fellow man which also spills over to the health care of the poor.
Collective mental and physical harm given to provide superiority for
the haves over the have nots is just a grab for personal advantage
during a life against those who are unable to resist. If you believe
the equation that all comes to an end with death then this is logical,
But what if life transfers to another different life chosen by a true
superior? Do you think you can repeat such tactics at that time and be
succesfull ?

1637. Re: September 3

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-05 04:05:35 UTC
From: n9zas <n9zas.4e79acb@radiobanter.com>
Message-ID: <n9zas.4e79acb@radiobanter.com>
Source record: 13599

tom;687307 Wrote:
> Roy Culley wrote:-
> 0cc657d5-65a3-4995-8bc9-17755b64433e@a7g2000yqo.googlegroups.com,
> Art Unwin arthurunwin@gmail.com writes:-
> Seventy years ago the U.K declared war on Germany And they were
> alone !-
>
> France also declared war on 3rd September.-
>
> Yes, but we know they weren't really serious.

What does any of this crap have to with antennas??? Pay attention to
the forum you're in dummies!!!

--
n9zas

1638. Re: Corriolis force

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-05 04:18:00 UTC
From: Jeff Liebermann <jeffl@cruzio.com>
Message-ID: <kto3a5p4a7vj36k288ruh89gpp6fl23fou@4ax.com>
Source record: 13600

On Fri, 4 Sep 2009 17:49:07 -0700, "Sal M. Onella"
<salmonella@food.poisoning.org> wrote:

>
>"Jeff Liebermann" <jeffl@cruzio.com> wrote in message
>news:4lg1a5ti09bc0lu5uqn03qda77qph5q9qk@4ax.com...
>
>> ... attacking a persons background, education, personality, appearance,
>> and wallpaper is little better than a character assassination and
>> should be avoided. Discuss the ideas, not the person.
>
>Nonsense. Personal attacks are the surest way to victory. Study any
>successful politician and you will have no need for me to explain further.

I said "avoided", not eliminated entirely. There are places where
character assasinations are both useful and successful. As you
indicate, politics is one of these. There's also advertising,
competative bidding, and stealing someones girlfriend. All is fair in
love, war, politics, advertising, but not antenna design.

>Examine the dreck that fills up your mailbox on Friday and Saturday before
>any election day. It's not pro-candidate; it's not pro-anything; it's all
>god-damn-my-opponent -- and they're called "hit pieces" for good reason.

You're being too generous. It has been demonstrated that candidates
can win an election without ever mentioning any issues. Even the dead
have won elections. However, none of these politicians have ever
designed an antenna, so I suspect that this phenomenon would not be
particularly applicable.

>Saint Edward of Massachusetts, aka Teddy Kennedy, was civil when it suited
>him but he engaged in the vilest of character assassination* the rest of the
>time. It didn't matter as long as he could cast his target upon the trash
>heap.

Hint: You don't make it to the top in politics (and business) without
stepping over a few bodies. Much as I would like this to cease, I've
seen no indications that this will ever change. However, with debates
over antenna design, we still have the option to act in a reasonably
civil manner. In general, most of those posting questions and answers
in this group are quite civil and usually (not always) concentrate on
the merits of the design or problem, rather than attacking the
invidividual. Simply demonstrating that there is a class of
politicians that violate good taste, proper manners, and logical
arguementation, does not automatically give everyone in this newsgroup
a license to act in a similar manner.

>*Bork was a man's name. Senator Kennedy made it a verb.

Name calling also is common. Same logic. Just because politicians do
it, doesn't license everyone to follow in the same manner.

--
Jeff Liebermann 150 Felker St #D Santa Cruz CA 95060
831-336-2558
http://802.11junk.com jeffl@cruzio.com
http://www.LearnByDestroying.com AE6KS

1639. Re: Corriolis force

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-05 04:24:47 UTC
From: Jeff Liebermann <jeffl@cruzio.com>
Message-ID: <ilp3a55hkr8qhkatrlkaq91jufeleto751@4ax.com>
Source record: 13451

On Fri, 4 Sep 2009 14:15:14 -0700 (PDT), Art Unwin
<arthurunwin@gmail.com> wrote:

>For my self I will stick to equilibrium as stated in any dictionary.

<http://www.thefreedictionary.com/equilibrium>
"A stable situation in which forces cancel one another."

That suggests an equation, where the canceling forces are on opposite
sides of the equal sign.

I'll supply the equal sign. You supply the rest as in:
force_1 = force_2
What are the two forces that are being balanced or canceled?

--
Jeff Liebermann 150 Felker St #D Santa Cruz CA 95060
831-336-2558
http://802.11junk.com jeffl@cruzio.com
http://www.LearnByDestroying.com AE6KS

1640. Re: September 3

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-05 04:25:24 UTC
From: tom <news4792@taring.org>
Message-ID: <4aa1e82a$0$28114$8046368a@newsreader.iphouse.net>
Source record: 13452

n9zas wrote:
> tom;687307 Wrote:
>> Roy Culley wrote:-
>> 0cc657d5-65a3-4995-8bc9-17755b64433e@a7g2000yqo.googlegroups.com,
>> Art Unwin arthurunwin@gmail.com writes:-
>> Seventy years ago the U.K declared war on Germany And they were
>> alone !-
>>
>> France also declared war on 3rd September.-
>>
>> Yes, but we know they weren't really serious.
>
> What does any of this crap have to with antennas??? Pay attention to
> the forum you're in dummies!!!
>
>
>
>

Hit ignore on the thread, or killfile all of us.

And if it should be ignored, why did you add to it?

tom
K0TAR

1641. Re: Corriolis force

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-05 07:45:57 UTC
From: Szczepan Białek <sz.bialek@wp.pl>
Message-ID: <h7sq2c$ip3$1@node1.news.atman.pl>
Source record: 13453

"Dave Platt" <dplatt@radagast.org> wrote
news:3228n6-0bl.ln1@radagast.org...
> In article <0lt1a5dqc7ggakmgilf2l0nu69bampf5tk@4ax.com>,
> Jeff Liebermann <jeffl@cruzio.com> wrote:
>
>>I forgot to connect my comments to the original question. Sorry(tm).
>>You're correct. There's no way to get a good isotropic radiator
>>pattern with a simple vertical radiator. However, you can still get
>>fairly close if you make the antenna sufficiently small relative to
>>the operating wavelength. As the physical antenna size approaches a
>>point radiator, the pattern starts to look rather spherical.
>
> The difference in pattern between a half-wavelength dipole,
> and an infinitesimally-short dipole (i.e. one whose length
> approaches a point source) is actually quite small.

A dipole is always the two monopoles and never a point source. Only monopole
is a point source.
S*

1642. Re: Corriolis force

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-05 10:31:10 UTC
From: christofire <christofire@btinternet.com>
Message-ID: <n9WdnfZRu9hooD_XnZ2dnUVZ8hednZ2d@bt.com>
Source record: 13454

"Szczepan Bia&#65533;ek" <sz.bialek@wp.pl> wrote in message
news:h7sq2c$ip3$1@node1.news.atman.pl...
>
> "Dave Platt" <dplatt@radagast.org> wrote
> news:3228n6-0bl.ln1@radagast.org...
>> In article <0lt1a5dqc7ggakmgilf2l0nu69bampf5tk@4ax.com>,
>> Jeff Liebermann <jeffl@cruzio.com> wrote:
>>
>>>I forgot to connect my comments to the original question. Sorry(tm).
>>>You're correct. There's no way to get a good isotropic radiator
>>>pattern with a simple vertical radiator. However, you can still get
>>>fairly close if you make the antenna sufficiently small relative to
>>>the operating wavelength. As the physical antenna size approaches a
>>>point radiator, the pattern starts to look rather spherical.
>>
>> The difference in pattern between a half-wavelength dipole,
>> and an infinitesimally-short dipole (i.e. one whose length
>> approaches a point source) is actually quite small.
>
> A dipole is always the two monopoles and never a point source. Only
> monopole is a point source.
> S*

Nonsense. Only a point can be a point source.

The principle of the infinitesimal electric doublet is the hypothetical result of making the lengths of the elements of a balanced dipole vanishingly small. This is useful to quantify the characteristics of the limiting case but, because of its inherent axial symmetry, it still has the form of a dipole and the same kind of radiation pattern with linear polarisation and no radiation in the directions aligned with the ends of the dipole (for the reason I gave earlier in this thread).

Monopole antennas are developed from dipoles by substituting one of the elements, often using a 'reflection' of the remaining element in a ground plane. Their characteristics are different from those of the parent dipole because of this substitution but they still have the same kind of axially-symmetric radiation pattern, with linear polarisation and no radiation in the direction of the end of the monopole.

A point source is a hypothetical 'device' that radiates equally in all directions. Obviously this could not be realised using a monopole because that would provide the wrong radiation pattern.

A polarisation can be assigned to a point source, for the sake of comparison with real antennas (which is how the point source is used), just as a point source can be considered as transmitting or receiving a signal - but that doesn't mean a physical antenna can be made that has the same characteristics, that can be made to transmit or receive.

Chris

1643. Re: Corriolis force

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-05 12:47:48 UTC
From: Dave <noone@nowhere.com>
Message-ID: <U5tom.1270$tl3.768@nwrddc01.gnilink.net>
Source record: 13455

"Art Unwin" <arthurunwin@gmail.com> wrote in message
news:58ff82c9-a4f0-461c-92da-074255fd451a@37g2000yqm.googlegroups.com...
On Sep 4, 7:21 pm, Gordon <go...@alltomyself.com> wrote:
> And the electrostatic field is a isolated phenomina that has
> zero connections to laws of this Universe

Another golden quote! thanks art, i needed a good laugh this morning!

1644. Re: Corriolis force

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-05 12:49:26 UTC
From: Dave <noone@nowhere.com>
Message-ID: <q7tom.1271$tl3.187@nwrddc01.gnilink.net>
Source record: 13456

"Szczepan Bialek" <sz.bialek@wp.pl> wrote in message
news:h7sq2c$ip3$1@node1.news.atman.pl...
>
> "Dave Platt" <dplatt@radagast.org> wrote
> news:3228n6-0bl.ln1@radagast.org...
>> In article <0lt1a5dqc7ggakmgilf2l0nu69bampf5tk@4ax.com>,
>> Jeff Liebermann <jeffl@cruzio.com> wrote:
>>
>>>I forgot to connect my comments to the original question. Sorry(tm).
>>>You're correct. There's no way to get a good isotropic radiator
>>>pattern with a simple vertical radiator. However, you can still get
>>>fairly close if you make the antenna sufficiently small relative to
>>>the operating wavelength. As the physical antenna size approaches a
>>>point radiator, the pattern starts to look rather spherical.
>>
>> The difference in pattern between a half-wavelength dipole,
>> and an infinitesimally-short dipole (i.e. one whose length
>> approaches a point source) is actually quite small.
>
> A dipole is always the two monopoles and never a point source. Only
> monopole is a point source.
> S*

there is no such thing as a monopole antenna. unless you have discovered
the magnetic monopole somewhere?

1645. Re: Corriolis force

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-05 14:20:53 UTC
From: Mike Coslo <mjc5@psu.edu>
Message-ID: <h7ts3v$q068$1@tr22n12.aset.psu.edu>
Source record: 13457

Sal M. Onella wrote:

> Saint Edward of Massachusetts, aka Teddy Kennedy, was civil when it suited
> him but he engaged in the vilest of character assassination* the rest of the
> time. It didn't matter as long as he could cast his target upon the trash
> heap.

Sal, respectfully, as long as you and the folks who identify with you
try to turn every stinking conversation into a political bullshit
throwing party against the damm leeburuls and socialists and commies,
You'll just make yourself look kind of well, maniacally obsessed.

Not a leebural, but tired off all that crap.

Just sayin'.

1646. Re: Corriolis force

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-05 14:30:13 UTC
From: Mike Coslo <mjc5@psu.edu>
Message-ID: <h7tsle$q06a$1@tr22n12.aset.psu.edu>
Source record: 13458

Gordon wrote:
> Art Unwin <arthurunwin@gmail.com> wrote in news:cf5b3115-db1d-42a5-98cb-
> 5c67260e1580@v36g2000yqv.googlegroups.com:
>
>> Thus to state spin or torque is not a force
>> is truly rediculous. Let the insults come.
>>
>
> Of course torque is a force. Ask any auto mechanic.
>
> I am more familier with the Corriolis force as
> it applies to weather. IE: the spin of huricanes,
> the rotation of weather around low pressure systems.

And that is what the Coriolis force is. It's a mechanical effect, and not an electrical one.

Art is trying to convince us that EM energy is also a mechanical force, consisting of particles that fly off the end of our antennas like little turds. The ramifications of that means that everything we thought we know about RF - and in fact all physics is completely wrong.

- 73 de Mike N3LI -

1647. Re: Corriolis force

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-05 14:44:48 UTC
From: Mike Coslo <mjc5@psu.edu>
Message-ID: <h7ttgq$hk12$1@tr22n12.aset.psu.edu>
Source record: 13459

Art Unwin wrote:
> On Sep 4, 3:03 pm, Mike Coslo <m...@psu.edu> wrote:
>> Art Unwin wrote:
>>> On Sep 4, 12:48 pm, Michael Coslo <m...@psu.edu> wrote:
>>>> Art Unwin wrote:
>>>>> Mike you forget.
>>>>> I do not subscribe to the wave theory over the particle aproach.
>>>>> I cannot see any other way to fit that "radiation is from the
>>>>> acceleration of a charge". And I can not find any explanation of this
>>>>> in any books. Only mass is able to have spin and at the same time
>>>>> transport energy, at least to my mind.
>>>> So are you saying that FR energy has mass, or that it doesn't have spin?
>>>>> Therefore accelaration is the
>>>>> creation of two forces that are not in the same plain ala a shear
>>>>> action where the combination of gravity and the Coriolis force are the
>>>>> weakest forces known in the std model.
>>>> What is the acceleration of RF?
>>>> - 73 de Mike N3LI -
>>> The speed of light.
>> Acceleration isn't expressed as C.
>>
>> Does RF energy have mass?
>
> Yes if you see it as a particle and not a electromagnetic wave.

A test can be performed easily.

If RF energy has mass

It then follows that a transmitting antenna will lose mass.
Likewise, a receiving antenna will gain mass.

The confirming experiment can be made by using a two small antennas in
an isolated environment. One is transmitting, and one receiving. If RF
energy is a particle - therefore mechanical force, the receiving antenna
must accumulate mass, and the transmitting antenna must lose it.

We do have the needed resolution of measurement to make that test.

- 73 de Mike N3LI -

1648. Re: Corriolis force

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-05 14:52:25 UTC
From: Art Unwin <arthurunwin@gmail.com>
Message-ID: <4bef70e2-f1be-48f9-8238-43c6ec6f5396@o9g2000yqj.googlegroups.com>
Source record: 13460

On Sep 5, 9:30 am, Mike Coslo <m...@psu.edu> wrote:
> Gordon wrote:
> > Art Unwin <arthurun...@gmail.com> wrote in news:cf5b3115-db1d-42a5-98cb-
> > 5c67260e1...@v36g2000yqv.googlegroups.com:
>
> >> Thus to state spin or torque is not a force
> >> is truly rediculous. Let the insults come.
>
> > Of course torque is a force. Ask any auto mechanic.
>
> > I am more familier with the Corriolis force as
> > it applies to weather. IE: the spin of huricanes,
> > the rotation of weather around low pressure systems.
>
> And that is what the Coriolis force is. It's a mechanical effect, and
> not an electrical one.
>
> Art is trying to convince us that EM energy is also a mechanical force,
> consisting of particles that fly off the end of our antennas like little
> turds. The ramifications of that means that everything we thought we
> know about RF - and in fact all physics is completely wrong.
>
>   - 73 de Mike N3LI -

That is correct and soon the teachings will reflect what I proposed

1649. Re: Corriolis force

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-05 15:17:17 UTC
From: Art Unwin <arthurunwin@gmail.com>
Message-ID: <e00bb58c-1999-4410-b755-39b36e8707fa@l13g2000yqb.googlegroups.com>
Source record: 13461

On Sep 5, 9:44 am, Mike Coslo <m...@psu.edu> wrote:
> Art Unwin wrote:
> > On Sep 4, 3:03 pm, Mike Coslo <m...@psu.edu> wrote:
> >> Art Unwin wrote:
> >>> On Sep 4, 12:48 pm, Michael Coslo <m...@psu.edu> wrote:
> >>>> Art Unwin wrote:
> >>>>> Mike you forget.
> >>>>> I do not subscribe to the wave theory over the particle aproach.
> >>>>> I cannot see any other way to fit that "radiation is from the
> >>>>> acceleration of a charge". And I can not find any explanation of this
> >>>>> in any books. Only mass is able to have spin and at the same time
> >>>>> transport energy, at least to my mind.
> >>>> So are you saying that FR energy has mass, or that it doesn't have spin?
> >>>>> Therefore accelaration is the
> >>>>> creation of two forces that are not in the same plain ala a shear
> >>>>> action where the combination of gravity and the Coriolis force are the
> >>>>> weakest forces known in the std model.
> >>>> What is the acceleration of RF?
> >>>>   - 73 de Mike N3LI -
> >>> The speed of light.
> >> Acceleration isn't expressed as C.
> >
> >> Does RF energy have mass?
> >
> > Yes if you see it as a particle and not a electromagnetic wave.
> >
> A test can be performed easily.
>
> If RF energy has mass
>
> It then follows that a transmitting antenna will lose mass.
> Likewise, a receiving antenna will gain mass.
>
> The confirming experiment can be made by using a two small antennas in
> an isolated environment. One is transmitting, and one receiving. If RF
> energy is a particle - therefore mechanical force, the receiving antenna
> must accumulate mass, and the transmitting antenna must lose it.
>
> We do have the needed resolution of measurement to make that test.
>
>   - 73 de Mike N3LI -

That is the presently accepted formula in science where atoms are
removed from the matrics of the radiator.

For me, all diamagnetic materials are completely covered with particles that entered the solar stream from the Sun. As soon as they are projected away from a radiator another takes its place, thus no changes in mass.
When placing such an arrangement in boundary form on the outside is the vectors of gravity and the Coriolis force. On the inside of the arbitrary boundary
are the vectors of a moving charge together with a spin action of a eddy current together with a particle at rest where all transforms in to a projection with spin of the static particle.
This breaks the arbitrary boundary and where the arrival of another static particle restores equilibrium.
This mechanism is the same as that from the sun when equilibrium is broken by the escape of such particles because of the exchange of potential energy to kinetic energy within its boundary.

1650. Re: Corriolis force

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-05 15:35:33 UTC
From: Art Unwin <arthurunwin@gmail.com>
Message-ID: <e8a1e50b-e9ce-4bc9-87c9-a176370195e7@y42g2000yqb.googlegroups.com>
Source record: 13462

On Sep 5, 7:47 am, "Dave" <no...@nowhere.com> wrote:
> "Art Unwin" <arthurun...@gmail.com> wrote in message
>
> news:58ff82c9-a4f0-461c-92da-074255fd451a@37g2000yqm.googlegroups.com...
> On Sep 4, 7:21 pm, Gordon <go...@alltomyself.com> wrote:
>
> > And the electrostatic field is a isolated phenomina that has
> > zero connections to laws of this Universe
>
> Another golden quote! thanks art, i needed a good laugh this morning!

See David,
I do take notice and remember your statements of the past
Check the archives for accuracy.
I too had a good laugh when you came up with that
as your position with respect to physics. What surprised me was that
you were seen as a role model and every one else followed in step. To
this day the group accepts your
position on physics that you cannot add a time varying field to
Gauss's law of Statics.
Two different things, you said, where one has no association with the
other so the premise that Gaussian law then becomes the same as
Maxwells laws is a faulty application and should not be done. Oh my!
What a short memory you have. And remember when you dissed that Doctor
from MIT who agreed with my premise and then everybody assasinated
him as a fool. As for me I am not going anywhere I holding to my
premise
Have a great holiday.

1651. Re: Corriolis force

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-05 16:36:52 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <6twom.343259$Ta5.9869@newsfe15.iad>
Source record: 13463

Mike Coslo wrote:
> If RF energy has mass ...

The mass of each photon is:

m = e/c2 = h/c*lambda

where h is Planck's constant, c is the speed of light,
and lambda is the wavelength.

The reason that your experiment won't work is that
equal amounts of energy are being supplied to and
radiated (or conducted) from a transmitting antenna.
--
73, Cecil, IEEE, OOTC, http://www.w5dxp.com

1652. Radio Towers

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-05 16:40:30 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <twwom.343260$Ta5.238319@newsfe15.iad>
Source record: 13464

http://www.breitbart.com/article.php?id=D9AGKD0O0&show_article=1

1653. Re: Corriolis force

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-05 17:10:00 UTC
From: Art Unwin <arthurunwin@gmail.com>
Message-ID: <040c47b4-6dc8-409e-800d-9a1a7f9c7736@q7g2000yqi.googlegroups.com>
Source record: 13465

On Sep 5, 11:36 am, Cecil Moore <nos...@w5dxp.com> wrote:
> Mike Coslo wrote:
> > If RF energy has mass ...
>
> The mass of each photon is:
>
> m = e/c2 = h/c*lambda
>
> where h is Planck's constant, c is the speed of light,
> and lambda is the wavelength.
>
> The reason that your experiment won't work is that
> equal amounts of energy are being supplied to and
> radiated (or conducted) from a transmitting antenna.
> --
> 73, Cecil, IEEE, OOTC, http://www.w5dxp.com

Where exactly does a photon come from and what does it consist of?
Mass with potential energy or what? This word is bandied around so
much
but its existence has not been verified as yet by it's capture!
This approach has handicapped the advance in physics and radio for
over a century now.
Should we not explore a different avenue to see if answers lay
elsewhere.? Why do we resist change to so called accepted analogies
and theories? Why is this group so confident
that particles are not involved because it is an electrical thing? If
one accepts kinetic and potential energy why do they fight the
presence of mass?
Regards
Art

1654. Re: Corriolis force

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-05 17:30:34 UTC
From: Szczepan Białek <sz.bialek@wp.pl>
Message-ID: <h7tsa3$n1b$1@node1.news.atman.pl>
Source record: 13466

"Mike Coslo" <mjc5@psu.edu> wrote
news:h7tsle$q06a$1@tr22n12.aset.psu.edu...
>>
> Art is trying to convince us that EM energy is also a mechanical force,
> consisting of particles that fly off the end of our antennas like little
> turds. The ramifications of that means that everything we thought we know
> about RF - and in fact all physics is completely wrong.

You have made a small mistake. Antennas are feed with the oscillating
voltage. So the little truds fly off and come back. It is normal
longitudinal wave.
The key problem is what radiate: the end of an antenna or something else.
What do you think?
S*

1655. Re: Corriolis force

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-05 17:53:33 UTC
From: christofire <christofire@btinternet.com>
Message-ID: <5L-dnaw1aKw6OD_XnZ2dnUVZ8iKdnZ2d@bt.com>
Source record: 13467

"Szczepan Bia&#65533;ek" <sz.bialek@wp.pl> wrote in message
news:h7tsa3$n1b$1@node1.news.atman.pl...
>
> "Mike Coslo" <mjc5@psu.edu> wrote
> news:h7tsle$q06a$1@tr22n12.aset.psu.edu...
>>>
>> Art is trying to convince us that EM energy is also a mechanical force,
>> consisting of particles that fly off the end of our antennas like little
>> turds. The ramifications of that means that everything we thought we know
>> about RF - and in fact all physics is completely wrong.
>
> You have made a small mistake. Antennas are feed with the oscillating
> voltage. So the little truds fly off and come back. It is normal
> longitudinal wave.
> The key problem is what radiate: the end of an antenna or something else.
> What do you think?
> S*

No, you've made a mistake ... again. EM waves are transverse waves in air (i.e. around a normal antenna) not longitudinal waves (see http://en.wikipedia.org/wiki/Longitudinal_wave). Sound waves are longitudinal because air pressure is a scalar, whereas electric and magnetic fields are vectors - they have polarisation.

Also, antennas that radiate are fed with alternating current. The terminal voltage is almost immaterial in comparison with the current - that's what causes the radiation.

If you want to discover what radiates I suggest you read one of the normal text books on the subject, like Kraus 'Antennas', and stop making up your own versions!

Chris

1656. Re: Corriolis force

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-05 17:56:14 UTC
From: Szczepan Białek <sz.bialek@wp.pl>
Message-ID: <h7ttq7$n5n$1@node1.news.atman.pl>
Source record: 13468

"Dave" <noone@nowhere.com> wrote
news:q7tom.1271$tl3.187@nwrddc01.gnilink.net...
>
> "Szczepan Bialek" <sz.bialek@wp.pl> wrote in message
> news:h7sq2c$ip3$1@node1.news.atman.pl...
>>
>> "Dave Platt" <dplatt@radagast.org> wrote
>> news:3228n6-0bl.ln1@radagast.org...
>>> In article <0lt1a5dqc7ggakmgilf2l0nu69bampf5tk@4ax.com>,
>>> Jeff Liebermann <jeffl@cruzio.com> wrote:
>>>
>>>>I forgot to connect my comments to the original question. Sorry(tm).
>>>>You're correct. There's no way to get a good isotropic radiator
>>>>pattern with a simple vertical radiator. However, you can still get
>>>>fairly close if you make the antenna sufficiently small relative to
>>>>the operating wavelength. As the physical antenna size approaches a
>>>>point radiator, the pattern starts to look rather spherical.
>>>
>>> The difference in pattern between a half-wavelength dipole,
>>> and an infinitesimally-short dipole (i.e. one whose length
>>> approaches a point source) is actually quite small.
>>
>> A dipole is always the two monopoles and never a point source. Only
>> monopole is a point source.
>> S*
>
> there is no such thing as a monopole antenna. unless you have discovered
> the magnetic monopole somewhere?

Chris wrote: "Monopole antennas are developed from dipoles by substituting
one of the
elements, often using a 'reflection' of the remaining element in a ground
plane. Their characteristics are different from those of the parent dipole
because of this substitution but they still have the same kind of
axially-symmetric radiation pattern, with linear polarisation and no
radiation in the direction of the end of the monopole."

Is he right?
S*

>

1657. Re: Corriolis force

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-05 18:00:31 UTC
From: Mike Coslo <mjc5@psu.edu>
Message-ID: <h7u900$jo1k$1@tr22n12.aset.psu.edu>
Source record: 13469

Cecil Moore wrote:
> Mike Coslo wrote:
>> If RF energy has mass ...
>
> The mass of each photon is:
>
> m = e/c2 = h/c*lambda
>
> where h is Planck's constant, c is the speed of light,
> and lambda is the wavelength.
>
> The reason that your experiment won't work is that
> equal amounts of energy are being supplied to and
> radiated (or conducted) from a transmitting antenna.

So now we have left science, and as far as I can tell, have entered religion.

I was totally destructed and reconstructed 100,000,000 times this morning.

Prove I wasn't. Art's particles did it. Every atom in my body has been shed and replaced 10 times that while I typed this note.

Seriously, you guys want to de-construct everything we know and replace it with religion? Ooookay, I was taught a long time ago to avoid religious arguments, so have fun, kids.

- 73 de Mike N3LI -

1658. Re: Corriolis force

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-05 18:02:00 UTC
From: Mike Coslo <mjc5@psu.edu>
Message-ID: <h7u92o$jo1k$2@tr22n12.aset.psu.edu>
Source record: 13470

Szczepan Białż˝ek wrote:
>
> "Mike Coslo" <mjc5@psu.edu> wrote
> news:h7tsle$q06a$1@tr22n12.aset.psu.edu...
>>>
>> Art is trying to convince us that EM energy is also a mechanical
>> force, consisting of particles that fly off the end of our antennas
>> like little turds. The ramifications of that means that everything we
>> thought we know about RF - and in fact all physics is completely wrong.
>
> You have made a small mistake.

Yup, getting involved in a religious argument, Sorry about that!

I'll be Art's religion can explain Chemtrails too! 8^)

- 73 de Mike N3LI

1659. Re: Corriolis force

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-05 18:16:04 UTC
From: Szczepan Białek <sz.bialek@wp.pl>
Message-ID: <h7tuvc$nc4$1@node1.news.atman.pl>
Source record: 13471

"christofire" <christofire@btinternet.com> wrote
news:n9WdnfZRu9hooD_XnZ2dnUVZ8hednZ2d@bt.com...
>
> "Szczepan Biaďż˝ek" <sz.bialek@wp.pl> wrote in message
> news:h7sq2c$ip3$1@node1.news.atman.pl...
>>
>> >>
>> A dipole is always the two monopoles and never a point source. Only
>> monopole is a point source.
>> S*
>
> Nonsense. Only a point can be a point source.

Yes. Monopole made of wire is not a point source. For this reason inventors
mounted something lake a ball on the end.
>
> The principle of the infinitesimal electric doublet is the hypothetical
> result of making the lengths of the elements of a balanced dipole
> vanishingly small. This is useful to quantify the characteristics of the
> limiting case but, because of its inherent axial symmetry, it still has
> the form of a dipole and the same kind of radiation pattern with linear
> polarisation and no radiation in the directions aligned with the ends of
> the dipole (for the reason I gave earlier in this thread).

Each todays dipole consist of the two monopoles in opposite phase.
There are the two seperate sources. They produce the two spherical waves.
You say they are polarised - I that they are coupled.
>
> Monopole antennas are developed from dipoles by substituting one of the
> elements, often using a 'reflection' of the remaining element in a ground
> plane. Their characteristics are different from those of the parent
> dipole because of this substitution but they still have the same kind of
> axially-symmetric radiation pattern, with linear polarisation and no
> radiation in the direction of the end of the monopole.
>
> A point source is a hypothetical 'device' that radiates equally in all
> directions. Obviously this could not be realised using a monopole because
> that would provide the wrong radiation pattern.
>
> A polarisation can be assigned to a point source, for the sake of
> comparison with real antennas (which is how the point source is used),
> just as a point source can be considered as transmitting or receiving a
> signal - but that doesn't mean a physical antenna can be made that has the
> same characteristics, that can be made to transmit or receive.

Equipment is polarized - not waves. Point sorce cannot be polarised. The two monopoles are always polarized. Long wire without big tip is pseudo-polarized.
S*

1660. Re: Corriolis force

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-05 18:22:01 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <G%xom.285034$E61.226743@newsfe09.iad>
Source record: 13472

Art Unwin wrote:
> Where exactly does a photon come from and what does it consist of?
> ... its existence has not been verified as yet by it's capture!

Photons are quantized elementary particles in the standard
model. Every time you see something, like this posting of mine,
you are capturing the photons incident upon your retina.

Double slit experiments with photons have been performed
with a single photon which apparently can go through both
slits at the same time and interfere with itself on the
other side. Those photon detectors indeed can capture
individual photons.

Photons are quite often generated and detected within
particle accelerators.
--
73, Cecil, IEEE, OOTC, http://www.w5dxp.com

1661. Re: Corriolis force

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-05 18:32:40 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <oib5a55gluc757miq1gel35j6an544rdus@4ax.com>
Source record: 13473

On Sat, 05 Sep 2009 10:30:13 -0400, Mike Coslo <mjc5@psu.edu> wrote:

>Art is trying to convince us that ... in fact all physics is completely wrong.

How many years and thousands of postings did it take to come to that observation?

What comes around goes around (the Corriolis force defined). ;-)

73's
Richard Clark, KB7QHC

1662. Re: Corriolis force

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-05 18:36:23 UTC
From: Szczepan Białek <sz.bialek@wp.pl>
Message-ID: <h7u05fnfq1@node1.news.atman.pl>
Source record: 13474

"christofire" <christofire@btinternet.com> wrote
news:5L-dnaw1aKw6OD_XnZ2dnUVZ8iKdnZ2d@bt.com...
>
> "Szczepan Biaďż˝ek" <sz.bialek@wp.pl> wrote in message
> news:h7tsa3$n1b$1@node1.news.atman.pl...
>>
>> "Mike Coslo" <mjc5@psu.edu> wrote
>> news:h7tsle$q06a$1@tr22n12.aset.psu.edu...
>>>>
>>> Art is trying to convince us that EM energy is also a mechanical force,
>>> consisting of particles that fly off the end of our antennas like little
>>> turds. The ramifications of that means that everything we thought we
>>> know about RF - and in fact all physics is completely wrong.
>>
>> You have made a small mistake. Antennas are feed with the oscillating
>> voltage. So the little truds fly off and come back. It is normal
>> longitudinal wave.
>> The key problem is what radiate: the end of an antenna or something else.
>> What do you think?
>> S*
>
>
> No, you've made a mistake ... again. EM waves are transverse waves in air
> (i.e. around a normal antenna) not longitudinal waves (see
> http://en.wikipedia.org/wiki/Longitudinal_wave).

EM waves by Maxwell are transverse waves. They are the paper waves. The real
electric waves are mainly longitudinal.

>Sound waves are longitudinal because air pressure is a scalar, whereas
>electric and magnetic fields are vectors - they have polarisation.

The math has not to do here.
Here is the full acoustic analogy. The two loudspeakers work like the two
monopoles.
>
> Also, antennas that radiate are fed with alternating current. The
> terminal voltage is almost immaterial in comparison with the current -
> that's what causes the radiation.
>
> If you want to discover what radiates I suggest you read one of the normal
> text books on the subject, like Kraus 'Antennas', and stop making up your
> own versions!

To discower what radiates will be better to do experiments with tipping of monopole antenas.

S*

1663. Re: Corriolis force

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-05 18:54:36 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <duyom.15464$ec2.3297@newsfe13.iad>
Source record: 13475

Mike Coslo wrote:
> So now we have left science, and as far as I can tell, have entered
> religion.

Everything I said is supported by the laws of physics
as we presently understand them.

> I was totally destructed and reconstructed 100,000,000 times this morning.
> Prove I wasn't.

It is usually impossible to prove a negative. You might
have only been destructed and reconstructed 99,999,999
times this morning. That's why the onus of proof is upon
the one who makes the positive assertion.

What would you say if the police knock on your door and
demand that you prove that you never ran a red light?
--
73, Cecil, IEEE, OOTC, http://www.w5dxp.com

1664. Re: Corriolis force

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-05 19:02:50 UTC
From: JIMMIE <JIMMIEDEE123@YAHOO.COM>
Message-ID: <16a827fc-8393-45db-8e47-e1a8b0ba24c2@z24g2000yqb.googlegroups.com>
Source record: 13476

On Sep 5, 10:52 am, Art Unwin <arthurun...@gmail.com> wrote:
> On Sep 5, 9:30 am, Mike Coslo <m...@psu.edu> wrote:
>
>
>
>
>
> > Gordon wrote:
> > > Art Unwin <arthurun...@gmail.com> wrote in news:cf5b3115-db1d-42a5-98cb-
> > > 5c67260e1...@v36g2000yqv.googlegroups.com:
>
> > >> Thus to state spin or torque is not a force
> > >> is truly rediculous. Let the insults come.
>
> > > Of course torque is a force. Ask any auto mechanic.
>
> > > I am more familier with the Corriolis force as
> > > it applies to weather. IE: the spin of huricanes,
> > > the rotation of weather around low pressure systems.
>
> > And that is what the Coriolis force is. It's a mechanical effect, and
> > not an electrical one.
>
> > Art is trying to convince us that EM energy is also a mechanical force,
> > consisting of particles that fly off the end of our antennas like little
> > turds. The ramifications of that means that everything we thought we
> > know about RF - and in fact all physics is completely wrong.
>
> >   - 73 de Mike N3LI -
>
> That is correct and soon the teachings will reflect what I proposed- Hide quoted text -
>
> - Show quoted text -

Art should surely stick to the one liners. ROTFLAMO.

Jimmie

1665. Re: Corriolis force

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-05 19:24:26 UTC
From: Dave <noone@nowhere.com>
Message-ID: <KVyom.1331$tl3.708@nwrddc01.gnilink.net>
Source record: 13477

"Szczepan Bialek" <sz.bialek@wp.pl> wrote in message
news:h7ttq7$n5n$1@node1.news.atman.pl...
>
> "Dave" <noone@nowhere.com> wrote
> news:q7tom.1271$tl3.187@nwrddc01.gnilink.net...
>>
>> "Szczepan Bialek" <sz.bialek@wp.pl> wrote in message
>> news:h7sq2c$ip3$1@node1.news.atman.pl...
>>>
>>> "Dave Platt" <dplatt@radagast.org> wrote
>>> news:3228n6-0bl.ln1@radagast.org...
>>>> In article <0lt1a5dqc7ggakmgilf2l0nu69bampf5tk@4ax.com>,
>>>> Jeff Liebermann <jeffl@cruzio.com> wrote:
>>>>
>>>>>I forgot to connect my comments to the original question. Sorry(tm).
>>>>>You're correct. There's no way to get a good isotropic radiator
>>>>>pattern with a simple vertical radiator. However, you can still get
>>>>>fairly close if you make the antenna sufficiently small relative to
>>>>>the operating wavelength. As the physical antenna size approaches a
>>>>>point radiator, the pattern starts to look rather spherical.
>>>>
>>>> The difference in pattern between a half-wavelength dipole,
>>>> and an infinitesimally-short dipole (i.e. one whose length
>>>> approaches a point source) is actually quite small.
>>>
>>> A dipole is always the two monopoles and never a point source. Only
>>> monopole is a point source.
>>> S*
>>
>> there is no such thing as a monopole antenna. unless you have discovered
>> the magnetic monopole somewhere?
>
> Chris wrote: "Monopole antennas are developed from dipoles by substituting
> one of the
> elements, often using a 'reflection' of the remaining element in a ground
> plane. Their characteristics are different from those of the parent
> dipole
> because of this substitution but they still have the same kind of
> axially-symmetric radiation pattern, with linear polarisation and no
> radiation in the direction of the end of the monopole."
>
> Is he right?

different context... "Monopole" antennas as he is describing are a specific type of antennas that are otherwise described as 'verticals', 'ground plane', or several other terms.. all of which actually are dipoles in the context that they have 2 poles, not that they look like a 'half wave dipole' which is a special case of a dipole. In his context it refers to a vertical with some real size greater than zero. in your context the 'monopole is a point source' means you think that a point source is a monopole which is impossible since a monopole(meaning single pole) can't radiate. His description is a bit simplified, but otherwise reasonable for a "Monopole" antenna, but you must always remember there are 2 poles even in a "Monopole" antenna... just one of them is the ground screen or radials.

1666. Re: Corriolis force

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-05 19:26:14 UTC
From: Art Unwin <arthurunwin@gmail.com>
Message-ID: <0d5a90c6-5c6b-4ca2-b32b-8038c06bdbef@h13g2000yqk.googlegroups.com>
Source record: 13478

On Sep 5, 9:30 am, Mike Coslo <m...@psu.edu> wrote:
> Gordon wrote:
> > Art Unwin <arthurun...@gmail.com> wrote in news:cf5b3115-db1d-42a5-98cb-
> > 5c67260e1...@v36g2000yqv.googlegroups.com:
>
> >> Thus to state spin or torque is not a force
> >> is truly rediculous. Let the insults come.
>
> > Of course torque is a force. Ask any auto mechanic.
>
> > I am more familier with the Corriolis force as
> > it applies to weather. IE: the spin of huricanes,
> > the rotation of weather around low pressure systems.
>
> And that is what the Coriolis force is. It's a mechanical effect, and
> not an electrical one.
>
> Art is trying to convince us that EM energy is also a mechanical force,
> consisting of particles that fly off the end of our antennas like little
> turds. The ramifications of that means that everything we thought we
> know about RF - and in fact all physics is completely wrong.
>
>   - 73 de Mike N3LI -

Where on earth did you get that thought from.? Or is your intent to
mess up the minds of everybody? This line "Art is trying to convince
us that EM energy is also a mechanical force consisting of particles"
Where did you see that comment? As for things flying of the ends of
an antenna where did that idea come from?
Everything in this world can be converted to electrical units! What
you want to label them
at any particular time is fine by me. But untruths are something else.
Is this what your presence in this discussion you intend to propagate?

1667. Re: Corriolis force

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-05 19:28:14 UTC
From: Dave <noone@nowhere.com>
Message-ID: <iZyom.1332$tl3.1251@nwrddc01.gnilink.net>
Source record: 13479

"Art Unwin" <arthurunwin@gmail.com> wrote in message
news:e00bb58c-1999-4410-b755-39b36e8707fa@l13g2000yqb.googlegroups.com...
On Sep 5, 9:44 am, Mike Coslo <m...@psu.edu> wrote:
>> The confirming experiment can be made by using a two small antennas in
>> an isolated environment. One is transmitting, and one receiving. If RF
>> energy is a particle - therefore mechanical force, the receiving antenna
>> must accumulate mass, and the transmitting antenna must lose it.

>That is the presently accepted formula in science where atoms are
>removed from the matrics of the radiator.
>For me, all diamagnetic materials are completely covered with
>particles that entered the solar stream from the Sun. As soon as they
>are projected away from a radiator another takes its place, thus no
>changes in mass.

what about my ferromagnetic radiators??? since they don't have your magical
levitating diamagnetic neutrinos they must constantly be losing mass and
will eventually fall apart!

1668. Gaussian law of statatics extended by adding a time vary field

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-05 19:53:36 UTC
From: Art Unwin <arthurunwin@gmail.com>
Message-ID: <9c9f95b6-6900-4cb9-8e38-0f78be9edf8f@j39g2000yqh.googlegroups.com>
Source record: 13480

Years of discussion on this same subject has been a matter of lies,
misinterpretations and a determination to obstruct change.
All of these discussion rest on a statement made years ago which has
since gone on to many tangential discussions based on untruths.
The original statement, made by me was:

"If you add a time varying field to the laws of Statics by Gauss the
mathematic results are in full conformance with Maxwells laws"

It is this statement that the group is up in arms about ! Yet they
want me to explain the antenna that is a direct result of the above
statement. A statement they refuse to accept where their response has
been character
assasination which has failed because I am still here.
It is a simple statement which is exact and true which all are
fighting to prevent this from being accepted. Why? Because of a
reluctance to embrace change because of age.
Thus for this representative group they are content that all is known
as printed in the books and trying to convince the World there is no
need for further discussion. So I ask, what is the real reason hams
take this position if in fact they are represented by this newsgroup
of self perceived experts?

1669. Gaussian law of statatics extended by adding a time vary field

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-05 19:55:24 UTC
From: Art Unwin <arthurunwin@gmail.com>
Message-ID: <068ebdd1-a6a5-4ba2-b566-faa4e0cb159e@w36g2000yqm.googlegroups.com>
Source record: 13481

Years of discussion on this same subject has been a matter of lies,
misinterpretations and a determination to obstruct change.
All of these discussion rest on a statement made years ago which has
since gone on to many tangential discussions based on untruths.
The original statement, made by me was:

"If you add a time varying field to the laws of Statics by Gauss the
mathematic results are in full conformance with Maxwells laws"

It is this statement that the group is up in arms about ! Yet they
want me to explain the antenna that is a direct result of the above
statement. A statement they refuse to accept where their response has
been character
assasination which has failed because I am still here.
It is a simple statement which is exact and true which all are
fighting to prevent this from being accepted. Why? Because of a
reluctance to embrace change because of age.
Thus for this representative group they are content that all is known
as printed in the books and trying to convince the World there is no
need for further discussion. So I ask, what is the real reason hams
take this position if in fact they are represented by this newsgroup
of self perceived experts?

1670. Re: Corriolis force

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-05 20:00:25 UTC
From: Art Unwin <arthurunwin@gmail.com>
Message-ID: <ec690505-9347-4aac-90dd-14c1e480a877@z16g2000yqe.googlegroups.com>
Source record: 13482

On Sep 5, 2:28 pm, "Dave" <no...@nowhere.com> wrote:
> "Art Unwin" <arthurun...@gmail.com> wrote in message
>
> news:e00bb58c-1999-4410-b755-39b36e8707fa@l13g2000yqb.googlegroups.com...
> On Sep 5, 9:44 am, Mike Coslo <m...@psu.edu> wrote:
>
> >> The confirming experiment can be made by using a two small antennas in
> >> an isolated environment. One is transmitting, and one receiving. If RF
> >> energy is a particle - therefore mechanical force, the receiving antenna
> >> must accumulate mass, and the transmitting antenna must lose it.
> >That is the presently accepted formula in science where atoms are
> >removed from the matrics of the radiator.
> >For me, all diamagnetic materials are completely covered with
> >particles that entered the solar stream from the Sun. As soon as they
> >are projected away from a radiator another takes its place, thus no
> >changes in mass.
>
> what about my ferromagnetic radiators??? since they don't have your magical
> levitating diamagnetic neutrinos they must constantly be losing mass and
> will eventually fall apart!

And you are the role model that this group is in lockstep with? Pay
attention and stop manufacturing things

1671. Re: Corriolis force

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-05 20:17:42 UTC
From: christofire <christofire@btinternet.com>
Message-ID: <oJednXCPscDwWj_XnZ2dnUVZ8uSdnZ2d@bt.com>
Source record: 13483

"Szczepan Bia&#65533;ek" <sz.bialek@wp.pl> wrote in message
news:h7u05fnfq1@node1.news.atman.pl...
>
> "christofire" <christofire@btinternet.com> wrote
> news:5L-dnaw1aKw6OD_XnZ2dnUVZ8iKdnZ2d@bt.com...
>>
>> "Szczepan Bia&#65533;ek" <sz.bialek@wp.pl> wrote in message
>> news:h7tsa3$n1b$1@node1.news.atman.pl...
>>>
>>> "Mike Coslo" <mjc5@psu.edu> wrote
>>> news:h7tsle$q06a$1@tr22n12.aset.psu.edu...
>>>>>
>>>> Art is trying to convince us that EM energy is also a mechanical force,
>>>> consisting of particles that fly off the end of our antennas like
>>>> little turds. The ramifications of that means that everything we
>>>> thought we know about RF - and in fact all physics is completely wrong.
>>>
>>> You have made a small mistake. Antennas are feed with the oscillating
>>> voltage. So the little truds fly off and come back. It is normal
>>> longitudinal wave.
>>> The key problem is what radiate: the end of an antenna or something
>>> else.
>>> What do you think?
>>> S*
>>
>>
>> No, you've made a mistake ... again. EM waves are transverse waves in
>> air (i.e. around a normal antenna) not longitudinal waves (see
>> http://en.wikipedia.org/wiki/Longitudinal_wave).
>
> EM waves by Maxwell are transverse waves. They are the paper waves. The
> real electric waves are mainly longitudinal.

* Would you care to cite a reference where it is stated that EM waves in the
far field of a transmitting antenna contain a significant longitudinal
component? Many respected authors, such as Kraus, have illustrated the
contrary, but their work isn't limited to paper; people like Kraus have
designed real antennas of types that are still in use today.

>>Sound waves are longitudinal because air pressure is a scalar, whereas
>>electric and magnetic fields are vectors - they have polarisation.
>
> The math has not to do here.

* What 'math'? ... just the mention of scalars and vectors, in a group devoted to antennas. Please.

> Here is the full acoustic analogy. The two loudspeakers work like the two
> monopoles.

* Rubbish. What 'two loudspeakers'? Ever heard of a horn loudspeaker? ... it produces longitudinal pressure waves.

>> Also, antennas that radiate are fed with alternating current. The
>> terminal voltage is almost immaterial in comparison with the current -
>> that's what causes the radiation.
>>
>> If you want to discover what radiates I suggest you read one of the
>> normal text books on the subject, like Kraus 'Antennas', and stop making
>> up your own versions!
>
> To discower what radiates will be better to do experiments with tipping of
> monopole antenas.

* Where do you get this stuff from? Please visit a library - you could do yourself a lot of good.
Chris

1672. Re: Corriolis force

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-05 21:02:51 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <iYidnQQDHbtiTD_XnZ2dnUVZ_oadnZ2d@giganews.com>
Source record: 13484

christofire wrote:
>
> * Would you care to cite a reference where it is stated that EM waves in the
> far field of a transmitting antenna contain a significant longitudinal
> component? Many respected authors, such as Kraus, have illustrated the
> contrary, but their work isn't limited to paper; people like Kraus have
> designed real antennas of types that are still in use today.
> . . .

EM waves in an unbounded medium, far enough from a source to be in the far field, have a longitudinal component only if the medium has loss. In air, the fields are for all practical purposes purely transverse as christofire says. Hence the descriptive name for the field orientation as TEM for Transverse Electro-Magnetic. This is also true of some bounded media such as coaxial cables, where again the fields are transverse except for a usually small longitudinal component caused by loss. But in other bounded media such as waveguides, one field or the other (electric field in TM mode and magnetic in TE mode) can be longitudinal. You'll also see a longitudinal component when a wave gets close to lossy ground, although it's typically not large compared to the total field.

Roy Lewallen, W7EL

1673. Re: Corriolis force

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-05 21:12:45 UTC
From: Art Unwin <arthurunwin@gmail.com>
Message-ID: <e94b6de7-8bd7-43a9-ad8b-9da5f6e80f78@h13g2000yqk.googlegroups.com>
Source record: 13485

On Sep 5, 1:22 pm, Cecil Moore <nos...@w5dxp.com> wrote:
> Art Unwin wrote:
> > Where exactly does a photon come from and what does it consist of?
> > ... its existence has not been verified as yet by it's capture!
>
> Photons are quantized elementary particles in the standard
> model. Every time you see something, like this posting of mine,
> you are capturing the photons incident upon your retina.
>
> Double slit experiments with photons have been performed
> with a single photon which apparently can go through both
> slits at the same time and interfere with itself on the
> other side. Those photon detectors indeed can capture
> individual photons.
>
> Photons are quite often generated and detected within
> particle accelerators.
> --
> 73, Cecil, IEEE, OOTC, http://www.w5dxp.com

My problem is with how photons fit in with radiation?
It is a nice name but how does it get launched and where did it come
from?
Personaly I can't distinguish it from a particle at rest on a radiator
or how it can possibly get attached to it which apparently you
believe. I just want to see how this proton fits in with what we know.
Waves or particles.

1674. Re: Corriolis force

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-05 21:33:06 UTC
From: Art Unwin <arthurunwin@gmail.com>
Message-ID: <3d0c7b2e-968e-4626-91a7-b35bd6c54756@w36g2000yqm.googlegroups.com>
Source record: 13486

On Sep 5, 3:17 pm, "christofire" <christof...@btinternet.com> wrote:
> "Szczepan Bia³ek" <sz.bia...@wp.pl> wrote in message
>
> news:h7u05fnfq1@node1.news.atman.pl...
>
>
>
>
>
> > "christofire" <christof...@btinternet.com> wrote
> >news:5L-dnaw1aKw6OD_XnZ2dnUVZ8iKdnZ2d@bt.com...
>
> >> "Szczepan Bia³ek" <sz.bia...@wp.pl> wrote in message
> >>news:h7tsa3$n1b$1@node1.news.atman.pl...
>
> >>> "Mike Coslo" <m...@psu.edu> wrote
> >>>news:h7tsle$q06a$1@tr22n12.aset.psu.edu...
>
> >>>> Art is trying to convince us that EM energy is also a mechanical force,
> >>>> consisting of particles that fly off the end of our antennas like
> >>>> little turds. The ramifications of that means that everything we
> >>>> thought we know about RF - and in fact all physics is completely wrong.
>
> >>> You have made a small mistake. Antennas are feed with the oscillating
> >>> voltage. So the little truds fly off and come back. It is normal
> >>> longitudinal wave.
> >>> The key problem is what radiate: the end of an antenna or something
> >>> else.
> >>> What do you think?
> >>> S*
>
> >> No, you've made a mistake ... again. EM waves are transverse waves in
> >> air (i.e. around a normal antenna) not longitudinal waves (see
> >>http://en.wikipedia.org/wiki/Longitudinal_wave).
>
> > EM waves by Maxwell are transverse waves. They are the paper waves. The
> > real electric waves are mainly longitudinal.
>
> * Would you care to cite a reference where it is stated that EM waves in the
> far field of a transmitting antenna contain a significant longitudinal
> component? Many respected authors, such as Kraus, have illustrated the
> contrary, but their work isn't limited to paper; people like Kraus have
> designed real antennas of types that are still in use today.
>

> >>Sound waves are longitudinal because air pressure is a scalar, whereas
> >>electric and magnetic fields are vectors - they have polarisation.
>
> > The math has not to do here.
>
> * What 'math'? ... just the mention of scalars and vectors, in a group
> devoted to antennas. Please.
>
> > Here is the full acoustic analogy. The two loudspeakers work like the two
> > monopoles.
>
> * Rubbish. What 'two loudspeakers'? Ever heard of a horn loudspeaker? ...
> it produces longitudinal pressure waves.
>
> >> Also, antennas that radiate are fed with alternating current. The
> >> terminal voltage is almost immaterial in comparison with the current -
> >> that's what causes the radiation.
>
> >> If you want to discover what radiates I suggest you read one of the
> >> normal text books on the subject, like Kraus 'Antennas', and stop making
> >> up your own versions!
>
> > To discower what radiates will be better to do experiments with tipping of
> > monopole antenas.
>
> * Where do you get this stuff from? Please visit a library - you could do
> yourself a lot of good.
> Chris

Chris, what I believe he is referring to is that computer programs
support a tipped vertical over one at right angles to earth. Computer
programs are supposed to be based on Maxwell's formula. Is this an
error and how do we fix it. If it is not an error then it supports the
presence of the Coriolis force in collusion with gravity. and not
gravity alone.
More to the point, it is common knoweledge that there is no full
understanding of radiation
available anywhere. Thus he is asking probing questions to fill in the
gaps.
Personaly I am not willing yet to say antenna programs are at fault
until more explanations come about. Can you explain what he is
commenting upon.?

1675. Re: Corriolis force

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-05 21:44:00 UTC
From: "Sal M. Onella" <salmonella@food.poisoning.org>
Message-ID: <BYAom.207238$ZN.106106@newsfe23.iad>
Source record: 13487

"Mike Coslo" <mjc5@psu.edu> wrote in message
news:h7ts3v$q068$1@tr22n12.aset.psu.edu...
> Sal M. Onella wrote:
>
> > Saint Edward of Massachusetts, aka Teddy Kennedy, was civil when it
suited
> > him but he engaged in the vilest of character assassination* the rest of
the
> > time. It didn't matter as long as he could cast his target upon the
trash
> > heap.
>
> Sal, respectfully, as long as you and the folks who identify with you
> try to turn every stinking conversation into a political bullshit
> throwing party against the damm leeburuls and socialists and commies,
> You'll just make yourself look kind of well, maniacally obsessed.
>
> Not a leebural, but tired off all that crap.
>
> Just sayin'.

The crap is with us to stay. I didn't invent it. Recognizing it shouldn't
be an offense.

My response was to what I perceived to be an overly-idealistic viewpoint
about it. Politicians aren't statesmen -- they're simply opportunists.

Sal
Maniacal Obsessions a Specialty

1676. Re: Art - prove it or go away

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-05 21:50:55 UTC
From: richardharrison@webtv.net
Message-ID: <6309-4AA2DD3F-2930@storefull-3171.bay.webtv.net>
Source record: 13492

Tom, K0TAR wrote:
"Usually they are correct, sometimes it is arguable, seldom is anyone wrong. But i`ve never seen anyone not step up.

Until Art Unwin.

Who refuses to prove enything."

I don`t think Art needs to prove that a 1/2-wavelength of wire behaves as a reaonant 1/4- wavelength under proper conditions. It has been so reported many times by many reliable reporters and should have become common knowledge long ago.

I`ll quote only one source as I have no appetite for digging through many dusty volumes right know. That source I consider very reliable is "The 20th Edition of the "ARRL Antenna Book". On page 6-28 it says: " The quarter-wavelengrh helically wound vertical can be used in the same manner as a full-size vertical. That is, it can be worked against a wire radial system (four or more radials) or it can be ground-mounted with radials buried or lying on the ground.

On page 6-29 it says: " "Experience has indicated that a secrion of wire approximately one half wavelength long, wound on an insulating form with linear pitch (equal spacing between turns) will come close to yielding a resonant quarter wavelength. Therefore, an antenna for use on 160 meters would require approximately 230 feet of wire, spirally wound on the support.

Art may have discovered the above alone but he was very unlikely to have been the first discoverer.

Best regards, Richard Harrison, KB5WZI

1677. Re: Corriolis force

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-05 21:53:34 UTC
From: Dave <noone@nowhere.com>
Message-ID: <y5Bom.1253$Jd7.750@nwrddc02.gnilink.net>
Source record: 13488

"Art Unwin" <arthurunwin@gmail.com> wrote in message
news:3d0c7b2e-968e-4626-91a7-b35bd6c54756@w36g2000yqm.googlegroups.com...
On Sep 5, 3:17 pm, "christofire" <christof...@btinternet.com> wrote:

>Chris, what I believe he is referring to is that computer programs
>support a tipped vertical over one at right angles to earth. Computer
>programs are supposed to be based on Maxwell's formula. Is this an
>error and how do we fix it. If it is not an error then it supports the
>presence of the Coriolis force in collusion with gravity. and not
>gravity alone.

where do you put in the Coriolis effect or gravity direction in your
computer modeling program? i haven't seen one yet that let you put those
in, or even the latittude that could be used to derive the effect from.
without those you are just tipsy.

>More to the point, it is common knoweledge that there is no full
>understanding of radiation
>available anywhere. Thus he is asking probing questions to fill in the
>gaps.

you and him are the ones with gaps... the rest of us believe the hundred
plus years of experimental and practical evidence that says maxwell got it
right.

1678. Re: Corriolis force

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-05 21:55:09 UTC
From: Dave <noone@nowhere.com>
Message-ID: <17Bom.1254$Jd7.957@nwrddc02.gnilink.net>
Source record: 13489

"Art Unwin" <arthurunwin@gmail.com> wrote in message
news:0d5a90c6-5c6b-4ca2-b32b-8038c06bdbef@h13g2000yqk.googlegroups.com...
On Sep 5, 9:30 am, Mike Coslo <m...@psu.edu> wrote:

>Where on earth did you get that thought from.? Or is your intent to
>mess up the minds of everybody? This line "Art is trying to convince
>us that EM energy is also a mechanical force consisting of particles"
>Where did you see that comment? As for things flying of the ends of
>an antenna where did that idea come from?

are you now denying your magical levitating diamagnetic neutrinos from the
sun that get kicked off the antenna elements??

1679. Re: Radio Towers

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-05 21:59:50 UTC
From: "Sal M. Onella" <salmonella@food.poisoning.org>
Message-ID: <rbBom.114252$nL7.110303@newsfe18.iad>
Source record: 13490

"Cecil Moore" <nospam@w5dxp.com> wrote in message
news:twwom.343260$Ta5.238319@newsfe15.iad...
> http://www.breitbart.com/article.php?id=D9AGKD0O0&show_article=1

ELF was involved in the $50M destruction of a condo complex in San Diego
(2003). These people are heavy into it.

Prison, soon, please.

1680. Re: Gaussian law of statatics extended by adding a time vary field

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-05 21:59:55 UTC
From: Dave <noone@nowhere.com>
Message-ID: <vbBom.1255$Jd7.600@nwrddc02.gnilink.net>
Source record: 13491

"Art Unwin" <arthurunwin@gmail.com> wrote in message
news:068ebdd1-a6a5-4ba2-b566-faa4e0cb159e@w36g2000yqm.googlegroups.com...
> Years of discussion on this same subject has been a matter of lies,
> misinterpretations and a determination to obstruct change.
> All of these discussion rest on a statement made years ago which has
> since gone on to many tangential discussions based on untruths.
> The original statement, made by me was:
>
> "If you add a time varying field to the laws of Statics by Gauss the
> mathematic results are in full conformance with Maxwells laws"

my statement still stands. Gauss's law IS one of Maxwell's four equations, and it doesn't need you adding a (t) to it to make it work any better than it has for the last hundred years or so. The basis is that Gauss's law is independent of time, so it is true AT ANY TIME, it doesn't need a time parameter to make it work. if you really want to you can add a (t) on both sides of the equation, but it won't change anything, it just clutters up the notation.

1681. Re: radiators

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-05 22:17:51 UTC
From: richardharrison@webtv.net
Message-ID: <6310-4AA2E38F-1352@storefull-3171.bay.webtv.net>
Source record: 13493

Art wrote:
"I have untold books on antennas but none (not including ARRL stuff)
provide any sort of reason that this could be true."

It is almost self evident that if it takes 2 feet of wire to do the work
of 1 foot, you get twice the resistance and loss.

Best regards, Richard Harrison, KB5WZI

1682. Re: Art - prove it or go away

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-05 22:34:29 UTC
From: tom <news4792@taring.org>
Message-ID: <4aa2e7ce$0$42839$8046368a@newsreader.iphouse.net>
Source record: 13494

Richard Harrison wrote:

> On page 6-29 it says: " "Experience has indicated that a secrion of wire
> approximately one half wavelength long, wound on an insulating form with
> linear pitch (equal spacing between turns) will come close to yielding a
> resonant quarter wavelength. Therefore, an antenna for use on 160 meters
> would require approximately 230 feet of wire, spirally wound on the
> support.
>
> Art may have discovered the above alone but he was very unlikely to have
> been the first discoverer.
>
> Best regards, Richard Harrison, KB5WZI
>

Richard

I don't have any issues with spiral wound loaded antennas. I have several hamsticks which fall in that category.

Perhaps you've missed the parts where he claims performance including gain and especially directionality from a 160m antenna that is perhaps the size of a shoebox. And has windings in one sense and then in the other. That's the stuff he won't and can't prove works as claimed. And I just remembered the part where he's going to put a DSS style dish behind it to make it even more directive.

And then there's the imaginary physics that he claims makes all antennas work.

Sorry, I stand on my statements.

tom
K0TAR

1683. Re: Corriolis force

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-05 22:37:19 UTC
From: christofire <christofire@btinternet.com>
Message-ID: <4cidnd1ZWei7dT_XnZ2dnUVZ8mudnZ2d@bt.com>
Source record: 13495

"Art Unwin" <arthurunwin@gmail.com> wrote in message
news:3d0c7b2e-968e-4626-91a7-b35bd6c54756@w36g2000yqm.googlegroups.com...
On Sep 5, 3:17 pm, "christofire" <christof...@btinternet.com> wrote:
> "Szczepan Bia�ek" <sz.bia...@wp.pl> wrote in message
>
-- snip --

> >> If you want to discover what radiates I suggest you read one of the
> >> normal text books on the subject, like Kraus 'Antennas', and stop
> >> making
> >> up your own versions!
>
> > To discower what radiates will be better to do experiments with tipping
> > of
> > monopole antenas.
>
> * Where do you get this stuff from? Please visit a library - you could do
> yourself a lot of good.
> Chris

Chris, what I believe he is referring to is that computer programs
support a tipped vertical over one at right angles to earth. Computer
programs are supposed to be based on Maxwell's formula. Is this an
error and how do we fix it. If it is not an error then it supports the
presence of the Coriolis force in collusion with gravity. and not
gravity alone.

* I don't doubt that it is possible to obtain results from a computer
program that appear to contradict conventional theory. Interpretation of
what comes out is always the responsibility of the operator so, whilst
anyone can enter parameter values and hit 'go', not everyone will interpret
the results correctly. In this respect it must help greatly to have a clear
understanding of the basic principles of how antennas radiate and how the
modelling programs operate; in most cases how the moment method works. My
recommendation, as before, is to read an edition of 'Antennas' by Kraus (or
an equivalent), cover to cover, before trying to make sense of the output of
any antenna modelling program. Of course, I realise that some who 'publish'
here feel this would be beneath them, or too hard ... but, really, it is
neither.

My own take on the effect of tilting a vertical antenna is that if its
length is an appreciable fraction of a wavelength then tilting it will
distort its radiation pattern and will upset the uniformity of its
polarisation, which will impose a further effective radiation pattern. If
this results in a bit of gain in one particular direction with respect to a

particular polarisation then fine, and this may be of some use in amateur radio service although it isn't how vertical monopoles are most often used (i.e. their omni-directional pattern is their strength and there are many other, better ways, to obtain directional patterns).

However, the theory on which all the well-known modelling programs is based is the simple stuff described by Kraus, et al, and probably in most cases follows from the original work that led to NEC (http://www.nec2.org/other/nec2prt1.pdf). It takes _no_ account of the Coriolis force or gravity (outside of its impact on the speed of light). If such a program produces output that the operator interprets as depending on the Coriolis force then, logically, this must be a mistake on the part of the operator - wouldn't you agree? However, if you believe the theory on which the program is based is in error then maybe you shouldn't use it.

More to the point, it is common knoweledge that there is no full understanding of radiation available anywhere. Thus he is asking probing questions to fill in the
gaps.

* There is sufficient understanding of radiation and antennas out there, as widely documented, to have enabled practical radio, radar, and suchlike for more than a century. I understand that part of the point of amateur radio is to encourage experimentation, but I don't understand why experimenters should wish to shun the accepted, conventional theory and try to come up with their own, perhaps paraphysical, versions - especially when those people don't exhibit much understanding of the basics. Maybe they treat the subject a bit like art (no pun intended) instead of the science that it should be.

Personaly I am not willing yet to say antenna programs are at fault until more explanations come about. Can you explain what he is commenting upon.?

* It's possible he is being deliberately provocative.

Chris

1684. Re: Art - prove it or go away

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-05 23:01:08 UTC
From: Dave <noone@nowhere.com>
Message-ID: <U4Com.1357$tl3.138@nwrddc01.gnilink.net>
Source record: 13496

"Richard Harrison" <richardharrison@webtv.net> wrote in message
news:6309-4AA2DD3F-2930@storefull-3171.bay.webtv.net...
> On page 6-29 it says: " "Experience has indicated that a secrion of wire
> approximately one half wavelength long, wound on an insulating form with
> linear pitch (equal spacing between turns) will come close to yielding a
> resonant quarter wavelength. Therefore, an antenna for use on 160 meters
> would require approximately 230 feet of wire, spirally wound on the
> support.
>
> Art may have discovered the above alone but he was very unlikely to have
> been the first discoverer.
>
> Best regards, Richard Harrison, KB5WZI

yeah, but art's 160m antenna fits in a shoebox.

1685. Re: Corriolis force

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-05 23:02:10 UTC
From: JIMMIE <JIMMIEDEE123@YAHOO.COM>
Message-ID: <0ba85287-71cc-487d-90b6-7351091f470b@m38g2000yqd.googlegroups.com>
Source record: 13497

On Sep 5, 6:37 pm, "christofire" <christof...@btinternet.com> wrote:
> "Art Unwin" <arthurun...@gmail.com> wrote in message
>
> news:3d0c7b2e-968e-4626-91a7-b35bd6c54756@w36g2000yqm.googlegroups.com...
> On Sep 5, 3:17 pm, "christofire" <christof...@btinternet.com> wrote:> "Szczepan Bia³ek"
<sz.bia...@wp.pl> wrote in message
>
> -- snip --
>
> > >> If you want to discover what radiates I suggest you read one of the
> > >> normal text books on the subject, like Kraus 'Antennas', and stop
> > >> making
> > >> up your own versions!
>
> > > To discower what radiates will be better to do experiments with tipping
> > > of
> > > monopole antenas.
>
> > * Where do you get this stuff from? Please visit a library - you could do
> > yourself a lot of good.
> > Chris
>
> Chris, what I believe he is referring to is that computer programs
> support a tipped vertical over one at right angles to earth. Computer
> programs are supposed to be based on Maxwell's formula. Is this an
> error and how do we fix it. If it is not an error then it supports the
> presence of the Coriolis force in collusion with gravity. and not
> gravity alone.
>
> * I don't doubt that it is possible to obtain results from a computer
> program that appear to contradict conventional theory. Interpretation of
> what comes out is always the responsibility of the operator so, whilst
> anyone can enter parameter values and hit 'go', not everyone will interpret
> the results correctly. In this respect it must help greatly to have a clear
> understanding of the basic principles of how antennas radiate and how the
> modelling programs operate; in most cases how the moment method works. My
> recommendation, as before, is to read an edition of 'Antennas' by Kraus (or
> an equivalent), cover to cover, before trying to make sense of the output of
> any antenna modelling program. Of course, I realise that some who 'publish'
> here feel this would be beneath them, or too hard ... but, really, it is
> neither.
>
> My own take on the effect of tilting a vertical antenna is that if its
> length is an appreciable fraction of a wavelength then tilting it will

> distort its radiation pattern and will upset the uniformity of its
> polarisation, which will impose a further effective radiation pattern. If
> this results in a bit of gain in one particular direction with respect to a
> particular polarisation then fine, and this may be of some use in amateur
> radio service although it isn't how vertical monopoles are most often used
> (i.e. their omni-directional pattern is their strength and there are many
> other, better ways, to obtain directional patterns).
>
> However, the theory on which all the well-known modelling programs is based
> is the simple stuff described by Kraus, et al, and probably in most cases
> follows from the original work that led to NEC
> (http://www.nec2.org/other/nec2prt1.pdf). It takes _no_ account of the
> Coriolis force or gravity (outside of its impact on the speed of light). If
> such a program produces output that the operator interprets as depending on
> the Coriolis force then, logically, this must be a mistake on the part of
> the operator - wouldn't you agree? However, if you believe the theory on
> which the program is based is in error then maybe you shouldn't use it.
>
> More to the point, it is common knoweledge that there is no full
> understanding of radiation available anywhere. Thus he is asking probing
> questions to fill in the
> gaps.
>
> * There is sufficient understanding of radiation and antennas out there, as
> widely documented, to have enabled practical radio, radar, and suchlike for
> more than a century. I understand that part of the point of amateur radio
> is to encourage experimentation, but I don't understand why experimenters
> should wish to shun the accepted, conventional theory and try to come up
> with their own, perhaps paraphysical, versions - especially when those
> people don't exhibit much understanding of the basics. Maybe they treat the
> subject a bit like art (no pun intended) instead of the science that it
> should be.
>
> Personaly I am not willing yet to say antenna programs are at fault
> until more explanations come about. Can you explain what he is
> commenting upon.?
>
> * It's possible he is being deliberately provocative.
>
> Chris

It is conceivable that the Coriolis effect may act upon EM radiation.
But given the speed of propagation of the radiowaves the effect would
truly be miniscule. I Art thinks the rotation of the earth has any
significant effect on EM propagation he should show some reference. Im
not going to hold my breath until that happens.

Jimmie

1686. Re: Art - prove it or go away

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-05 23:02:12 UTC
From: Dave <noone@nowhere.com>
Message-ID: <U5Com.1358$tl3.715@nwrddc01.gnilink.net>
Source record: 13498

"tom" <news4792@taring.org> wrote in message
news:4aa2e7ce$0$42839$8046368a@newsreader.iphouse.net...
> Richard Harrison wrote:
>
>> On page 6-29 it says: " "Experience has indicated that a secrion of wire
>> approximately one half wavelength long, wound on an insulating form with
>> linear pitch (equal spacing between turns) will come close to yielding a
>> resonant quarter wavelength. Therefore, an antenna for use on 160 meters
>> would require approximately 230 feet of wire, spirally wound on the
>> support. Art may have discovered the above alone but he was very
>> unlikely to have
>> been the first discoverer.
>>
>> Best regards, Richard Harrison, KB5WZI
>>
>
> Richard
>
> I don't have any issues with spiral wound loaded antennas. I have several
> hamsticks which fall in that category.
>
> Perhaps you've missed the parts where he claims performance including gain
> and especially directionality from a 160m antenna that is perhaps the size
> of a shoebox. And has windings in one sense and then in the other.
> That's the stuff he won't and can't prove works as claimed. And I just
> remembered the part where he's going to put a DSS style dish behind it to
> make it even more directive.
>
> And then there's the imaginary physics that he claims makes all antennas
> work.
>
> Sorry, I stand on my statements.
>
> tom
> K0TAR

oh yeah, i forgot the laser beam pattern... was it also circularly
polarized, or was that some later rant?

1687. Re: Corriolis force

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-05 23:09:37 UTC
From: Dave <noone@nowhere.com>
Message-ID: <RcCom.1360$tl3.570@nwrddc01.gnilink.net>
Source record: 13499

"JIMMIE" <JIMMIEDEE123@YAHOO.COM> wrote in message
news:0ba85287-71cc-487d-90b6-7351091f470b@m38g2000yqd.googlegroups.com...
On Sep 5, 6:37 pm, "christofire" <christof...@btinternet.com> wrote:

>It is conceivable that the Coriolis effect may act upon EM radiation.
>But given the speed of propagation of the radiowaves the effect would
>truly be miniscule. I Art thinks the rotation of the earth has any
>significant effect on EM propagation he should show some reference. Im
>not going to hold my breath until that happens.

the key with the coriolis effect is that the earth turns under something
that is moving north or south at different rates. it doesn't affect what is
moving, that still follows normal physics... so basically something launched
from the equator going north will have a higher velocity to the east than an
observer north of it so it will appear to bend to the east. it really
didn't, its just that the observer didn't move fast enough to keep up with
it. that is why it is an 'effect' and not a 'force'. the object travels in
a normal ballistic path as if the earth wasn't there once it leaves the
launching point... so if you shine your laser north from the equator it will
'appear' to bend east, but if it did actually follow the earth's curvature
it would only very slightly miss the north pole.

1688. Re: Gaussian law of statatics extended by adding a time vary field

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-05 23:10:38 UTC
From: Art Unwin <arthurunwin@gmail.com>
Message-ID: <8f59200c-a4d5-49b0-a88e-a134a77c8c37@r39g2000yqm.googlegroups.com>
Source record: 13500

On Sep 5, 4:59 pm, "Dave" <no...@nowhere.com> wrote:
> "Art Unwin" <arthurun...@gmail.com> wrote in message
>
> news:068ebdd1-a6a5-4ba2-b566-faa4e0cb159e@w36g2000yqm.googlegroups.com...
>
> > Years of discussion on this same subject has been a matter of lies,
> > misinterpretations and a determination to obstruct change.
> > All of these discussion rest on a statement made years ago which has
> > since gone on to many tangential discussions based on untruths.
> > The original statement, made by me was:
>
> > "If you add a time varying field to the laws of Statics by Gauss the
> > mathematic results are in full conformance with Maxwells laws"
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> my statement still stands. Gauss's law IS one of Maxwell's four equations,
> and it doesn't need you adding a (t) to it to make it work any better than
> it has for the last hundred years or so. The basis is that Gauss's law is
> independent of time, so it is true AT ANY TIME, it doesn't need a time
> parameter to make it work. if you really want to you can add a (t) on both
> sides of the equation, but it won't change anything, it just clutters up the
> notation.

O.K. No problem
Now let us see what others have to say. After all it is a academic
question
related to electrical engineering and there are many engineers around
beyond the self perceived versions.

1689. Re: Corriolis force

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-05 23:29:17 UTC
From: Art Unwin <arthurunwin@gmail.com>
Message-ID: <1105ffb4-0418-42ea-a85e-0edab570add8@j19g2000yqk.googlegroups.com>
Source record: 13401

On Sep 5, 6:02 pm, JIMMIE <JIMMIEDEE...@YAHOO.COM> wrote:
> On Sep 5, 6:37 pm, "christofire" <christof...@btinternet.com> wrote:
>
>
>
> > "Art Unwin" <arthurun...@gmail.com> wrote in message
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> > -- snip --
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> > > >> normal text books on the subject, like Kraus 'Antennas', and stop
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> > > Chris
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> > Chris, what I believe he is referring to is that computer programs
> > support a tipped vertical over one at right angles to earth. Computer
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> > error and how do we fix it. If it is not an error then it supports the
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> > particular polarisation then fine, and this may be of some use in amateur
> > radio service although it isn't how vertical monopoles are most often used
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> > such a program produces output that the operator interprets as depending on
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> > which the program is based is in error then maybe you shouldn't use it.
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> > questions to fill in the
> > gaps.
>
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> not going to hold my breath until that happens.

>
> Jimmie

I have always followed the particle approach over the EM route. The reason I have followed this path is that Gauss's law dictates it and computer programs support it. There has been no move to doubt programs so I assume they are according to Maxwell and the errors are else where. So let's go back and leave these assertions that have been erroniously pointed at me and look at the Gaussian/ Maxwell observation which I have pursued. I have posted the original statement and look for those who have expertise in the area to post their views and why. So Jimmie you have been prolific with your thoughts and insults, allow us to view the mechanics of what ever decision you make whether it is a repeat of David or one that shows your own method of thinking.
Thanks in advance
Art
Dave has posted his reasons why he feels my assertion is false

1690. Re: Corriolis force

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-05 23:36:08 UTC
From: Dave <noone@nowhere.com>
Message-ID: <IBCom.1362$tl3.23@nwrddc01.gnilink.net>
Source record: 13402

"Art Unwin" <arthurunwin@gmail.com> wrote in message
news:1105ffb4-0418-42ea-a85e-0edab570add8@j19g2000yqk.googlegroups.com...
> So let's go back and leave these assertions that have been
>erroniously pointed at me and look at the Gaussian/ Maxwell
>observation which I have pursued.

see, he still doesn't understand that Gauss's law is one of the 4 basic
Maxwell equations, always has been and always will be... without his extra
time parameter or anything else. he thinks he has discovered something new
by adding Gauss's law with time into the equations.

1691. Re: Art - prove it or go away

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-05 23:39:41 UTC
From: Art Unwin <arthurunwin@gmail.com>
Message-ID: <1ce9f6e2-48ae-4a5c-9db5-03f26ea6a925@o41g2000yqb.googlegroups.com>
Source record: 13403

On Sep 5, 6:02 pm, "Dave" <no...@nowhere.com> wrote:
> "tom" <news4...@taring.org> wrote in message
>
> news:4aa2e7ce$0$42839$8046368a@newsreader.iphouse.net...
>
>
>
> > Richard Harrison wrote:
>
> >> On page 6-29 it says: " "Experience has indicated that a secrion of wire
> >> approximately one half wavelength long, wound on an insulating form with
> >> linear pitch (equal spacing between turns) will come close to yielding a
> >> resonant quarter wavelength. Therefore, an antenna for use on 160 meters
> >> would require approximately 230 feet of wire, spirally wound on the
> >> support. Art may have discovered the above alone but he was very
> >> unlikely to have
> >> been the first discoverer.
>
> >> Best regards, Richard Harrison, KB5WZI
>
> > Richard
>
> > I don't have any issues with spiral wound loaded antennas. I have several
> > hamsticks which fall in that category.
>
> > Perhaps you've missed the parts where he claims performance including gain
> > and especially directionality from a 160m antenna that is perhaps the size
> > of a shoebox. And has windings in one sense and then in the other.
> > That's the stuff he won't and can't prove works as claimed. And I just
> > remembered the part where he's going to put a DSS style dish behind it to
> > make it even more directive.
>
> > And then there's the imaginary physics that he claims makes all antennas
> > work.
>
> > Sorry, I stand on my statements.
>
> > tom
> > K0TAR
>
> oh yeah, i forgot the laser beam pattern... was it also circularly
> polarized, or was that some later rant?

Oh come on .you are riding on each others misinterpretations.
Pointless to follow this course. Watch the other thread on Gauss/
Maxwell.
I am sure there is somebody with some smarts that can state
specifically why it is correct or incorrect and just not shoot from
the hip with personal intuition. If the statement is in error then
every thing else falls apart. You don't need a character wipe out now.
The question of mine that is placed is clear and concise and I have
declared ownership of that statement.

1692. Re: Corriolis force

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-06 00:00:08 UTC
From: Art Unwin <arthurunwin@gmail.com>
Message-ID: <738ed19b-f933-42e6-b2f0-74aa2581963c@l9g2000yqi.googlegroups.com>
Source record: 13404

On Sep 5, 5:37 pm, "christofire" <christof...@btinternet.com> wrote:
> "Art Unwin" <arthurun...@gmail.com> wrote in message
>
> news:3d0c7b2e-968e-4626-91a7-b35bd6c54756@w36g2000yqm.googlegroups.com...
> On Sep 5, 3:17 pm, "christofire" <christof...@btinternet.com> wrote:> "Szczepan Bia³ek"
<sz.bia...@wp.pl> wrote in message
>
> -- snip --
>
> > >> If you want to discover what radiates I suggest you read one of the
> > >> normal text books on the subject, like Kraus 'Antennas', and stop
> > >> making
> > >> up your own versions!
>
> > > To discower what radiates will be better to do experiments with tipping
> > > of
> > > monopole antenas.
>
> > * Where do you get this stuff from? Please visit a library - you could do
> > yourself a lot of good.
> > Chris
>
> Chris, what I believe he is referring to is that computer programs
> support a tipped vertical over one at right angles to earth. Computer
> programs are supposed to be based on Maxwell's formula. Is this an
> error and how do we fix it. If it is not an error then it supports the
> presence of the Coriolis force in collusion with gravity. and not
> gravity alone.
>
> * I don't doubt that it is possible to obtain results from a computer
> program that appear to contradict conventional theory. Interpretation of
> what comes out is always the responsibility of the operator so, whilst
> anyone can enter parameter values and hit 'go', not everyone will interpret
> the results correctly. In this respect it must help greatly to have a clear
> understanding of the basic principles of how antennas radiate and how the
> modelling programs operate; in most cases how the moment method works. My
> recommendation, as before, is to read an edition of 'Antennas' by Kraus (or
> an equivalent), cover to cover, before trying to make sense of the output of
> any antenna modelling program. Of course, I realise that some who 'publish'
> here feel this would be beneath them, or too hard ... but, really, it is
> neither.
>
> My own take on the effect of tilting a vertical antenna is that if its
> length is an appreciable fraction of a wavelength then tilting it will

> distort its radiation pattern and will upset the uniformity of its
> polarisation, which will impose a further effective radiation pattern. If
> this results in a bit of gain in one particular direction with respect to a
> particular polarisation then fine, and this may be of some use in amateur
> radio service although it isn't how vertical monopoles are most often used
> (i.e. their omni-directional pattern is their strength and there are many
> other, better ways, to obtain directional patterns).
>
> However, the theory on which all the well-known modelling programs is based
> is the simple stuff described by Kraus, et al, and probably in most cases
> follows from the original work that led to NEC
> (http://www.nec2.org/other/nec2prt1.pdf). It takes _no_ account of the
> Coriolis force or gravity (outside of its impact on the speed of light). If
> such a program produces output that the operator interprets as depending on
> the Coriolis force then, logically, this must be a mistake on the part of
> the operator - wouldn't you agree? However, if you believe the theory on
> which the program is based is in error then maybe you shouldn't use it.
>
> More to the point, it is common knoweledge that there is no full
> understanding of radiation available anywhere. Thus he is asking probing
> questions to fill in the
> gaps.
>
> * There is sufficient understanding of radiation and antennas out there, as
> widely documented, to have enabled practical radio, radar, and suchlike for
> more than a century. I understand that part of the point of amateur radio
> is to encourage experimentation, but I don't understand why experimenters
> should wish to shun the accepted, conventional theory and try to come up
> with their own, perhaps paraphysical, versions - especially when those
> people don't exhibit much understanding of the basics. Maybe they treat the
> subject a bit like art (no pun intended) instead of the science that it
> should be.
>
> Personaly I am not willing yet to say antenna programs are at fault
> until more explanations come about. Can you explain what he is
> commenting upon.?
>
> * It's possible he is being deliberately provocative.
>
> Chris

Chris I assume that you have a computer with an optimizer so you are
aware that it will follow the intent of Maxwells laws. And if you
allow it to do this the input should not be designed for planar forms
but allow the optimizer to do its thing. When it finishes it will
provide a response of 100 percent accountabilityYou know this because
maxwells laws account for all forces such that it then provides a
tipped radiator But if you feel it is operator error then what did
your program supply with that input or is it you do not own or use an
optimizer which seems to be prevalent on this newsgroup. Soooooooo

address the statement made by me and provide an academic response since all posted on this subject comes back to that simple statement I made. All the other postings are distortions that have run amoke such that nobody knows the subject of debate and it has become a joke. Your input to the statement I am sure from your comments will be academic in form and greatly appreciated. I am winding this thread down now as statement made are being attributed to me which is false and errors are piling up on errors

1693. Re: Art - prove it or go away

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-06 00:14:49 UTC
From: Dave <noone@nowhere.com>
Message-ID: <Z9Dom.1269$Jd7.910@nwrddc02.gnilink.net>
Source record: 13405

"Art Unwin" <arthurunwin@gmail.com> wrote in message
news:1ce9f6e2-48ae-4a5c-9db5-03f26ea6a925@o41g2000yqb.googlegroups.com...
>Watch the other thread on Gauss/Maxwell.

again...

>I am sure there is somebody with some smarts that can state
>specifically why it is correct or incorrect and just not shoot from
>the hip with personal intuition.

done. and no, i'm not going to go back and provide references as i have in the past, as art would say... you do your own research, i don't have to prove anything.

>If the statement is in error then every thing else falls apart.

it is in error and everything else fell apart long ago.

1694. Re: Art - prove it or go away

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-06 00:17:57 UTC
From: Richard Fry <rfry@adams.net>
Message-ID: <a508086b-097c-4016-b3ce-4d0318336e27@y21g2000yqn.googlegroups.com>
Source record: 13406

> On page 6-29 it says: " "Experience has indicated that a secrion of wire
> approximately one half wavelength long, wound on an insulating form with
> linear pitch (equal spacing between turns) will come close to yielding a
> resonant quarter wavelength. Therefore, an antenna for use on 160 meters
> would require approximately 230 feet of wire, spirally wound on the
> support.

Such a helical may come close to resonance, but unless the overall length of the helical structure approaches 1/4WL, its radiation resistance (Rr) will not be as great as if a naturally resonant, straight, ~quarter-wavelength conductor is used.

Lower Rr for "monopole" antennas will reduce the radiation efficiency of these systems -- if they are not using a zero-loss r-f ground connection.

RF

1695. Re: Gaussian law of statatics extended by adding a time vary field

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-06 00:18:03 UTC
From: Registered User <n4jvp@ix.netcom.com>
Message-ID: <6fv5a5hvuuek7rsbhe958hjraao8h4frqc@4ax.com>
Source record: 13407

On Sat, 5 Sep 2009 16:10:38 -0700 (PDT), Art Unwin
<arthurunwin@gmail.com> wrote:

>On Sep 5, 4:59ï¿½pm, "Dave" <no...@nowhere.com> wrote:
>> "Art Unwin" <arthurun...@gmail.com> wrote in message
>
>O.K. No problem
> Now let us see what others have to say. After all it is a academic
>question
>related to electrical engineering and there are many engineers around
>beyond the self perceived versions.

You have mentioned there are several universities in your area. Why
not present your questions and theories in such an academic venue?

1696. Re: Corriolis force

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-06 00:36:20 UTC
From: Mike Coslo <mjc5@psu.edu>
Message-ID: <h7v067$q86o$1@tr22n12.aset.psu.edu>
Source record: 13408

Dave wrote:

> the key with the coriolis effect is that the earth turns under something
> that is moving north or south at different rates. it doesn't affect
> what is moving, that still follows normal physics...

That is correct. And effect is so much better a word than "force".

- 73 de Mike N3LI -

1697. Re: Gaussian law of statatics extended by adding a time vary field

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-06 00:41:42 UTC
From: Jeff Liebermann <jeffl@cruzio.com>
Message-ID: <u6v5a5t2k70a878ua2sghl3vuk25led4k1@4ax.com>
Source record: 13409

On Sat, 5 Sep 2009 16:10:38 -0700 (PDT), Art Unwin
<arthurunwin@gmail.com> wrote:

>Now let us see what others have to say. After all it is a academic
>question
>related to electrical engineering and there are many engineers around
>beyond the self perceived versions.

Bachelor O'Science, Electrical and Electronic Engineering.
Cal Poly, Pomona (1971).

1. There is no such thing as Gauss's Law of Statatics, Statics,
Statistics, or Silliness. Please find and use a spelling chequer.

2. Maxwell's first two equations are Gauss's Law for electric fields
and Gauss's Law for magnetic fields.
<http://en.wikipedia.org/wiki/Maxwell%27s_equations#General_formulation>

3. Gauss's Law roughly states that the total electric flux through a
closed surface is proportional to the total electric charge enclosed
within that surface. Note that neither the flux or the charge are
moving.

4. Unless you want to add quantum or relativistic variables, a static
field or charge does not need to have a time variable. If you insist
on adding it to Gauss's Law, it will appear identically on both sides
of the equation and cancel. That's because you cannot have time
moving at different rates on both sides of an equality.

Youtube lecture on Gauss's Law (from India):
<http://www.youtube.com/watch?v=whv_d-fBCg0>
It's 1 hour long. The speaker is very good at deriving Gauss's Law
from Coulomb's. I hate to admit how much I had forgotten. So far,
I've watched about half the lecture. I'll watch the rest later
tonite.

--
Jeff Liebermann jeffl@cruzio.com
150 Felker St #D http://www.LearnByDestroying.com
Santa Cruz CA 95060 http://802.11junk.com
Skype: JeffLiebermann AE6KS 831-336-2558

1698. Re: Corriolis force

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-06 00:48:34 UTC
From: Mike Coslo <mjc5@psu.edu>
Message-ID: <h7v0t4$q86q$1@tr22n12.aset.psu.edu>
Source record: 13410

Richard Clark wrote:
> On Sat, 05 Sep 2009 10:30:13 -0400, Mike Coslo <mjc5@psu.edu> wrote:
>
>> Art is trying to convince us that ... in fact all physics is completely wrong.
>
> How many years and thousands of postings did it take to come to that
> observation?

Well whaddya expect when all my electrons were replaced this morning.
Some of them got a little messed up.....

Now I'm working on a way to get the particles that leave my antennas to
be replaced with gold instead of more particles of Aluminum or copper.

- 73 de Mike N3LI -

1699. Re: Corriolis force

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-06 00:50:39 UTC
From: Mike Coslo <mjc5@psu.edu>
Message-ID: <h7v110$q86q$2@tr22n12.aset.psu.edu>
Source record: 13411

Cecil Moore wrote:
> Mike Coslo wrote:
>> So now we have left science, and as far as I can tell, have entered
>> religion.
>
> Everything I said is supported by the laws of physics
> as we presently understand them.

Great. Show me the cites that all the particles that leave an antenna
are immediately replaced.

- 73 de Mike N3LI -

1700. Re: Corriolis force

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-06 01:01:15 UTC
From: Mike Coslo <mjc5@psu.edu>
Message-ID: <h7v1l0$q86s$1@tr22n12.aset.psu.edu>
Source record: 13412

Cecil Moore wrote:
> Mike Coslo wrote:
>> If RF energy has mass ...
>
> The mass of each photon is:
>
> m = e/c2 = h/c*lambda
>
> where h is Planck's constant, c is the speed of light,
> and lambda is the wavelength.
>
> The reason that your experiment won't work is that
> equal amounts of energy are being supplied to and
> radiated (or conducted) from a transmitting antenna.

Somewhere somehow mass must be transferred under your system. Particles leave and particles come.

It isn't just that energy is supplied to the antenna from the radio, which gets these particles from the electricity provided to it, which gets it's voltage from something.

Somewhere along the line something has to lose mass, unless magic or supernatural forces are involved. How does the mass from the last thing in the chain go back to the first thing in the chain?

-73 de Mike N3LI -

1701. Re: New antenna design

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-06 01:14:06 UTC
From: Mike Coslo <mjc5@psu.edu>
Message-ID: <h7v2d2$q86u$1@tr22n12.aset.psu.edu>
Source record: 13413

JB wrote:
> Corriolis deals with mass, so it is incorporated with the same core Math
> that deals with Gravity, Inertia, Acceleration. Corriolis really isn't a
> "force".

> However, since you bring up the idea of "spin", it seems to have become more
> important than the laws of Physics in some classrooms.

Given that Coriolis is an effect, what would be the cause of the
supposed spin?

Do the spun up particles that accelerate at the speed of light and are
replaced by other particles follow a curved trajectory through the
universe? Do the particles that replace them have identical spin?

- 73 de Mike N3LI -

1702. Re: Gaussian law of statatics extended by adding a time vary field

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-06 01:15:07 UTC
From: jimp@specsol.spam.sux.com
Message-ID: <tgebn6-2p.ln1@mail.specsol.com>
Source record: 13414

Jeff Liebermann <jeffl@cruzio.com> wrote:

> Bachelor O'Science, Electrical and Electronic Engineering.
> Cal Poly, Pomona (1971).

Aren't you the guy who I got a manual for a PRR-9/PRT-4 squad radio
from my reserver unit just before you graduated?

Seems to me you wanted to put it on 6M.

--
Jim Pennino

Remove .spam.sux to reply.

1703. Re: radiators

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-06 01:24:46 UTC
From: Mike Coslo <mjc5@psu.edu>
Message-ID: <h7v311$q870$1@tr22n12.aset.psu.edu>
Source record: 13415

tom wrote:

> Ok, so this would mean that at every north or south latitude the angle
> would be different, and at the equator would be zero, since there's no
> coriolis effect there. Please give a table that shows the tip angle
> versus latitude. (Bet you won't because it's secret) And at the north
> or south pole it's not definable so antennas can't work there..

I already mentioned that in which case the rifling on a gun would need to be in a different direction depending on the hemisphere, and no rifling would be used at the equator. No answer.

Bullets do not use spin to utilize the Coriolis effect, they use spin as gyroscopic stabilization.

1704. Re: Corriolis force

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-06 01:30:30 UTC
From: richardharrison@webtv.net
Message-ID: <20199-4AA310B6-3224@storefull-3173.bay.webtv.net>
Source record: 13416

Art wrote:
"Chris, what I believe he is referring to is that computer programs support a tipped vertical over one at right angles to earth."

Quick! Tell your local broadcaster.

We don`t need theory to show that antennas for transmitters and receivers work best together when they are exactly parallel in space unless something in the transmission path is redirecting the polarization of the signal. In aligning microwave antennas humdreds of times, I`ll swear this is true every time, regarfless of Corriolis, no matter which side of the equator I was on. Try it. You`ll be convinced too.

Best regards, Richard Harrison, KB5WZI

1705. Burying Coax Feedlines & Control Cables

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-06 03:20:13 UTC
From: "Mike, who else?" <here@there.com>
Message-ID: <NTFom.198846$vp.134681@newsfe12.iad>
Source record: 13417

I have a 64 foot Trylon Titan Tower at 64 feet (with a 3 element Steppir) and it's 30 metres from my home. I intend on burying the feedlines (X2 1/2" heliax and x2 RG213 coax) plus rotators cable and Steppir cable. I was going to dig a 4" wide by 6" deep trench then just bury them. Yeah, that's alot of work with a shovel. Any better suggestions? This is my Labour Day weekend job (get the pun?).

73 de Mike VE6HMG

1706. Re: Gaussian law of statatics extended by adding a time vary field

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-06 03:38:07 UTC
From: Jeff Liebermann <jeffl@cruzio.com>
Message-ID: <gq96a519itl9fb6j52ds9tfeev3b209piu@4ax.com>
Source record: 13418

On Sun, 06 Sep 2009 01:15:07 GMT, jimp@specsol.spam.sux.com wrote:

>Jeff Liebermann <jeffl@cruzio.com> wrote:
>> Bachelor O'Science, Electrical and Electronic Engineering.
>> Cal Poly, Pomona (1971).
>
>Aren't you the guy who I got a manual for a PRR-9/PRT-4 squad radio
>from my reserver unit just before you graduated?
>
>Seems to me you wanted to put it on 6M.

No, that wasn't me.

At the time, I was WB6EEP. I later morphed into WB6SSY and recently upgraded to AE6KS. I was playing with Low Band, VHF, and UHF commercial FM radios in college. I built a 6 meter FM repeater with phone patch even before I went to Cal Poly so that I could make long distance calls for cheap from the dorms.
<http://802.11junk.com/jeffl/pics/Old%20Repeaters/slides/wb6eep-01.html>
Yep... tubes. I was also involved in building several local ham repeaters and worked part time at a local two-way shop.

A radio like the AN/PRT-4a would have been useful:
<http://www.prc68.com/I/PRT4R9.shtml>
<http://www.kpjung.de/e_prr.htm>
However, I don't recall ever seeing one around the skool, or in use by any of the other hams. Mostly we preferred GE, Motorola, and RCA commerical FM radios (in that order), which were available in abundance as a result of the original FCC narrow banding ordeal process.

Also, just before I was graduated(1), I was in a state of panic and in danger of getting drafted. I had to quit all outside activities, including part time employment and ham radio, and study sufficiently hard in order to insure that I graduate. Failure would have meant that I would probably get to use one of those squad radios, in Viet Nam.

(1) The debate among the instructors was whether to fail my senior project, thus requiring me to take another year of classes, or to get rid of me by handing me my diploma with instructions go as far away as possible. Fortunately, the latter group won.

--
Jeff Liebermann jeffl@cruzio.com
150 Felker St #D http://www.LearnByDestroying.com

Santa Cruz CA 95060 http://802.11junk.com
Skype: JeffLiebermann AE6KS 831-336-2558

1707. Contructing a balun for receiving antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-06 03:58:16 UTC
From: skk203 <skkumble@gmail.com>
Message-ID: <7786a6e7-c9fc-4bf6-84ac-a8fbb8bdda06@p23g2000vbl.googlegroups.com>
Source record: 13419

Could anybody let me know how to contruct a bulun to match a longwire antenna to a receiver. A step by step guide would be appreciated as I am a non technical person.

1708. Re: Gaussian law of statatics extended by adding a time vary field

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-06 04:00:01 UTC
From: jimp@specsol.spam.sux.com
Message-ID: <2iobn6-os1.ln1@mail.specsol.com>
Source record: 13420

Jeff Liebermann <jeffl@cruzio.com> wrote:
> On Sun, 06 Sep 2009 01:15:07 GMT, jimp@specsol.spam.sux.com wrote:
>
>>Jeff Liebermann <jeffl@cruzio.com> wrote:
>>> Bachelor O'Science, Electrical and Electronic Engineering.
>>> Cal Poly, Pomona (1971).
>>
>>Aren't you the guy who I got a manual for a PRR-9/PRT-4 squad radio
>>from my reserver unit just before you graduated?
>>
>>Seems to me you wanted to put it on 6M.
>
> No, that wasn't me.
>
> At the time, I was WB6EEP. I later morphed into WB6SSY and recently
> upgraded to AE6KS. I was playing with Low Band, VHF, and UHF
> commercial FM radios in college. I built a 6 meter FM repeater with
> phone patch even before I went to Cal Poly so that I could make long
> distance calls for cheap from the dorms.
> <http://802.11junk.com/jeffl/pics/Old%20Repeaters/slides/wb6eep-01.html>
> Yep... tubes. I was also involved in building several local ham
> repeaters and worked part time at a local two-way shop.
>
> A radio like the AN/PRT-4a would have been useful:
> <http://www.prc68.com/I/PRT4R9.shtml>
> <http://www.kpjung.de/e_prr.htm>
> However, I don't recall ever seeing one around the skool, or in use by
> any of the other hams. Mostly we preferred GE, Motorola, and RCA
> commerical FM radios (in that order), which were available in
> abundance as a result of the original FCC narrow banding ordeal
> process.
>
> Also, just before I was graduated(1), I was in a state of panic and in
> danger of getting drafted. I had to quit all outside activities,
> including part time employment and ham radio, and study sufficiently
> hard in order to insure that I graduate. Failure would have meant
> that I would probably get to use one of those squad radios, in Viet
> Nam.
>
>
> (1) The debate among the instructors was whether to fail my senior
> project, thus requiring me to take another year of classes, or to get
> rid of me by handing me my diploma with instructions go as far away as
> possible. Fortunately, the latter group won.

You sure you aren't just trying to get out of giving me the manual back? :-)

Not sure after all these years why the manual was wanted, but I do remember the Jeff I knew going to Thousand Oaks before I lost track of him.

--
Jim Pennino

Remove .spam.sux to reply.

1709. Re: Corriolis force

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-06 04:13:31 UTC
From: Jeff Liebermann <jeffl@cruzio.com>
Message-ID: <5nb6a55q7c36naefhfbqp0k0tp3mh49olo@4ax.com>
Source record: 13421

On Sat, 5 Sep 2009 20:30:30 -0500, richardharrison@webtv.net (Richard Harrison) wrote:

>Art wrote:
>"Chris, what I believe he is referring to is that computer programs
>support a tipped vertical over one at right angles to earth."
>
>Quick! Tell your local broadcaster.
>
>We don`t need theory to show that antennas for transmitters and
>receivers work best together when they are exactly parallel in space
>unless something in the transmission path is redirecting the
>polarization of the signal. In aligning microwave antennas humdreds of
>times, I`ll swear this is true every time, regarfless of Corriolis, no
>matter which side of the equator I was on. Try it. You`ll be convinced
>too.
>
>Best regards, Richard Harrison, KB5WZI

Ummmm.... Faraday Rotation?
<http://en.wikipedia.org/wiki/Faraday_effect>
It's not too horrible at microwave frequencies, but becomes noticeable as the frequency decreases. I've done some crude polarization studies at VHF and UHF frequencies with a rotating dipole, and found some rotation on line of sight paths. However, we were looking for a polarization distribution and didn't really spend any time getting accurate numbers for a line of sight path.

Also many broadcasters use elliptical polarization (a mix of horizontal and vertical). However, that's not to eliminate any Faraday Rotation effects. It's to deal with the effects of reflections and refraction, which create nearly random polarization at the receiving end. Also, because stationary broadcast antennas are horizontally polarized, while vehicle mounted broadcast antennas are usually vertical.

I was once asked why the British drive on the left side of the road. My instant answer was Coriolis Effect. I claimed that due to the earth's rotation, it's easier to make left turns on the left side of the Atlantic Ocean and easier to make right turns on the right side of the Atlantic. It took an excessively long time for even the sharpest student to catch the joke/hoax. Sigh.

Drivel: At 2.4GHz, most wi-fi wireless routers use vertically polarized rubber ducky antennas. Yet, most laptops have their antennas in the top of the LCD frame which are horizontally polarized.

Same with PCB antennas found on most PCMCIA cards.

Anyway, nobody cares much about antenna polarization:
<http://picasaweb.google.com/lh/photo/HC8B4F-AnCQF6I_u0k3MYg>
<http://802.11junk.com/jeffl/pics/Old%20Repeaters/slides/LoopMtn03.html>

--
Jeff Liebermann jeffl@cruzio.com
150 Felker St #D http://www.LearnByDestroying.com
Santa Cruz CA 95060 http://802.11junk.com
Skype: JeffLiebermann AE6KS 831-336-2558

1710. Re: Burying Coax Feedlines & Control Cables

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-06 04:13:57 UTC
From: Art Unwin <arthurunwin@gmail.com>
Message-ID: <64ccecc5-b8da-463d-a427-5891b5b18d44@j39g2000yqh.googlegroups.com>
Source record: 13422

On Sep 5, 10:20 pm, "Mike, who else?" <h...@there.com> wrote:
> I have a 64 foot Trylon Titan Tower at 64 feet (with a 3 element Steppir)
> and it's 30 metres from my home. I intend on burying the feedlines (X2
> 1/2" heliax and x2 RG213 coax) plus rotators cable and Steppir cable. I
> was going to dig a 4" wide by 6" deep trench then just bury them. Yeah,
> that's alot of work with a shovel. Any better suggestions? This is my
> Labour Day weekend job (get the pun?).
>
> 73 de Mike VE6HMG

That is my setup but I put large 4 inch plastic tubing in the trench
so that the innards could be easily removed, inspected and added to
without having to re dig the trench each time.
I left a heavy wire in place to make it easy to make changes over the
years. Because of the length underground and then the tower I used 7/8
heliax. I also placed a pipe into the tower concrete so I could place
the coax inside the tower if I wanted without the possibility of the
mower hitting it.

1711. Re: Corriolis force

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-06 04:29:10 UTC
From: Gordon <gonzo@alltomyself.com>
Message-ID: <Xns9C7DDA8926A47greederxprtnet@194.177.98.144>
Source record: 13423

Art Unwin <arthurunwin@gmail.com> wrote in news:58ff82c9-a4f0-461c-92da-074255fd451a@37g2000yqm.googlegroups.com:

>> I am more familier with the Corriolis force as
>> it applies to weather. IE: the spin of huricanes,
>> the rotation of weather around low pressure systems.
>
> Excellent Gordon and the particles are connected to the weather
> When particles arrive from outer space they reside on diamagnetic
> substances and water is one.

Nope.
The Corilis Effect that I am familier with has nothing to do
with particles from outer space. It's just a mechanical
force related to the spin of the earth.

1712. Re: Burying Coax Feedlines & Control Cables

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-06 04:30:01 UTC
From: jimp@specsol.spam.sux.com
Message-ID: <kupbn6-222.ln1@mail.specsol.com>
Source record: 13424

Mike, who else? <here@there.com> wrote:
> I have a 64 foot Trylon Titan Tower at 64 feet (with a 3 element Steppir)
> and it's 30 metres from my home. I intend on burying the feedlines (X2
> 1/2" heliax and x2 RG213 coax) plus rotators cable and Steppir cable. I
> was going to dig a 4" wide by 6" deep trench then just bury them. Yeah,
> that's alot of work with a shovel. Any better suggestions? This is my
> Labour Day weekend job (get the pun?).
>
> 73 de Mike VE6HMG

Well, if it were me and more than a few feet, I'd rent a trencher for
installing sprinklers systems and put it all in a PVC pipe with
downward facing elbows at each end stuffed with foam to keep bugs
and water out.

Mine has been out there for about 6 years and no water or bugs yet...

--
Jim Pennino

Remove .spam.sux to reply.

1713. Re: Gaussian law of statatics extended by adding a time vary field

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-06 04:44:09 UTC
From: Jeff Liebermann <jeffl@cruzio.com>
Message-ID: <vpd6a59rgg38c8q6eamsmqbhl0q7shppmm@4ax.com>
Source record: 13425

On Sun, 06 Sep 2009 04:00:01 GMT, jimp@specsol.spam.sux.com wrote:

>You sure you aren't just trying to get out of giving me the manual
>back? :-)

Yes, I'm sure. I don't have too many military radio manuals. Plenty
of test equipment and commercial radio manuals, but no military. I'm
slowly scanning them to PDF and selling the cellulose on eBay.

>Not sure after all these years why the manual was wanted, but I do
>remember the Jeff I knew going to Thousand Oaks before I lost track
>of him.

Not me. Somewhat after Cal Poly Pomona, I went to Israel for a short
while. When I returned, it was Smog Angeles -> Capitola -> Santa
Clara -> East San Jose -> and finally to Ben Lomond. The family
accountant had an office in Thousand Oaks, but I never lived there. I
don't recall any other Jeff at my college that was also a ham.
Sorry(tm).

--
Jeff Liebermann jeffl@cruzio.com
150 Felker St #D http://www.LearnByDestroying.com
Santa Cruz CA 95060 http://802.11junk.com
Skype: JeffLiebermann AE6KS 831-336-2558

1714. Re: Contructing a balun for receiving antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-06 04:59:39 UTC
From: Jeff Liebermann <jeffl@cruzio.com>
Message-ID: <bsf6a51hlfcimfandvkiqip2onge36k1n7@4ax.com>
Source record: 13426

On Sat, 5 Sep 2009 20:58:16 -0700 (PDT), skk203 <skkumble@gmail.com>
wrote:

>Could anybody let me know how to contruct a bulun to match a longwire
>antenna to a receiver. A step by step guide would be appreciated as I
>am a non technical person.

Ummm... you don't use a balun to match a long wire. Balun means
"balanced to unbalanced". A long wire is unbalanced. So is the 50
ohm output from your radio. If the antenna were a dipole, which is a
balanced antenna, you might need a balaun, but not a long wire.

Search Google for an "antenna tuner" claiming to match any antenna to
50 ohms. There are plenty of construction articles online, but you
need to know if you're building a QRP tuner, or a kilowatt monster.
Some indexes:
<http://www.arrl.org/tis/info/tuner.html>
<http://www.dxzone.com/catalog/Antennas/Tuners/>

If you wanna buy something ready to go, I like LDR automatic tuners
and MFJ for cheap tuners. Be sure to build or buy something that will
handle the frequency range and power output of your unspecified
xmitter.

<http://www.ldgelectronics.com/c/252/products/1>
<http://www.mfjenterprises.com/Catergories.php?sec=16>

--
Jeff Liebermann jeffl@cruzio.com
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Skype: JeffLiebermann AE6KS 831-336-2558

1715. Re: Burying Coax Feedlines & Control Cables

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-06 05:32:38 UTC
From: Jeff Liebermann <jeffl@cruzio.com>
Message-ID: <8eg6a51rhp9la27dkh0nh3ut2mlbkpbqb6@4ax.com>
Source record: 13427

On Sat, 5 Sep 2009 21:13:57 -0700 (PDT), Art Unwin
<arthurunwin@gmail.com> wrote:

>On Sep 5, 10:20ï¿½pm, "Mike, who else?" <h...@there.com> wrote:
>> I have a 64 foot Trylon Titan Tower at 64 feet (with a 3 element Steppir)
>> and it's 30 metres from my home. I intend on burying the feedlines (X2
>> 1/2" heliax and x2 RG213 coax) plus rotators cable and Steppir cable. I
>> was going to dig a 4" wide by 6" deep trench then just bury them. Yeah,
>> that's alot of work with a shovel. Any better suggestions? This is my
>> Labour Day weekend job (get the pun?).
>>
>> 73 de Mike VE6HMG
>
>That is my setup but I put large 4 inch plastic tubing in the trench
>so that the innards could be easily removed, inspected and added to
>without having to re dig the trench each time.
>I left a heavy wire in place to make it easy to make changes over the
>years. Because of the length underground and then the tower I used 7/8
>heliax. I also placed a pipe into the tower concrete so I could place
>the coax inside the tower if I wanted without the possibility of the
>mower hitting it.

I just hate to admit that Art is right (this time only). Conduit is
the way to go. Don't direct bury the cables. Bury conduit and pull
the cables through.

Incidentally, a local state radio building went cheap and used direct
burial cables. 3 months later, the whole mess failed. I popped the
pull box cover and discovered that the gophers had chewed through the
coax and control cables.

I don't know what manner of ground you're working with, but you might
consider horizontal drilling. See:
<http://www.borit.com>
About $250 or available from your local rental yard. Most plumbers
and electricians have one or something like it for laying conduit
under driveways and sidewalks. The standard back reamer is about 5"
diameter, which is about right for 4" I.D. schedule 40.

Otherwise, you get to do some trenching. Sweat or Ditch Witch from
the rental yard. You decide. You'll need to go considerably deeper
than 6 inches. Check your local electrical code, but as I vaguely
recall, it's at least 2.5 ft. Putting 1.8" of dirt on top of a 4.2"
diameter pipe just isn't going to work. The first time someone drive
a vehicle over the conduit, it's going to crack. Dig deeper.

Actually, I'm not sure that 4" diameter will work. Measure or calculate the required diameter. Just use a circle template and draw the bundle on a piece of paper. Leave PLENTY of extra room. Be prepared to leave extra space to pull the RF connectors through (one at a time) or you'll be cutting off some expensive Heliax connectors. Don't forget to leave a polypropylene pull line in the conduit for repairs and additions. You'll need 100 meters of line as you need to pull a new line through with every wire pull. 30 meters is a long way for a conduit pull. You may need to get some slimy cable lube to make it easier. You can try to pull the whole bundle through at once, but I don't think you'll make it, especially with 90 degree elbows at each end.

Put some effort into making sure that the conduit is waterproof. This is best done by proper gluing and testing with an air compressor and bubble soap mix. I'm partial to sealing the ends and pressurizing the conduit, but that's overkill for the typical ham installation.

You'll need a 90 degree elbow at each end. Use the largest radius you can get away with. Heliax does not like to be snaked around sharp corners. You'll also need some kind of protective cover or rams-head at the conduit ends. You don't want the open end of the conduit pointing up and acting as a funnel.

You should also get some useful pointers from the Tower Talk mailing list:
<http://www.contesting.com/FAQ/towertalk>

In case you haven't noticed, this is a bit more than a weekend project. It's also not cheap. Good luck.

--
Jeff Liebermann jeffl@cruzio.com
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Santa Cruz CA 95060 http://802.11junk.com
Skype: JeffLiebermann AE6KS 831-336-2558

1716. Re: New antenna design

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-06 07:04:59 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <gim6a5d2gbehgnado7gunth12t5rkpvbf3@4ax.com>
Source record: 13428

On Sat, 05 Sep 2009 21:14:06 -0400, Mike Coslo <mjc5@psu.edu> wrote:

>Given that Coriolis is an effect, what would be the cause of the
>supposed spin?

Not an effect, not a cause, not a force, not an energy, not a power,
not even a spin: Coriolis is a twisted perception.

If Art were to stumble in the woods and saw you flip simply because
his frame of reference swished, would you feel it? Were you pushed in
- or knocked up? Did you trip on the wall - or did the floor fall on
you? Would you fall clockwise, or counter-clockwise depending on
which hemisphere you are in?

Most of the last few days posts read like a bad LSD trip for a patent
examiner.

73's
Richard Clark, KB7QHC

1717. Re: Corriolis force

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-06 09:08:30 UTC
From: Szczepan Białek <sz.bialek@wp.pl>
Message-ID: <h7vj8ctbh1@node1.news.atman.pl>
Source record: 13429

"Mike Coslo" <mjc5@psu.edu> wrote news:h7ttgq$hk12$1@tr22n12.aset.psu.edu...
> Art Unwin wrote:
>> On Sep 4, 3:03 pm, Mike Coslo <m...@psu.edu> wrote:
>>> Art Unwin wrote:
>>>> On Sep 4, 12:48 pm, Michael Coslo <m...@psu.edu> wrote:
>>>>> Art Unwin wrote:
>>>>>> Mike you forget.
>>>>>> I do not subscribe to the wave theory over the particle aproach.
>>>>>> I cannot see any other way to fit that "radiation is from the
>>>>>> acceleration of a charge". And I can not find any explanation of this
>>>>>> in any books. Only mass is able to have spin and at the same time
>>>>>> transport energy, at least to my mind.
>>>>> So are you saying that FR energy has mass, or that it doesn't have
>>>>> spin?
>>>>>> Therefore accelaration is the
>>>>>> creation of two forces that are not in the same plain ala a shear
>>>>>> action where the combination of gravity and the Coriolis force are
>>>>>> the
>>>>>> weakest forces known in the std model.
>>>>> What is the acceleration of RF?
>>>>> - 73 de Mike N3LI -
>>>> The speed of light.
>>> Acceleration isn't expressed as C.
>>>
>>> Does RF energy have mass?
>>
>> Yes if you see it as a particle and not a electromagnetic wave.
>
> A test can be performed easily.
>
> If RF energy has mass
>
> It then follows that a transmitting antenna will lose mass.
> Likewise, a receiving antenna will gain mass.

Mistake. In the halve of the cycle the both antennas lose mass and in the
next halve gain mass.
>
> The confirming experiment can be made by using a two small antennas in an
> isolated environment. One is transmitting, and one receiving. If RF energy
> is a particle - therefore mechanical force, the receiving antenna must
> accumulate mass, and the transmitting antenna must lose it.
>
> We do have the needed resolution of measurement to make that test.

You must measure the mass after the halve of the cycle.
S*

1718. Re: Corriolis force

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-06 10:07:23 UTC
From: Szczepan Białek <sz.bialek@wp.pl>
Message-ID: <h7vmmotmc1@node1.news.atman.pl>
Source record: 13430

```
"christofire" <christofire@btinternet.com> wrote
news:oJednXCPscDwWj_XnZ2dnUVZ8uSdnZ2d@bt.com...
>
> "Szczepan Biaďż˝ek" <sz.bialek@wp.pl> wrote in message
> news:h7u05f$nfq$1@node1.news.atman.pl...
>>
>> "christofire" <christofire@btinternet.com> wrote
>> news:5L-dnaw1aKw6OD_XnZ2dnUVZ8iKdnZ2d@bt.com...
>>>
>>> "Szczepan Biaďż˝ek" <sz.bialek@wp.pl> wrote in message
>>> news:h7tsa3$n1b$1@node1.news.atman.pl...
>>>>
>>>> "Mike Coslo" <mjc5@psu.edu> wrote
>>>> news:h7tsle$q06a$1@tr22n12.aset.psu.edu...
>>>>>>
>>>>> Art is trying to convince us that EM energy is also a mechanical
>>>>> force, consisting of particles that fly off the end of our antennas
>>>>> like little turds. The ramifications of that means that everything we
>>>>> thought we know about RF - and in fact all physics is completely
>>>>> wrong.
>>>>
>>>> You have made a small mistake. Antennas are feed with the oscillating
>>>> voltage. So the little truds fly off and come back. It is normal
>>>> longitudinal wave.
>>>> The key problem is what radiate: the end of an antenna or something
>>>> else.
>>>> What do you think?
>>>> S*
>>>
>>>
>>> No, you've made a mistake ... again. EM waves are transverse waves in
>>> air (i.e. around a normal antenna) not longitudinal waves (see
>>> http://en.wikipedia.org/wiki/Longitudinal_wave).
>>
>> EM waves by Maxwell are transverse waves. They are the paper waves. The
>> real electric waves are mainly longitudinal.
>
> * Would you care to cite a reference where it is stated that EM waves in
> the far field of a transmitting antenna contain a significant longitudinal
> component? Many respected authors, such as Kraus, have illustrated the
> contrary, but their work isn't limited to paper; people like Kraus have
> designed real antennas of types that are still in use today.
```

Maxwell ASSUMED that the aether is a solid body and ASSUMED that there are
the transversal waves. Next he do the math to it. To prove it he asks
Michelson to measure the movements of the Earth in this solid body. In 1878
(about) Michelson did not detect 30km/s. In 1925 he detect 0.4 km/s. It
means that the eather is not a solid body. The EM theory is only math (a
piece to teach).
>
>
>>>Sound waves are longitudinal because air pressure is a scalar, whereas
>>>electric and magnetic fields are vectors - they have polarisation.
>>
>> The math has not to do here.
>
> * What 'math'? ... just the mention of scalars and vectors, in a group
> devoted to antennas. Please.

The first step should be dicovering which part of the oryginal Hertz dipole
radiate:
http://people.seas.harvard.edu/~jones/cscie129/nu_lectures/lecture6/hertz/Hertz_exp.html

The big sparks (current) or the plates (balls).
Note that todays dipoles are quite different. Now no current between the
tips.
>
>
>> Here is the full acoustic analogy. The two loudspeakers work like the two
>> monopoles.
>
> * Rubbish. What 'two loudspeakers'? Ever heard of a horn loudspeaker?
> ... it produces longitudinal pressure waves.

Why then the two loudspeaker and the two monopoles have the same directional
patern?
>
>
>>> Also, antennas that radiate are fed with alternating current. The
>>> terminal voltage is almost immaterial in comparison with the current -
>>> that's what causes the radiation.
>>>
>>> If you want to discover what radiates I suggest you read one of the
>>> normal text books on the subject, like Kraus 'Antennas', and stop making
>>> up your own versions!
>>
>> To discower what radiates will be better to do experiments with tipping
>> of monopole antenas.
>
> * Where do you get this stuff from? Please visit a library - you could do
> yourself a lot of good.

Now Maxwell is avaiable on line. It is interesting to take a glance at them.
S*

1719. Re: Corriolis force

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-06 10:27:21 UTC
From: christofire <christofire@btinternet.com>
Message-ID: <b7qdnSnPopAMEz7XnZ2dnUVZ8h-dnZ2d@bt.com>
Source record: 13431

"Art Unwin" <arthurunwin@gmail.com> wrote in message
news:738ed19b-f933-42e6-b2f0-74aa2581963c@l9g2000yqi.googlegroups.com...
On Sep 5, 5:37 pm, "christofire" <christof...@btinternet.com> wrote:
> "Art Unwin" <arthurun...@gmail.com> wrote in message

-- snip --

>
> * I don't doubt that it is possible to obtain results from a computer
> program that appear to contradict conventional theory. Interpretation of
> what comes out is always the responsibility of the operator so, whilst
> anyone can enter parameter values and hit 'go', not everyone will
> interpret
> the results correctly. In this respect it must help greatly to have a
> clear
> understanding of the basic principles of how antennas radiate and how the
> modelling programs operate; in most cases how the moment method works. My
> recommendation, as before, is to read an edition of 'Antennas' by Kraus
> (or
> an equivalent), cover to cover, before trying to make sense of the output
> of
> any antenna modelling program. Of course, I realise that some who
> 'publish'
> here feel this would be beneath them, or too hard ... but, really, it is
> neither.
>
> My own take on the effect of tilting a vertical antenna is that if its
> length is an appreciable fraction of a wavelength then tilting it will
> distort its radiation pattern and will upset the uniformity of its
> polarisation, which will impose a further effective radiation pattern. If
> this results in a bit of gain in one particular direction with respect to
> a
> particular polarisation then fine, and this may be of some use in amateur
> radio service although it isn't how vertical monopoles are most often used
> (i.e. their omni-directional pattern is their strength and there are many
> other, better ways, to obtain directional patterns).
>
> However, the theory on which all the well-known modelling programs is
> based
> is the simple stuff described by Kraus, et al, and probably in most cases
> follows from the original work that led to NEC
> (http://www.nec2.org/other/nec2prt1.pdf). It takes _no_ account of the
> Coriolis force or gravity (outside of its impact on the speed of light).
> If
> such a program produces output that the operator interprets as depending

> on
> the Coriolis force then, logically, this must be a mistake on the part of
> the operator - wouldn't you agree? However, if you believe the theory on
> which the program is based is in error then maybe you shouldn't use it.
>
> More to the point, it is common knoweledge that there is no full
> understanding of radiation available anywhere. Thus he is asking probing
> questions to fill in the
> gaps.
>
> * There is sufficient understanding of radiation and antennas out there,
> as
> widely documented, to have enabled practical radio, radar, and suchlike
> for
> more than a century. I understand that part of the point of amateur radio
> is to encourage experimentation, but I don't understand why experimenters
> should wish to shun the accepted, conventional theory and try to come up
> with their own, perhaps paraphysical, versions - especially when those
> people don't exhibit much understanding of the basics. Maybe they treat
> the
> subject a bit like art (no pun intended) instead of the science that it
> should be.
>
> Personaly I am not willing yet to say antenna programs are at fault
> until more explanations come about. Can you explain what he is
> commenting upon.?
>
> * It's possible he is being deliberately provocative.
>
> Chris

Chris I assume that you have a computer with an optimizer so you are aware that it will follow the intent of Maxwells laws. And if you allow it to do this the input should not be designed for planar forms but allow the optimizer to do its thing. When it finishes it will provide a response of 100 percent accountabilityYou know this because maxwells laws account for all forces such that it then provides a tipped radiator But if you feel it is operator error then what did your program supply with that input or is it you do not own or use an optimizer which seems to be prevalent on this newsgroup. Soooooo address the statement made by me and provide an academic response since all posted on this subject comes back to that simple statement I made. All the other postings are distortions that have run amoke such that nobody knows the subject of debate and it has become a joke. Your input to the statement I am sure from your comments will be academic in form and greatly appreciated. I am winding this thread down now as statement made are being attributed to me which is false and errors are piling up on errors

* I have used NEC professionally and I am aware of some of the lower-cost derivatives used by amateurs. What I stated before does not conflict with

my experience of using NEC - if I were to tip a vertical element then those effects would result; there wouldn't be any general improvement in its performance.

If the program you use shows increased coupling factor in all directions when you tip a vertical monopole then it, and your interpretation of its results, is in error. If you run an 'optimiser' and it yields such a result then the error is widespread in your computing system. The simplest analysis (using arithmetic) of a tipped-over monopole or dipole will demonstrate that its pattern in the horizontal plane is no longer uniform so whatever is gained in one direction is lost elsewhere.

I'm beginning to think that the issue is some kind of arrogance - certain individuals purporting to know better than the conventional wisdom (when they probably don't know much of the basics). But I don't really understand why they do this. Perhaps the volume of responses in this NG is enough to give them a feeling of importance and, I realise, I'm not helping by adding to the bonfire!

Chris

1720. Re: Corriolis force

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-06 10:48:16 UTC
From: christofire <christofire@btinternet.com>
Message-ID: <YMSdnW_oONTqDj7XnZ2dnUVZ8u-dnZ2d@bt.com>
Source record: 13432

"Jeff Liebermann" <jeffl@cruzio.com> wrote in message
news:5nb6a55q7c36naefhfbqp0k0tp3mh49olo@4ax.com...
> On Sat, 5 Sep 2009 20:30:30 -0500, richardharrison@webtv.net (Richard
> Harrison) wrote:
>
>>Art wrote:
>>"Chris, what I believe he is referring to is that computer programs
>>support a tipped vertical over one at right angles to earth."
>>
>>Quick! Tell your local broadcaster.
>>
>>We don`t need theory to show that antennas for transmitters and
>>receivers work best together when they are exactly parallel in space
>>unless something in the transmission path is redirecting the
>>polarization of the signal. In aligning microwave antennas humdreds of
>>times, I`ll swear this is true every time, regarfless of Corriolis, no
>>matter which side of the equator I was on. Try it. You`ll be convinced
>>too.
>>
>>Best regards, Richard Harrison, KB5WZI
>
> Ummmm.... Faraday Rotation?
> <http://en.wikipedia.org/wiki/Faraday_effect>
> It's not too horrible at microwave frequencies, but becomes noticeable
> as the frequency decreases. I've done some crude polarization studies
> at VHF and UHF frequencies with a rotating dipole, and found some
> rotation on line of sight paths. However, we were looking for a
> polarization distribution and didn't really spend any time getting
> accurate numbers for a line of sight path.

* Fraday rotation is much greater in the ionosphere where there are more
free electrons, apparently. L-band and C-band links with geostationary
satellites use circular polarisation for this reason (as well as others when
a mobile terminal is involved) - the degree of twist is measured in turns.
At Ku-band it's down to a few degrees.

>
> Also many broadcasters use elliptical polarization (a mix of
> horizontal and vertical). However, that's not to eliminate any
> Faraday Rotation effects. It's to deal with the effects of
> reflections and refraction, which create nearly random polarization at
> the receiving end. Also, because stationary broadcast antennas are
> horizontally polarized, while vehicle mounted broadcast antennas are
> usually vertical.

* In the UK, VHF FM radio was launched with horizontal polarisation mainly because of a belief that vehicle-generated nois was predominantly vertically polarised. This belief derived from an experiment, but the conclusion may have contained an error. However, it was clear that VHF reception in vehicles was impaired by this choice because a simple vehicular antenna is vertically polarised. As vehicular reception grew, and when commercial radio started at VHF, a vertical component was added to the transmitted signal to improve matters. Nowadays, most of the transmitting antennas for VHF FM radio provide 'mixed polarisation'.

> I was once asked why the British drive on the left side of the road.
> My instant answer was Coriolis Effect. I claimed that due to the
> earth's rotation, it's easier to make left turns on the left side of
> the Atlantic Ocean and easier to make right turns on the right side of
> the Atlantic. It took an excessively long time for even the sharpest
> student to catch the joke/hoax. Sigh.

* Isn't the real answer connected to knights in shining armour on their horses and the side that they, traditionally, carried their jousting pole? ... but where did the tradition come from? ... is that to do with the traditional way a right-handed person mounts a horse?

> Drivel: At 2.4GHz, most wi-fi wireless routers use vertically
> polarized rubber ducky antennas. Yet, most laptops have their
> antennas in the top of the LCD frame which are horizontally polarized.
> Same with PCB antennas found on most PCMCIA cards.

* A vertical whip on a device with a horizontal chassis, and horizontal power/data cables, probably radiates plenty of HP as well as VP. Years ago (before the widespread use of normal-mode helix antenna) I worked on a scheme that involved STC/ITT 'Starphone' hand-held transceivers. The base-station antenna was VP but the handsets each contained a PCB loop antenna where the axis of the loop was parallel with the long dimension of the handset, that is, generally wrong! ... but the scheme worked quite well and there was no chance of whip antennas getting broken.

> Anyway, nobody cares much about antenna polarization:

* Well, some still do!

Chris

> <http://picasaweb.google.com/lh/photo/HC8B4F-AnCQF6I_u0k3MYg>
> <http://802.11junk.com/jeffl/pics/Old%20Repeaters/slides/LoopMtn03.html>
>
>
> --
> Jeff Liebermann jeffl@cruzio.com
> 150 Felker St #D http://www.LearnByDestroying.com
> Santa Cruz CA 95060 http://802.11junk.com
> Skype: JeffLiebermann AE6KS 831-336-2558

1721. Re: Corriolis force

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-06 11:09:02 UTC
From: christofire <christofire@btinternet.com>
Message-ID: <oKmdneS1muPLBT7XnZ2dnUVZ8vSdnZ2d@bt.com>
Source record: 13433

"Szczepan Bia&#65533;ek" <sz.bialek@wp.pl> wrote in message
news:h7vmmotmc1@node1.news.atman.pl...
>

-- snip --

>> * Would you care to cite a reference where it is stated that EM waves in
>> the far field of a transmitting antenna contain a significant
>> longitudinal component? Many respected authors, such as Kraus, have
>> illustrated the contrary, but their work isn't limited to paper; people
>> like Kraus have designed real antennas of types that are still in use
>> today.
>
> Maxwell ASSUMED that the aether is a solid body and ASSUMED that there are
> the transversal waves. Next he do the math to it. To prove it he asks
> Michelson to measure the movements of the Earth in this solid body. In
> 1878 (about) Michelson did not detect 30km/s. In 1925 he detect 0.4 km/s.
> It means that the eather is not a solid body. The EM theory is only math
> (a piece to teach).

* You haven't cited a reference. The words you have written here do not
demonstrate that EM waves are longitudinal. A 'reference', if you didn't
understand the term, means a passage from a book or paper written by someone
who has a proven reputation for good, useful work in the field.

>>>>Sound waves are longitudinal because air pressure is a scalar, whereas
>>>>electric and magnetic fields are vectors - they have polarisation.
>>>
>>> The math has not to do here.
>>
>> * What 'math'? ... just the mention of scalars and vectors, in a group
>> devoted to antennas. Please.
>
> The first step should be dicovering which part of the oryginal Hertz
> dipole radiate:
> http://people.seas.harvard.edu/~jones/cscie129/nu_lectures/lecture6/hertz/Hertz_exp.html
>
> The big sparks (current) or the plates (balls).
> Note that todays dipoles are quite different. Now no current between the
> tips.
>>
>>
>>> Here is the full acoustic analogy. The two loudspeakers work like the
>>> two monopoles.
>>

>> * Rubbish. What 'two loudspeakers'? Ever heard of a horn loudspeaker?
>> ... it produces longitudinal pressure waves.
>
> Why then the two loudspeaker and the two monopoles have the same
> directional patern?

* What 'two loudspeaker'? If you're drawing comparison between a direct-radiator loudspeaker and a dipole and using that as a basis for saying that EM waves are longitudinal, as I suspect you are, then you should also consider a horn loudspeaker. Sound is radiated from the mouth of a horn 'speaker and the other side of the compression driver diaphragm can be totally enclosed. There is no simple comparison with a dipole antenna in this case.

>>
>>
>>>> Also, antennas that radiate are fed with alternating current. The
>>>> terminal voltage is almost immaterial in comparison with the current -
>>>> that's what causes the radiation.
>>>>
>>>> If you want to discover what radiates I suggest you read one of the
>>>> normal text books on the subject, like Kraus 'Antennas', and stop
>>>> making up your own versions!
>>>
>>> To discower what radiates will be better to do experiments with tipping
>>> of monopole antenas.
>>
>> * Where do you get this stuff from? Please visit a library - you could
>> do yourself a lot of good.
>
> Now Maxwell is avaiable on line. It is interesting to take a glance at
> them.
> S*

* It's even more interesting to read text books by writers such as Kraus who have known provenance. Maxwell's equations are covered very well in his books 'Antennas' and 'Electromagnetics' - I suggest you read them. It appears a lot of what is published on the WWW is written by people who haven't taken the time to learn the basic simple stuff; school pupils and college students perhaps. You have to be very careful what you accept as true when the internet is involved.

Chris

1722. Art's "Tipping" Belief Explained?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-06 12:02:20 UTC
From: Richard Fry <rfry@adams.net>
Message-ID: <194de661-9754-43e1-a346-6745a33f997d@o10g2000yqa.googlegroups.com>
Source record: 13434

The link below leads to a composite NEC plot comparing the elevation patterns of a vertical dipole with one that is "tipped."

Sure enough, the tipped antenna has slightly more peak gain, and the elevation null at the zenith above the vertical version is filled -- just as Art has posted.

However the reason for that is NOT that the antenna itself radiates better when tipped. It is the result of directing more of the peak gain of the radiation pattern launched by the antenna (which is a constant regardless of its physical orientation) toward the earth near the antenna. This increases the earth reflection in that direction/ sector.

Those considering only the net, far-field radiation as calculated by NEC may think that the antenna itself radiates better when tipped. But it is only the contribution of the earth reflection that makes it appear so.

The radiation pattern of the antenna itself remains the same, regardless of its physical orientation.

http://i62.photobucket.com/albums/h85/rfry-100/Tipped_Vertical_Dipole.gif

RF

1723. Re: Art's "Tipping" Belief Explained?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-06 13:10:36 UTC
From: Dave <noone@nowhere.com>
Message-ID: <gxOom.1333$Jd7.1287@nwrddc02.gnilink.net>
Source record: 13435

"Richard Fry" <rfry@adams.net> wrote in message
news:194de661-9754-43e1-a346-6745a33f997d@o10g2000yqa.googlegroups.com...
> The link below leads to a composite NEC plot comparing the elevation
> patterns of a vertical dipole with one that is "tipped."
>
> Sure enough, the tipped antenna has slightly more peak gain, and the
> elevation null at the zenith above the vertical version is filled --
> just as Art has posted.
>
> However the reason for that is NOT that the antenna itself radiates
> better when tipped. It is the result of directing more of the peak
> gain of the radiation pattern launched by the antenna (which is a
> constant regardless of its physical orientation) toward the earth near
> the antenna. This increases the earth reflection in that direction/
> sector.
>
> Those considering only the net, far-field radiation as calculated by
> NEC may think that the antenna itself radiates better when tipped.
> But it is only the contribution of the earth reflection that makes it
> appear so.
>
> The radiation pattern of the antenna itself remains the same,
> regardless of its physical orientation.
>
> http://i62.photobucket.com/albums/h85/rfry-100/Tipped_Vertical_Dipole.gif
>
> RF

and even more important, the vertical null is reduced getting it closer to
art's 'equilibrium'.

1724. Re: Corriolis force

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-06 13:30:14 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <7QOom.350396$Ta5.64102@newsfe15.iad>
Source record: 13436

Art Unwin wrote:
> My problem is with how photons fit in with radiation?
> It is a nice name but how does it get launched and where did it come
> from?
> Personaly I can't distinguish it from a particle at rest on a radiator
> or how it can possibly get attached to it which apparently you
> believe. I just want to see how this proton fits in with what we know.
> Waves or particles.

EM radiation waves *are* groups of quantized coherent
particles. It's called the wave/particle duality. If
one is expecting a wave, one detects a wave. If one
is expecting particles, one detects particles. In
reality, there is no difference between waves and
particles which existed long before man evolved.

If you will simply conceptually replace whatever particle
that you believe is blasted off the surface of a radiator
with a photon radiated by an energetic electron that
remains on the surface of the radiator, you will
have the presently accepted standard physics model.

For something resembling your concepts, one might say that
the RF source supplies the energy for the bullets fired
by the electron gun located on the surface of the radiator.
The gun didn't have any bullets before the source supplied
the energy for them. Once the electron gun is loaded,
Mother Nature pulls the trigger.

A photon at rest on a radiator is undetectable if it can
exist at all. The theory is that photons are created by
supplying energy to electrons. Photons are the method that
electrons use to shed their excess energy.
--
73, Cecil, IEEE, OOTC, http://www.w5dxp.com

1725. Re: Gaussian law of statatics extended by adding a time vary field

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-06 13:40:01 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <gZOom.350397$Ta5.281100@newsfe15.iad>
Source record: 13437

Jeff Liebermann wrote:
> That's because you cannot have time
> moving at different rates on both sides of an equality.

Black hole radiation is thought to balance the inequality.
--
73, Cecil, IEEE, OOTC, http://www.w5dxp.com

1726. Re: Contructing a balun for receiving antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-06 13:54:08 UTC
From: Gerard <pe1oud@amsat.org>
Message-ID: <4aa3bf18$0$56608$dbd45001@news.wanadoo.nl>
Source record: 13438

"Jeff Liebermann" <jeffl@cruzio.com> schreef in bericht
news:bsf6a51hlfcimfandvkiqip2onge36k1n7@4ax.com...
> On Sat, 5 Sep 2009 20:58:16 -0700 (PDT), skk203
> <skkumble@gmail.com>
> wrote:
>
>>Could anybody let me know how to contruct a bulun to match a
>>longwire
>>antenna to a receiver. A step by step guide would be
>>appreciated as I
>>am a non technical person.
>
> Ummm... you don't use a balun to match a long wire.
Could it be he means an 'MLB', a Magnetic Longwire Balun?

A small MFJ tuner will do a better job, especially since he
claims he'll only needs it on a receiver.

Note: a 'longwire' starts at abt 5 x wavelength. That's not the
same as a random end-fed wire.

73 - Gerard - PE1OUD

E-mail: pe1oud(NOTTHIS)@amsat.org

1727. Re: Corriolis force

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-06 13:57:41 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <NdPom.156265$O23.30890@newsfe11.iad>
Source record: 13440

Mike Coslo wrote:
> Somewhere along the line something has to lose mass, unless magic or
> supernatural forces are involved.

You seem to be missing the fact of physics that mass
and energy are equivalent forms related by constants.

e = K1*m and m = K2*e

where K1 and K2 are constants.

For transmitting, there's nothing to prohibit mass from
being supplied in its equivalent energy form and then
lost from the antenna through radiated mass.

(energy in) = (mass in)c^2 = (energy out) = (mass out)c^2

When an atomic bomb goes off, mass is not lost - it simply
takes the form of an equivalent amount of energy which, if
we were smart enough, could be converted back to mass.
--
73, Cecil, IEEE, OOTC, http://www.w5dxp.com

1728. Re: Art's "Tipping" Belief Explained?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-06 13:58:01 UTC
From: Richard Fry <rfry@adams.net>
Message-ID: <33c83f4b-a46c-42da-af09-9250f99a717b@k39g2000yqe.googlegroups.com>
Source record: 13439

On Sep 6, 8:10 am, "Dave" <no...@nowhere.com> wrote:
> and even more important, the vertical null is reduced getting it
> closer to art's 'equilibrium'.

Only thing is that my plots are based on 1/2-wave antennas.

Art says only full wave antennas have equilibrium.

Perhaps he'll explain.

RF

1729. Re: Contructing a balun for receiving antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-06 14:09:03 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <roPom.156268$O23.153707@newsfe11.iad>
Source record: 13441

skk203 wrote:
> Could anybody let me know how to contruct a bulun to match a longwire
> antenna to a receiver. A step by step guide would be appreciated as I
> am a non technical person.

The design impedance of a balun is determined by
taking the square root of (the input impedance
multiplied by the output impedance). Do you know
the output impedance?
--
73, Cecil, IEEE, OOTC, http://www.w5dxp.com

1730. Re: Corriolis force

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-06 14:20:41 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <ozPom.156269$O23.38918@newsfe11.iad>
Source record: 13442

Szczepan Białˇżˇek wrote:
> In the halve of the cycle the both antennas lose mass and in
> the next halve gain mass.

Actually, a radiator radiates equally during each
half cycle, i.e. it loses equal mass during each
half cycle.

Hint: think balanced transmission line with its
two equal differential currents. Electrons on the
balanced radiator are accelerated/decelerated
equally in either direction.
--
73, Cecil, IEEE, OOTC, http://www.w5dxp.com

1731. Are Sunspots Disappearing?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-06 14:25:06 UTC
From: Peter <pm@hotmail.com>
Message-ID: <i4udnbakpMPfWz7XnZ2dnUVZ8k6dnZ2d@westnet.com.au>
Source record: 13443

Interesting article at science@nasa regarding speculation of future sunspots activity or should I say the lack of activity.

Whatever happens, notes Hathaway, "the sun is behaving in an interesting way and I believe we're about to learn something new."

http://science.nasa.gov/headlines/y2009/03sep_sunspots.htm

--
Peter VK6YSF

http://members.optushome.com.au/vk6ysf/vk6ysf/main.htm

1732. Re: Art's "Tipping" Belief Explained?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-06 14:33:30 UTC
From: Dave <noone@nowhere.com>
Message-ID: <_KPom.1431$tl3.924@nwrddc01.gnilink.net>
Source record: 13444

"Richard Fry" <rfry@adams.net> wrote in message
news:33c83f4b-a46c-42da-af09-9250f99a717b@k39g2000yqe.googlegroups.com...
On Sep 6, 8:10 am, "Dave" <no...@nowhere.com> wrote:
>> and even more important, the vertical null is reduced getting it
>> closer to art's 'equilibrium'.
>Only thing is that my plots are based on 1/2-wave antennas.
>Art says only full wave antennas have equilibrium.
>Perhaps he'll explain.

try a full wave dipole, maybe it will get closer to 'equilibrium' by art's
definition.

1733. Re: Art's "Tipping" Belief Explained?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-06 15:25:24 UTC
From: Richard Fry <rfry@adams.net>
Message-ID: <6d18ceb1-2b49-4c45-94ae-7f60c532a06a@s39g2000yqj.googlegroups.com>
Source record: 13445

On Sep 6, 9:33 am, "Dave" <no...@nowhere.com> wrote:
> try a full wave dipole, maybe it will get closer to 'equilibrium'
> by art's definition.

The lobe of a full-wave dipole is narrower than that of a 1/2-wave dipole, so the tipped version of the full-wave should show the worse "equilibrium" of the two configurations.

RF

1734. Re: Corriolis force

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-06 15:32:59 UTC
From: Art Unwin <arthurunwin@gmail.com>
Message-ID: <a9f4b8d8-d8f0-465e-8427-dbd2eec902dd@c37g2000yqi.googlegroups.com>
Source record: 13446

On Sep 6, 8:30 am, Cecil Moore <nos...@w5dxp.com> wrote:
> Art Unwin wrote:
> > My problem is with how photons fit in with radiation?
> > It is a nice name but how does it get launched and where did it come
> > from?
> > Personaly I can't distinguish it from a particle at rest on a radiator
> > or how it can possibly get attached to it which apparently you
> > believe. I just want to see how this proton fits in with what we know.
> > Waves or particles.
>
> EM radiation waves *are* groups of quantized coherent
> particles. It's called the wave/particle duality. If
> one is expecting a wave, one detects a wave. If one
> is expecting particles, one detects particles. In
> reality, there is no difference between waves and
> particles which existed long before man evolved.
>
> If you will simply conceptually replace whatever particle
> that you believe is blasted off the surface of a radiator
> with a photon radiated by an energetic electron that
> remains on the surface of the radiator, you will
> have the presently accepted standard physics model.
>
> For something resembling your concepts, one might say that
> the RF source supplies the energy for the bullets fired
> by the electron gun located on the surface of the radiator.
> The gun didn't have any bullets before the source supplied
> the energy for them. Once the electron gun is loaded,
> Mother Nature pulls the trigger.
>
> A photon at rest on a radiator is undetectable if it can
> exist at all. The theory is that photons are created by
> supplying energy to electrons. Photons are the method that
> electrons use to shed their excess energy.
> --
> 73, Cecil, IEEE, OOTC, http://www.w5dxp.com

What you refer to as a photon I refer to as a particle
I refer to it as a particle because of the Gauss connection.
One can also use same with a capacitor where the particle
is retained between two diamagnetic surfaces and the
charge may transfer. Would you have it that a capacitor retains
protons which is a particle ?
With my analysis it has a trail but yours seem to be just snippets.

Perhaps you should provide a response to the Gauss/Maxwell thread
where only one academic has come out in favour of David, whereas all
others are unsure of the limits of the law on statics. I consider that
the beginning of my trail, so how does yours differ.
The thread is still there!

of a electrostatic field

1735. Re: Corriolis force

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-06 15:37:13 UTC
From: Art Unwin <arthurunwin@gmail.com>
Message-ID: <e2c7509a-1719-40e9-a5d7-2c44cdf7218b@x38g2000yqb.googlegroups.com>
Source record: 13447

On Sep 6, 8:57 am, Cecil Moore <nos...@w5dxp.com> wrote:
> Mike Coslo wrote:
> > Somewhere along the line something has to lose mass, unless magic or
> > supernatural forces are involved.
>
> You seem to be missing the fact of physics that mass
> and energy are equivalent forms related by constants.
>
> e = K1*m and m = K2*e
>
> where K1 and K2 are constants.
>
> For transmitting, there's nothing to prohibit mass from
> being supplied in its equivalent energy form and then
> lost from the antenna through radiated mass.
>
> (energy in) = (mass in)c^2 = (energy out) = (mass out)c^2
>
> When an atomic bomb goes off, mass is not lost - it simply
> takes the form of an equivalent amount of energy which, if
> we were smart enough, could be converted back to mass.
> --
> 73, Cecil, IEEE, OOTC, http://www.w5dxp.com

But if it is full wave it is a tank circuit which does not radiate in
both half cycles but in pulses
as Planck states. It only radiates when the capacitive field
intersects with a magnetic field.

1736. Re: Corriolis force

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-06 16:37:29 UTC
From: Dave <noone@nowhere.com>
Message-ID: <dzRom.1444$tl3.308@nwrddc01.gnilink.net>
Source record: 13448

"Art Unwin" <arthurunwin@gmail.com> wrote in message
news:a9f4b8d8-d8f0-465e-8427-dbd2eec902dd@c37g2000yqi.googlegroups.com...
On Sep 6, 8:30 am, Cecil Moore <nos...@w5dxp.com> wrote:
> What you refer to as a photon I refer to as a particle
>I refer to it as a particle because of the Gauss connection.

photons are and always have ben particles!

>One can also use same with a capacitor where the particle
>is retained between two diamagnetic surfaces and the
>charge may transfer. Would you have it that a capacitor retains
>protons which is a particle ?

yes, i would also have it retain electrons. but i would not have it retain
photons.

1737. Re: Corriolis force

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-06 16:56:25 UTC
From: Art Unwin <arthurunwin@gmail.com>
Message-ID: <f62f0f5d-ed03-44a8-9dba-85a7337a5bcd@h13g2000yqk.googlegroups.com>
Source record: 13449

On Sep 6, 8:30 am, Cecil Moore <nos...@w5dxp.com> wrote:
> Art Unwin wrote:
> > My problem is with how photons fit in with radiation?
> > It is a nice name but how does it get launched and where did it come
> > from?
> > Personaly I can't distinguish it from a particle at rest on a radiator
> > or how it can possibly get attached to it which apparently you
> > believe. I just want to see how this proton fits in with what we know.
> > Waves or particles.
>
> EM radiation waves *are* groups of quantized coherent
> particles. It's called the wave/particle duality. If
> one is expecting a wave, one detects a wave. If one
> is expecting particles, one detects particles. In
> reality, there is no difference between waves and
> particles which existed long before man evolved.
>
> If you will simply conceptually replace whatever particle
> that you believe is blasted off the surface of a radiator
> with a photon radiated by an energetic electron that
> remains on the surface of the radiator, you will
> have the presently accepted standard physics model.
>
> For something resembling your concepts, one might say that
> the RF source supplies the energy for the bullets fired
> by the electron gun located on the surface of the radiator.
> The gun didn't have any bullets before the source supplied
> the energy for them. Once the electron gun is loaded,
> Mother Nature pulls the trigger.
>
> A photon at rest on a radiator is undetectable if it can
> exist at all. The theory is that photons are created by
> supplying energy to electrons. Photons are the method that
> electrons use to shed their excess energy.
> --
> 73, Cecil, IEEE, OOTC, http://www.w5dxp.com

So you are saying they are one and the same where a wave is a
adjective describing the action of a spining particle. Interesting you
quote the electron gun. We have an electron
without a spin and certainly not with the speed of light. So we supply
a electrostatic field which intersects a magnetic field. When this
electron ,particle proton or what ever enters the area betwean the
capacitive plates. At that time the article (not to take sides)

starts to accelerate under the influence of both fields such that it takes on a parabolic spin.
When it exits this combined field it obviously takes a straight line projection with spin.
Now without the fields influence we move beyond acceleration where the speed can be determined. It is proven that it is a certain speed that was later determined as also the speed of light. So, we have a beam which is certainly not of a wave but a stream of particles which operate at the same speed as light. Very interesting. This moves away from Rutherford wave theory. Along comes the slit experiment which then sways back thought to the wave theory which is a convenient wy of saying it is undecided.
Now we have the slit antenna that sways the argument back to particles which has a connection to light and spin and the acelerration of charge. No where has the propasition of a photons being around is stated. Now you state that a photon exists dependent on the rate of spin to shed light So where did this photon emerge from?
It certainly did not come from mass as that can only happen when the nucleus of an atom is torn apart as you point out with a atomic explosion which is the result of what is called the Strong force and that is not happening. So if you provide an answer to the posted question posed on Gauss and Maxwell we can then follow on to explore your reasoning. But you must start from somewhere that is accordance with accepted laws. I have done that where you have not. So the question posted is salient to this whole discussion and your education suggests you are up to the task so what is it that you are uneasy about?

1738. Re: Corriolis force

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-06 17:00:01 UTC
From: jimp@specsol.spam.sux.com
Message-ID: <du5dn6-i67.ln1@mail.specsol.com>
Source record: 13450

Dave <noone@nowhere.com> wrote:
>
> "Art Unwin" <arthurunwin@gmail.com> wrote in message
> news:a9f4b8d8-d8f0-465e-8427-dbd2eec902dd@c37g2000yqi.googlegroups.com...
> On Sep 6, 8:30 am, Cecil Moore <nos...@w5dxp.com> wrote:
>> What you refer to as a photon I refer to as a particle
>>I refer to it as a particle because of the Gauss connection.
>
> photons are and always have ben particles!

Umm, no, photons are "particle like" and at the same time "wave like".

--
Jim Pennino

Remove .spam.sux to reply.

1739. Re: Corriolis force

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-06 17:23:09 UTC
From: Art Unwin <arthurunwin@gmail.com>
Message-ID: <dbcd54a3-fd9d-4441-a903-16d57ed8b84d@l9g2000yqi.googlegroups.com>
Source record: 13351

On Sep 6, 12:00 pm, j...@specsol.spam.sux.com wrote:
> Dave <no...@nowhere.com> wrote:
>
> > "Art Unwin" <arthurun...@gmail.com> wrote in message
> >news:a9f4b8d8-d8f0-465e-8427-dbd2eec902dd@c37g2000yqi.googlegroups.com...
> > On Sep 6, 8:30 am, Cecil Moore <nos...@w5dxp.com> wrote:
> >> What you refer to as a photon I refer to as a particle
> >>I refer to it as a particle because of the Gauss connection.
>
> > photons are and always have ben particles!
>
> Umm, no, photons are "particle like" and at the same time "wave like".
>
> --
> Jim Pennino
>
> Remove .spam.sux to reply.

Maybe but waves are an adjective where as particle is a noun. Yes a
cluster or a swarm
may move together that has the appearance of waves which also can be
seen as a swarm of particles but again root of discussion must be a
noun. An accelerated beam is that of a single particle action that is
repeated. The particle alone cannot act as a wave unless it has
another particle that can be seen as a datum.

1740. Re: Corriolis force

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-06 17:39:41 UTC
From: Dave <noone@nowhere.com>
Message-ID: <xtSom.1347$Jd7.501@nwrddc02.gnilink.net>
Source record: 13352

"Art Unwin" <arthurunwin@gmail.com> wrote in message
news:f62f0f5d-ed03-44a8-9dba-85a7337a5bcd@h13g2000yqk.googlegroups.com...
On Sep 6, 8:30 am, Cecil Moore <nos...@w5dxp.com> wrote:
> We have an electron without a spin and certainly not with the speed of
> light.

you can't have an electron without spin, it always has the same spin.
http://en.wikipedia.org/wiki/Electron

<snip a bunch of incoherent babbling>

> So where did this photon emerge from?
> It certainly did not come from mass as that can only happen when the
> nucleus of an atom is torn apart as you point out with a atomic
>explosion which is the result of what is called the Strong force and
>that is not happening.

ever hear of electrons changing state and emitting photons? or the
photoelectric effect?? neither require strong force or nuclear reactions.

1741. Re: Corriolis force

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-06 17:39:55 UTC
From: Art Unwin <arthurunwin@gmail.com>
Message-ID: <3bdf4289-d741-4654-96d2-cc152fc56e3e@j39g2000yqh.googlegroups.com>
Source record: 13353

On Sep 6, 11:37 am, "Dave" <no...@nowhere.com> wrote:
> "Art Unwin" <arthurun...@gmail.com> wrote in message
>
> news:a9f4b8d8-d8f0-465e-8427-dbd2eec902dd@c37g2000yqi.googlegroups.com...
> On Sep 6, 8:30 am, Cecil Moore <nos...@w5dxp.com> wrote:
>
> > What you refer to as a photon I refer to as a particle
> >I refer to it as a particle because of the Gauss connection.
>
> photons are and always have ben particles!
>
> >One can also use same with a capacitor where the particle
> >is retained between two diamagnetic surfaces and the
> >charge may transfer. Would you have it that a capacitor retains
> >protons which is a particle ?
>
> yes, i would also have it retain electrons. but i would not have it retain
> photons.

So the question remains where does a photon come from if it is not an
internal function of a free electron. Frankly the capacitor suggests
that the photon is a charge possesed by
a free electron. So again we are back to the Gauss/Maxwell question.
Cecil does has a track record with his degree and more important his
MENSA membership but he is having problems with the photon. particle
problem which lies with the Gauss/ Maxwell question.
Einstein insinuated that the weak force is part of radiation and I
have applied my theorem to that. But I can't persue other theorems
until the Gauss/maxwell question is resolved by those with a track
record and not just intuition.

1742. Re: Corriolis force

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-06 17:41:13 UTC
From: Dave <noone@nowhere.com>
Message-ID: <ZuSom.1348$Jd7.173@nwrddc02.gnilink.net>
Source record: 13354

"Art Unwin" <arthurunwin@gmail.com> wrote in message
news:dbcd54a3-fd9d-4441-a903-16d57ed8b84d@l9g2000yqi.googlegroups.com...

> The particle alone cannot act as a wave unless it has
> another particle that can be seen as a datum.

go read up on single photon diffraction experiments and see if you still
think it takes multiple photons to act as a wave.

1743. Re: Corriolis force

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-06 17:45:18 UTC
From: Szczepan Białek <sz.bialek@wp.pl>
Message-ID: <h80hh5$199$1@node1.news.atman.pl>
Source record: 13355

"christofire" <christofire@btinternet.com> wrote
news:oKmdneS1muPLBT7XnZ2dnUVZ8vSdnZ2d@bt.com...
>
> "Szczepan Biaďż˝ek" <sz.bialek@wp.pl> wrote in message
> news:h7vmmotmc1@node1.news.atman.pl...
>>
>
> -- snip --
>
>
>>> * Would you care to cite a reference where it is stated that EM waves in
>>> the far field of a transmitting antenna contain a significant
>>> longitudinal component? Many respected authors, such as Kraus, have
>>> illustrated the contrary, but their work isn't limited to paper; people
>>> like Kraus have designed real antennas of types that are still in use
>>> today.
>>
>> Maxwell ASSUMED that the aether is a solid body and ASSUMED that there
>> are the transversal waves. Next he do the math to it. To prove it he asks
>> Michelson to measure the movements of the Earth in this solid body. In
>> 1878 (about) Michelson did not detect 30km/s. In 1925 he detect 0.4 km/s.
>> It means that the eather is not a solid body. The EM theory is only math
>> (a piece to teach).
>
> * You haven't cited a reference. The words you have written here do not
> demonstrate that EM waves are longitudinal. A 'reference', if you didn't
> understand the term, means a passage from a book or paper written by
> someone who has a proven reputation for good, useful work in the field.

" Oliver Heaviside criticised Helmholtz' electromagnetic theory because it
allowed the existence of longitudinal waves" .From:
http://www.answers.com/topic/hermann-von-helmholtz

Do you know somebody who has more proven reputation in acoustic and
electrodynamics than Helmholtz?
Hertz was the pupil of Helmholtz.
The Maxwell's equations (that from 1864) was the same like the Helmholtz'
for fluid mechanics.
Many textbooks inform us that it was a big Maxwell's mistake. He ignored
atomic nature of electricity disovered by Faraday at electrolise. Helmholtz
not ignored it.
Maxwell (modified by Heaviside) is only a piece to teach the math.

>>>>>Sound waves are longitudinal because air pressure is a scalar, whereas
>>>>>electric and magnetic fields are vectors - they have polarisation.

>>>>
>>>> The math has not to do here.
>>>
>>> * What 'math'? ... just the mention of scalars and vectors, in a group
>>> devoted to antennas. Please.
>>
>> The first step should be dicovering which part of the oryginal Hertz
>> dipole radiate:
>>
http://people.seas.harvard.edu/~jones/cscie129/nu_lectures/lecture6/hertz/Hertz_exp.html
>>
>> The big sparks (current) or the plates (balls).
>> Note that todays dipoles are quite different. Now no current between the
>> tips.
>>>
>>>
>>>> Here is the full acoustic analogy. The two loudspeakers work like the
>>>> two monopoles.
>>>
>>> * Rubbish. What 'two loudspeakers'? Ever heard of a horn loudspeaker?
>>> ... it produces longitudinal pressure waves.
>>
>> Why then the two loudspeaker and the two monopoles have the same
>> directional patern?
>
> * What 'two loudspeaker'? If you're drawing comparison between a
> direct-radiator loudspeaker and a dipole and using that as a basis for
> saying that EM waves are longitudinal, as I suspect you are, then you
> should also consider a horn loudspeaker. Sound is radiated from the mouth
> of a horn 'speaker and the other side of the compression driver diaphragm
> can be totally enclosed. There is no simple comparison with a dipole
> antenna in this case.
>
>
>>>
>>>
>>>>> Also, antennas that radiate are fed with alternating current. The
>>>>> terminal voltage is almost immaterial in comparison with the current -
>>>>> that's what causes the radiation.
>>>>>
>>>>> If you want to discover what radiates I suggest you read one of the
>>>>> normal text books on the subject, like Kraus 'Antennas', and stop
>>>>> making up your own versions!
>>>>
>>>> To discower what radiates will be better to do experiments with tipping
>>>> of monopole antenas.
>>>
>>> * Where do you get this stuff from? Please visit a library - you could
>>> do yourself a lot of good.
>>

>> Now Maxwell is avaiable on line. It is interesting to take a glance at
>> them.
>> S*
>
> * It's even more interesting to read text books by writers such as Kraus
> who have known provenance. Maxwell's equations are covered very well in
> his books 'Antennas' and 'Electromagnetics' - I suggest you read them. It
> appears a lot of what is published on the WWW is written by people who
> haven't taken the time to learn the basic simple stuff; school pupils and
> college students perhaps. You have to be very careful what you accept as
> true when the internet is involved.

Take a rest in reading and look at the oryginal Hertz apparatus as the two
sources of longitudinal waves (radiated from ends). You should see the
Luxembourg effect (frequency doubling) and directional pattern.
S*

1744. Re: Corriolis force

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-06 18:16:40 UTC
From: JIMMIE <JIMMIEDEE123@YAHOO.COM>
Message-ID: <8ea74e42-3429-4e3d-8863-de3a80c3f949@g23g2000yqh.googlegroups.com>
Source record: 13356

On Sep 5, 7:29 pm, Art Unwin <arthurun...@gmail.com> wrote:
> On Sep 5, 6:02 pm, JIMMIE <JIMMIEDEE...@YAHOO.COM> wrote:
>
>
>
>
>
> > On Sep 5, 6:37 pm, "christofire" <christof...@btinternet.com> wrote:
>
> > > "Art Unwin" <arthurun...@gmail.com> wrote in message
>
> > >news:3d0c7b2e-968e-4626-91a7-b35bd6c54756@w36g2000yqm.googlegroups.com...
> > > On Sep 5, 3:17 pm, "christofire" <christof...@btinternet.com> wrote:> "Szczepan
Bia³ek" <sz.bia...@wp.pl> wrote in message
>
> > > -- snip --
>
> > > > >> If you want to discover what radiates I suggest you read one of the
> > > > >> normal text books on the subject, like Kraus 'Antennas', and stop
> > > > >> making
> > > > >> up your own versions!
>
> > > > > To discower what radiates will be better to do experiments with tipping
> > > > > of
> > > > > monopole antenas.
>
> > > > * Where do you get this stuff from? Please visit a library - you could do
> > > > yourself a lot of good.
> > > > Chris
>
> > > Chris, what I believe he is referring to is that computer programs
> > > support a tipped vertical over one at right angles to earth. Computer
> > > programs are supposed to be based on Maxwell's formula. Is this an
> > > error and how do we fix it. If it is not an error then it supports the
> > > presence of the Coriolis force in collusion with gravity. and not
> > > gravity alone.
>
> > > * I don't doubt that it is possible to obtain results from a computer
> > > program that appear to contradict conventional theory. Interpretation of
> > > what comes out is always the responsibility of the operator so, whilst
> > > anyone can enter parameter values and hit 'go', not everyone will interpret
> > > the results correctly. In this respect it must help greatly to have a clear
> > > understanding of the basic principles of how antennas radiate and how the
> > > modelling programs operate; in most cases how the moment method works. My

> > > recommendation, as before, is to read an edition of 'Antennas' by Kraus (or
> > > an equivalent), cover to cover, before trying to make sense of the output of
> > > any antenna modelling program. Of course, I realise that some who 'publish'
> > > here feel this would be beneath them, or too hard ... but, really, it is
> > > neither.
>
> > > My own take on the effect of tilting a vertical antenna is that if its
> > > length is an appreciable fraction of a wavelength then tilting it will
> > > distort its radiation pattern and will upset the uniformity of its
> > > polarisation, which will impose a further effective radiation pattern. If
> > > this results in a bit of gain in one particular direction with respect to a
> > > particular polarisation then fine, and this may be of some use in amateur
> > > radio service although it isn't how vertical monopoles are most often used
> > > (i.e. their omni-directional pattern is their strength and there are many
> > > other, better ways, to obtain directional patterns).
>
> > > However, the theory on which all the well-known modelling programs is based
> > > is the simple stuff described by Kraus, et al, and probably in most cases
> > > follows from the original work that led to NEC
> > > (http://www.nec2.org/other/nec2prt1.pdf). It takes _no_ account of the
> > > Coriolis force or gravity (outside of its impact on the speed of light). If
> > > such a program produces output that the operator interprets as depending on
> > > the Coriolis force then, logically, this must be a mistake on the part of
> > > the operator - wouldn't you agree? However, if you believe the theory on
> > > which the program is based is in error then maybe you shouldn't use it.
>
> > > More to the point, it is common knoweledge that there is no full
> > > understanding of radiation available anywhere. Thus he is asking probing
> > > questions to fill in the
> > > gaps.
>
> > > * There is sufficient understanding of radiation and antennas out there, as
> > > widely documented, to have enabled practical radio, radar, and suchlike for
> > > more than a century. I understand that part of the point of amateur radio
> > > is to encourage experimentation, but I don't understand why experimenters
> > > should wish to shun the accepted, conventional theory and try to come up
> > > with their own, perhaps paraphysical, versions - especially when those
> > > people don't exhibit much understanding of the basics. Maybe they treat the
> > > subject a bit like art (no pun intended) instead of the science that it
> > > should be.
>
> > > Personaly I am not willing yet to say antenna programs are at fault
> > > until more explanations come about. Can you explain what he is
> > > commenting upon.?
>
> > > * It's possible he is being deliberately provocative.
>
> > > Chris
>
> > It is conceivable that the Coriolis effect may act upon EM radiation.

> > But given the speed of propagation of the radiowaves the effect would
> > truly be miniscule. I Art thinks the rotation of the earth has any
> > significant effect on EM propagation he should show some reference. Im
> > not going to hold my breath until that happens.
>
> > Jimmie
>
> I have always followed the particle approach over the EM route. The
> reason I have followed this path is that Gauss's law dictates it and
> computer programs support it. There has been no move to doubt programs
> so I assume they are according to Maxwell and the errors are else
> where. So let's go back and leave these assertions that have been
> erroniously pointed at me and look at the Gaussian/ Maxwell
> observation which I have pursued. I have posted the original statement
> and look for those who have expertise in the area to post their views
> and why. So Jimmie you have been prolific with your thoughts and
> insults, allow us to view the mechanics of what ever decision you make
> whether it is a repeat of David or one that shows your own method of
> thinking.
> Thanks in advance
> Art
> Dave has posted his reasons why he feels my assertion is false- Hide quoted text -
>
> - Show quoted text -

Art, it would be nice if you posted reason to why you think your
assertions are true instead of just posting random assertions. Why
should I waste my effort trying to explain why you are wrong when you
refuse to make any effort to show why you are right.

Jimmie

1745. Re: Corriolis force

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-06 18:21:32 UTC
From: Dave <noone@nowhere.com>
Message-ID: <M4Tom.1349$Jd7.916@nwrddc02.gnilink.net>
Source record: 13357

"Art Unwin" <arthurunwin@gmail.com> wrote in message
news:3bdf4289-d741-4654-96d2-cc152fc56e3e@j39g2000yqh.googlegroups.com...
>So the question remains where does a photon come from if it is not an
>internal function of a free electron. Frankly the capacitor suggests
>that the photon is a charge possesed by
>a free electron.

photons have no charge.

>So again we are back to the Gauss/Maxwell question.

separate guass and maxwell. gauss wrote laws, maxwell made a collection of equations and tied them all together... some of which were written originally by gauss. the basic laws that went into maxwell's collection have been well proven separately for over a century, and as a collection to explain electromagnetic waves almost as long. but note that maxwell does not talk about particles, his equations describe fields and waves. They do contain terms for charge, but do not tie it to any given particle... and if you include the force equation then you can talk about mass and charge, but again not tied to any specific particle.

>Einstein insinuated that the weak force is part of radiation and I
>have applied my theorem to that.

ah, so that is where you have crossed up the weak for and radiation... unfortunately the radiation being described in relation to the weak force is not electromagnetic radiation, but rather radiation caused by nuclear decay... most often beta decay where the nucleus emits an electron and converts a neutron to a proton and an anti-neutrino. hmm, do anti-neutrinos cancel out your magical levitating diamagnetic solar neutrinos?

1746. Re: Corriolis force

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-06 18:23:17 UTC
From: Dave <noone@nowhere.com>
Message-ID: <p6Tom.1350$Jd7.609@nwrddc02.gnilink.net>
Source record: 13358

"Szczepan Bialek" <sz.bialek@wp.pl> wrote in message
news:h80hh5$199$1@node1.news.atman.pl...
> Take a rest in reading and look at the oryginal Hertz apparatus as the two
> sources of longitudinal waves (radiated from ends). You should see the
> Luxembourg effect (frequency doubling) and directional pattern.
> S*
>
but you don't because that is not how it works. the waves are radiated by
the whole length of the connecting wire and are transverse... there is no
frequency doubling as you explain it.

1747. Re: Corriolis force

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-06 18:27:04 UTC
From: Dave <noone@nowhere.com>
Message-ID: <Y9Tom.1351$Jd7.473@nwrddc02.gnilink.net>
Source record: 13359

"JIMMIE" <JIMMIEDEE123@YAHOO.COM> wrote in message
news:8ea74e42-3429-4e3d-8863-de3a80c3f949@g23g2000yqh.googlegroups.com...
On Sep 5, 7:29 pm, Art Unwin <arthurun...@gmail.com> wrote:
>Art, it would be nice if you posted reason to why you think your
>assertions are true instead of just posting random assertions. Why
>should I waste my effort trying to explain why you are wrong when you
>refuse to make any effort to show why you are right.

because art is the consummate Democrat... he thinks that if he believes something then it must be true and its up to everyone else to prove him wrong. just look at the Democrat's belief that throwing money at education will result in better educated students... that has been going wrong for decades and they still believe it. art also shares another quality with Democrats, they don't learn. They keep doing the same things over and over again expecting to get different results... isn't that a thing called insanity?

1748. Re: Corriolis force

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-06 18:50:07 UTC
From: JIMMIE <JIMMIEDEE123@YAHOO.COM>
Message-ID: <28cf0a09-3d78-444e-a9ca-dbc12b491a0d@t2g2000yqn.googlegroups.com>
Source record: 13360

On Sep 5, 7:09 pm, "Dave" <no...@nowhere.com> wrote:
> "JIMMIE" <JIMMIEDEE...@YAHOO.COM> wrote in message
>
> news:0ba85287-71cc-487d-90b6-7351091f470b@m38g2000yqd.googlegroups.com...
> On Sep 5, 6:37 pm, "christofire" <christof...@btinternet.com> wrote:
>
> >It is conceivable that the Coriolis effect may act upon EM radiation.
> >But given the speed of propagation of the radiowaves the effect would
> >truly be miniscule. I Art thinks the rotation of the earth has any
> >significant effect on EM propagation he should show some reference. Im
> >not going to hold my breath until that happens.
>
> the key with the coriolis effect is that the earth turns under something
> that is moving north or south at different rates. it doesn't affect what is
> moving, that still follows normal physics... so basically something launched
> from the equator going north will have a higher velocity to the east than an
> observer north of it so it will appear to bend to the east. it really
> didn't, its just that the observer didn't move fast enough to keep up with
> it. that is why it is an 'effect' and not a 'force'. the object travels in
> a normal ballistic path as if the earth wasn't there once it leaves the
> launching point... so if you shine your laser north from the equator it will
> 'appear' to bend east, but if it did actually follow the earth's curvature
> it would only very slightly miss the north pole.

Now I understand this continuous on going babble with Art. Damn, you
guys have nothing better to do. Come to think of it thats why Im here
right now. Lets go get some sun.

Jimmie

1749. Re: Are Sunspots Disappearing?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-06 18:51:21 UTC
From: greenpjs@neo.rr.com
Message-ID: <9t08a5dpj39ihc6p5oi15g63i91p3hgfsh@4ax.com>
Source record: 13361

On Sun, 6 Sep 2009 22:25:06 +0800, "Peter" <pm@hotmail.com> wrote:

>Interesting article at science@nasa regarding speculation of future sunspots
>activity or should I say the lack of activity.
>
>Whatever happens, notes Hathaway, "the sun is behaving in an interesting way
>and I believe we're about to learn something new."
>
>http://science.nasa.gov/headlines/y2009/03sep_sunspots.htm

Hmmmm.
Yesterday afternoon, I graphed the amount of natural light striking my property. I started around 3:00 and measured until 8:00. The trend was alarming! The natural light kept getting lower and lower. If that trend has continued, there would have been no natural light at all by today. Fortunately, the light started increasing again just after sunrise this morning. Wow. That was close.

(Sorry, I couldn't resist.)

1750. Re: Corriolis force

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-06 19:20:58 UTC
From: Art Unwin <arthurunwin@gmail.com>
Message-ID: <f11b2bb0-c806-4ffd-893d-a250890110e1@o10g2000yqa.googlegroups.com>
Source record: 13362

On Sep 6, 1:16 pm, JIMMIE <JIMMIEDEE...@YAHOO.COM> wrote:
> On Sep 5, 7:29 pm, Art Unwin <arthurun...@gmail.com> wrote:
>
>
>
> > On Sep 5, 6:02 pm, JIMMIE <JIMMIEDEE...@YAHOO.COM> wrote:
>
> > > On Sep 5, 6:37 pm, "christofire" <christof...@btinternet.com> wrote:
>
> > > > "Art Unwin" <arthurun...@gmail.com> wrote in message
>
> > > >news:3d0c7b2e-968e-4626-91a7-b35bd6c54756@w36g2000yqm.googlegroups.com...
> > > > On Sep 5, 3:17 pm, "christofire" <christof...@btinternet.com> wrote:> "Szczepan
Bia³ek" <sz.bia...@wp.pl> wrote in message
>
> > > > -- snip --
>
> > > > >> If you want to discover what radiates I suggest you read one of the
> > > > >> normal text books on the subject, like Kraus 'Antennas', and stop
> > > > >> making
> > > > >> up your own versions!
>
> > > > > To discower what radiates will be better to do experiments with tipping
> > > > > of
> > > > > monopole antenas.
>
> > > > * Where do you get this stuff from? Please visit a library - you could do
> > > > yourself a lot of good.
> > > > Chris
>
> > > Chris, what I believe he is referring to is that computer programs
> > > support a tipped vertical over one at right angles to earth. Computer
> > > programs are supposed to be based on Maxwell's formula. Is this an
> > > error and how do we fix it. If it is not an error then it supports the
> > > presence of the Coriolis force in collusion with gravity. and not
> > > gravity alone.
>
> > * I don't doubt that it is possible to obtain results from a computer
> > program that appear to contradict conventional theory. Interpretation of
> > what comes out is always the responsibility of the operator so, whilst
> > anyone can enter parameter values and hit 'go', not everyone will interpret
> > the results correctly. In this respect it must help greatly to have a clear
> > understanding of the basic principles of how antennas radiate and how the
> > modelling programs operate; in most cases how the moment method works. My

> > > > recommendation, as before, is to read an edition of 'Antennas' by Kraus (or
> > > > an equivalent), cover to cover, before trying to make sense of the output of
> > > > any antenna modelling program. Of course, I realise that some who 'publish'
> > > > here feel this would be beneath them, or too hard ... but, really, it is
> > > > neither.
> >
> > > > My own take on the effect of tilting a vertical antenna is that if its
> > > > length is an appreciable fraction of a wavelength then tilting it will
> > > > distort its radiation pattern and will upset the uniformity of its
> > > > polarisation, which will impose a further effective radiation pattern. If
> > > > this results in a bit of gain in one particular direction with respect to a
> > > > particular polarisation then fine, and this may be of some use in amateur
> > > > radio service although it isn't how vertical monopoles are most often used
> > > > (i.e. their omni-directional pattern is their strength and there are many
> > > > other, better ways, to obtain directional patterns).
> >
> > > > However, the theory on which all the well-known modelling programs is based
> > > > is the simple stuff described by Kraus, et al, and probably in most cases
> > > > follows from the original work that led to NEC
> > > > (http://www.nec2.org/other/nec2prt1.pdf). It takes _no_ account of the
> > > > Coriolis force or gravity (outside of its impact on the speed of light). If
> > > > such a program produces output that the operator interprets as depending on
> > > > the Coriolis force then, logically, this must be a mistake on the part of
> > > > the operator - wouldn't you agree? However, if you believe the theory on
> > > > which the program is based is in error then maybe you shouldn't use it.
> >
> > > > More to the point, it is common knoweledge that there is no full
> > > > understanding of radiation available anywhere. Thus he is asking probing
> > > > questions to fill in the
> > > > gaps.
> >
> > > > * There is sufficient understanding of radiation and antennas out there, as
> > > > widely documented, to have enabled practical radio, radar, and suchlike for
> > > > more than a century. I understand that part of the point of amateur radio
> > > > is to encourage experimentation, but I don't understand why experimenters
> > > > should wish to shun the accepted, conventional theory and try to come up
> > > > with their own, perhaps paraphysical, versions - especially when those
> > > > people don't exhibit much understanding of the basics. Maybe they treat the
> > > > subject a bit like art (no pun intended) instead of the science that it
> > > > should be.
> >
> > > > Personaly I am not willing yet to say antenna programs are at fault
> > > > until more explanations come about. Can you explain what he is
> > > > commenting upon.?
> >
> > > > * It's possible he is being deliberately provocative.
> >
> > > > Chris
> >
> > > It is conceivable that the Coriolis effect may act upon EM radiation.

> > > But given the speed of propagation of the radiowaves the effect would
> > > truly be miniscule. I Art thinks the rotation of the earth has any
> > > significant effect on EM propagation he should show some reference. Im
> > > not going to hold my breath until that happens.
>
> > > Jimmie
>
> > I have always followed the particle approach over the EM route. The
> > reason I have followed this path is that Gauss's law dictates it and
> > computer programs support it. There has been no move to doubt programs
> > so I assume they are according to Maxwell and the errors are else
> > where. So let's go back and leave these assertions that have been
> > erroniously pointed at me and look at the Gaussian/ Maxwell
> > observation which I have pursued. I have posted the original statement
> > and look for those who have expertise in the area to post their views
> > and why. So Jimmie you have been prolific with your thoughts and
> > insults, allow us to view the mechanics of what ever decision you make
> > whether it is a repeat of David or one that shows your own method of
> > thinking.
> > Thanks in advance
> > Art
> > Dave has posted his reasons why he feels my assertion is false- Hide quoted text -
>
> > - Show quoted text -
>
> Art, it would be nice if you posted reason to why you think your
> assertions are true instead of just posting random assertions. Why
> should I waste my effort trying to explain why you are wrong when you
> refuse to make any effort to show why you are right.
>
> Jimmie

Jimmie the answer resides in the question posed. If you have a track
record such as a degree where you can explain academically, place your
input or be declared a follower.
2;1 against me so far but I need a couple more. So far there has been
much more that have commented but I have to sort intuition from
academics to decide on the playing field

1751. Re: Corriolis force

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-06 19:59:55 UTC
From: Art Unwin <arthurunwin@gmail.com>
Message-ID: <d6516fa1-c869-4b65-95b1-bbaf26df9af3@y9g2000yqn.googlegroups.com>
Source record: 13363

On Sep 6, 1:21 pm, "Dave" <no...@nowhere.com> wrote:
> "Art Unwin" <arthurun...@gmail.com> wrote in message
>
> news:3bdf4289-d741-4654-96d2-cc152fc56e3e@j39g2000yqh.googlegroups.com...
>
> >So the question remains where does a photon come from if it is not an
> >internal function of a free electron. Frankly the capacitor suggests
> >that the photon is a charge possesed by
> >a free electron.
>
> photons have no charge.
Could be I believe Cecil thinks otherwise but first we need to verify
the first statement made to determine what path to take. As yet
photons are not in Maxwells laws as we know it. That is Cecil,s track
without the beginning disclosed or a position on my beginning
and he has a problem with that, hopefully he comes down on my side

>
> >So again we are back to the Gauss/Maxwell question.
>
> separate guass and maxwell. gauss wrote laws, maxwell made a collection of
> equations and tied them all together... some of which were written
> originally by gauss. the basic laws that went into maxwell's collection
> have been well proven separately for over a century,

We are in agreement up to here, a drum roll please!
and as a collection to
> explain electromagnetic waves almost as long.
Nope. He added to the laws dt becau8se the metrics must add up to zero
per Newton
From this addition the metrics supply a clue to accellaration of
charge

 but note that maxwell does
> not talk about particles, his equations describe fields and waves.

Yes but not a explanation of the addition referring to acelaration of
charge dt

Theories alone have come along by others, waves, particles (photons)
and a little bit of both as yet none have been conclusive.

 They do
> contain terms for charge, but do not tie it to any given particle..

Back again we are in agreement

. and if
> you include the force equation then you can talk about mass and charge, but
> again not tied to any specific particle.

Again we are in agreement, this is terrific !

>
> >Einstein insinuated that the weak force is part of radiation and I
> >have applied my theorem to that.
>
> ah, so that is where you have crossed up the weak for and radiation...
> unfortunately the radiation being described in relation to the weak force is
> not electromagnetic radiation,

That is a matter of contention which is why I turned to boundary laws
which exhibit all forces. The one I chose was Gaussion law of statics
to procede upon since it was the basis
for placing a weak force in position which up to that point had not
been applied.
Thus to keep in line with Maxwells laws I was forced to make a static
field dynamic
which is accepted by physics unless I want to make it a special case
as others seem to think

but rather radiation caused by nuclear
> decay... most often beta decay

Well the Sun did provide these particles when equilibrium was broken
so if residue from the sun is radio active OR includes such I can
accept that. No problem

where the nucleus emits an electron and
> converts a neutron to a proton and an anti-neutrino.

I have "hinted" at neutrinos because it is presently hinted that
several typed of Neutrinos (flavors are emited by the Sun) we also see
light on contact with the Aurora but I decided to hang my hat on a
particle/ free electron because a lot can happen between the Sun and
its travels to Earth.

Well now you are into theory and just like the Higgs field all are
searching for conformation
via existing laws to give some substance to particles between the sun
and the Earth!.

 hmm, do anti-neutrinos
> cancel out your magical levitating diamagnetic solar neutrinos?

I have no idea. We do not know what is the difference to flavours
emmitted or their characteristics., What we do know is they enter the
earth as the smallest mass known
(from the Italian world of Enrico)
All of this starts with the Gauss/Maxwell aproach where I say you can
turn a static field into a dynamic field which is against the

perception of those on the group that are educated ,
academically.At least so far as those who are comfortable with both of
these laws.

1752. Re: Corriolis force

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-06 20:01:47 UTC
From: Art Unwin <arthurunwin@gmail.com>
Message-ID: <8e1c940d-6fb0-434d-8f32-5f29e510bb07@z30g2000yqz.googlegroups.com>
Source record: 13364

On Sep 6, 1:27 pm, "Dave" <no...@nowhere.com> wrote:
> "JIMMIE" <JIMMIEDEE...@YAHOO.COM> wrote in message
>
> news:8ea74e42-3429-4e3d-8863-de3a80c3f949@g23g2000yqh.googlegroups.com...
> On Sep 5, 7:29 pm, Art Unwin <arthurun...@gmail.com> wrote:
>
> >Art, it would be nice if you posted reason to why you think your
> >assertions are true instead of just posting random assertions. Why
> >should I waste my effort trying to explain why you are wrong when you
> >refuse to make any effort to show why you are right.
>
> because art is the consummate Democrat... he thinks that if he believes
> something then it must be true and its up to everyone else to prove him
> wrong. just look at the Democrat's belief that throwing money at education
> will result in better educated students... that has been going wrong for
> decades and they still believe it. art also shares another quality with
> Democrats, they don't learn. They keep doing the same things over and over
> again expecting to get different results... isn't that a thing called
> insanity?

No. Some of this group state what you repeat day after day, sme old
thing, is called experience.

1753. Re: Corriolis force

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-06 20:02:59 UTC
From: Richard Fry <rfry@adams.net>
Message-ID: <0bd6d977-f7bc-4657-b66a-29cf46509716@o10g2000yqa.googlegroups.com>
Source record: 13365

On Sep 5, 7:00 pm, Art Unwin <arthurun...@gmail.com> wrote:

> > > * Where do you get this stuff from? Please visit a library - you could do
> > > yourself a lot of good.
> > > Chris
>
> > Chris, what I believe he is referring to is that computer programs
> > support a tipped vertical over one at right angles to earth. Computer
> > programs are supposed to be based on Maxwell's formula. Is this an
> > error and how do we fix it. If it is not an error then it supports the
> > presence of the Coriolis force in collusion with gravity. and not
> > gravity alone.

The NEC computer programs are not in error. The error is in
understanding how far-field patterns develop.

Art, please read the following link about "tipped verticals," which
hopefully will lead to a better understanding of this issue.

http://groups.google.com/group/rec.radio.amateur.antenna/browse_thread/thread/d419e5b91e29
e0be/a174e9df6d9d1aa9#a174e9df6d9d1aa9

RF

1754. Re: Corriolis force

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-06 21:02:55 UTC
From: Art Unwin <arthurunwin@gmail.com>
Message-ID: <05325974-3030-400d-9ca0-e23d9505de8c@q7g2000yqi.googlegroups.com>
Source record: 13366

On Sep 6, 3:02 pm, Richard Fry <r...@adams.net> wrote:
> On Sep 5, 7:00 pm, Art Unwin <arthurun...@gmail.com> wrote:
>
> > > > > * Where do you get this stuff from? Please visit a library - you could do
> > > > > yourself a lot of good.
> > > > > Chris
>
> > > Chris, what I believe he is referring to is that computer programs
> > > support a tipped vertical over one at right angles to earth. Computer
> > > programs are supposed to be based on Maxwell's formula. Is this an
> > > error and how do we fix it. If it is not an error then it supports the
> > > presence of the Coriolis force in collusion with gravity. and not
> > > gravity alone.
>
> ------------
>
> The NEC computer programs are not in error. The error is in
> understanding how far-field patterns develop.
>
> Art, please read the following link about "tipped verticals," which
> hopefully will lead to a better understanding of this issue.
>
> http://groups.google.com/group/rec.radio.amateur.antenna/browse_threa...
>
> RF

I thought you had trackrecord in academics so you had a understanding
of the Gauss/Maxwell laws Oh well we all make mistakes
.
Now for your eznec set up. If it were me I would not quit so early but
at least try to fill a quadrant so you can determine a step that
appears logical
A bit to early to slaughter the messenger tho it appears to be your
intention.regardless

1755. Re: Corriolis force

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-06 21:07:28 UTC
From: Art Unwin <arthurunwin@gmail.com>
Message-ID: <5293aa79-849d-47b5-af3a-588d8410a9b9@g19g2000yqo.googlegroups.com>
Source record: 13367

On Sep 6, 1:16 pm, JIMMIE <JIMMIEDEE...@YAHOO.COM> wrote:
> On Sep 5, 7:29 pm, Art Unwin <arthurun...@gmail.com> wrote:
>
>
>
> > On Sep 5, 6:02 pm, JIMMIE <JIMMIEDEE...@YAHOO.COM> wrote:
>
> > > On Sep 5, 6:37 pm, "christofire" <christof...@btinternet.com> wrote:
>
> > > > "Art Unwin" <arthurun...@gmail.com> wrote in message
>
> > > >news:3d0c7b2e-968e-4626-91a7-b35bd6c54756@w36g2000yqm.googlegroups.com...
> > > > On Sep 5, 3:17 pm, "christofire" <christof...@btinternet.com> wrote:> "Szczepan
Bia³ek" <sz.bia...@wp.pl> wrote in message
>
> > > > -- snip --
>
> > > > >> If you want to discover what radiates I suggest you read one of the
> > > > >> normal text books on the subject, like Kraus 'Antennas', and stop
> > > > >> making
> > > > >> up your own versions!
>
> > > > > To discower what radiates will be better to do experiments with tipping
> > > > > of
> > > > > monopole antenas.
>
> > > > * Where do you get this stuff from? Please visit a library - you could do
> > > > yourself a lot of good.
> > > > Chris
>
> > > Chris, what I believe he is referring to is that computer programs
> > > support a tipped vertical over one at right angles to earth. Computer
> > > programs are supposed to be based on Maxwell's formula. Is this an
> > > error and how do we fix it. If it is not an error then it supports the
> > > presence of the Coriolis force in collusion with gravity. and not
> > > gravity alone.
>
> > * I don't doubt that it is possible to obtain results from a computer
> > program that appear to contradict conventional theory. Interpretation of
> > what comes out is always the responsibility of the operator so, whilst
> > anyone can enter parameter values and hit 'go', not everyone will interpret
> > the results correctly. In this respect it must help greatly to have a clear
> > understanding of the basic principles of how antennas radiate and how the
> > modelling programs operate; in most cases how the moment method works. My

> > > > recommendation, as before, is to read an edition of 'Antennas' by Kraus (or
> > > > an equivalent), cover to cover, before trying to make sense of the output of
> > > > any antenna modelling program. Of course, I realise that some who 'publish'
> > > > here feel this would be beneath them, or too hard ... but, really, it is
> > > > neither.
> >
> > > > My own take on the effect of tilting a vertical antenna is that if its
> > > > length is an appreciable fraction of a wavelength then tilting it will
> > > > distort its radiation pattern and will upset the uniformity of its
> > > > polarisation, which will impose a further effective radiation pattern. If
> > > > this results in a bit of gain in one particular direction with respect to a
> > > > particular polarisation then fine, and this may be of some use in amateur
> > > > radio service although it isn't how vertical monopoles are most often used
> > > > (i.e. their omni-directional pattern is their strength and there are many
> > > > other, better ways, to obtain directional patterns).
> >
> > > > However, the theory on which all the well-known modelling programs is based
> > > > is the simple stuff described by Kraus, et al, and probably in most cases
> > > > follows from the original work that led to NEC
> > > > (http://www.nec2.org/other/nec2prt1.pdf). It takes _no_ account of the
> > > > Coriolis force or gravity (outside of its impact on the speed of light). If
> > > > such a program produces output that the operator interprets as depending on
> > > > the Coriolis force then, logically, this must be a mistake on the part of
> > > > the operator - wouldn't you agree? However, if you believe the theory on
> > > > which the program is based is in error then maybe you shouldn't use it.
> >
> > > > More to the point, it is common knoweledge that there is no full
> > > > understanding of radiation available anywhere. Thus he is asking probing
> > > > questions to fill in the
> > > > gaps.
> >
> > > > * There is sufficient understanding of radiation and antennas out there, as
> > > > widely documented, to have enabled practical radio, radar, and suchlike for
> > > > more than a century. I understand that part of the point of amateur radio
> > > > is to encourage experimentation, but I don't understand why experimenters
> > > > should wish to shun the accepted, conventional theory and try to come up
> > > > with their own, perhaps paraphysical, versions - especially when those
> > > > people don't exhibit much understanding of the basics. Maybe they treat the
> > > > subject a bit like art (no pun intended) instead of the science that it
> > > > should be.
> >
> > > > Personaly I am not willing yet to say antenna programs are at fault
> > > > until more explanations come about. Can you explain what he is
> > > > commenting upon.?
> >
> > > > * It's possible he is being deliberately provocative.
> >
> > > > Chris
> >
> > > It is conceivable that the Coriolis effect may act upon EM radiation.

> > > But given the speed of propagation of the radiowaves the effect would
> > > truly be miniscule. I Art thinks the rotation of the earth has any
> > > significant effect on EM propagation he should show some reference. Im
> > > not going to hold my breath until that happens.
>
> > > Jimmie
>
> > I have always followed the particle approach over the EM route. The
> > reason I have followed this path is that Gauss's law dictates it and
> > computer programs support it. There has been no move to doubt programs
> > so I assume they are according to Maxwell and the errors are else
> > where. So let's go back and leave these assertions that have been
> > erroniously pointed at me and look at the Gaussian/ Maxwell
> > observation which I have pursued. I have posted the original statement
> > and look for those who have expertise in the area to post their views
> > and why. So Jimmie you have been prolific with your thoughts and
> > insults, allow us to view the mechanics of what ever decision you make
> > whether it is a repeat of David or one that shows your own method of
> > thinking.
> > Thanks in advance
> > Art
> > Dave has posted his reasons why he feels my assertion is false- Hide quoted text -
>
> > - Show quoted text -
>
> Art, it would be nice if you posted reason to why you think your
> assertions are true instead of just posting random assertions. Why
> should I waste my effort trying to explain why you are wrong when you
> refuse to make any effort to show why you are right.
>
> Jimmie

If you have the academic background then post at the point of the
problem. If not enjoy the Sun

1756. Re: Corriolis force

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-06 21:37:56 UTC
From: christofire <christofire@btinternet.com>
Message-ID: <Z6Odnd4yd6wqtjnXnZ2dnUVZ8m6dnZ2d@bt.com>
Source record: 13368

"Dave" <noone@nowhere.com> wrote in message
news:p6Tom.1350$Jd7.609@nwrddc02.gnilink.net...
>
> "Szczepan Bialek" <sz.bialek@wp.pl> wrote in message
> news:h80hh5$199$1@node1.news.atman.pl...
>> Take a rest in reading and look at the oryginal Hertz apparatus as the
>> two sources of longitudinal waves (radiated from ends). You should see
>> the Luxembourg effect (frequency doubling) and directional pattern.
>> S*
>>
> but you don't because that is not how it works. the waves are radiated by
> the whole length of the connecting wire and are transverse... there is no
> frequency doubling as you explain it.

... and the so-called 'Luxembourg effect' is not frequency doubling but
cross modulation; that is, generation in the ionosphere of intermodulation
products that carry the modulation of both sources. Third-order IPs are
usually much more important than harmonics when they fall in the same band
as one or more of the generating signals.

Chris

1757. Re: Corriolis force

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-06 21:56:01 UTC
From: christofire <christofire@btinternet.com>
Message-ID: <iNudnbnPYb5psjnXnZ2dnUVZ8gqdnZ2d@bt.com>
Source record: 13369

"Szczepan Bia&#65533;ek" <sz.bialek@wp.pl> wrote in message
news:h80hh5$199$1@node1.news.atman.pl...
>
>> -- snip --
>>
>>
>>>> * Would you care to cite a reference where it is stated that EM waves
>>>> in the far field of a transmitting antenna contain a significant
>>>> longitudinal component? Many respected authors, such as Kraus, have
>>>> illustrated the contrary, but their work isn't limited to paper; people
>>>> like Kraus have designed real antennas of types that are still in use
>>>> today.
>>>
>>> Maxwell ASSUMED that the aether is a solid body and ASSUMED that there
>>> are the transversal waves. Next he do the math to it. To prove it he
>>> asks Michelson to measure the movements of the Earth in this solid body.
>>> In 1878 (about) Michelson did not detect 30km/s. In 1925 he detect 0.4
>>> km/s. It means that the eather is not a solid body. The EM theory is
>>> only math (a piece to teach).
>>
>> * You haven't cited a reference. The words you have written here do not
>> demonstrate that EM waves are longitudinal. A 'reference', if you didn't
>> understand the term, means a passage from a book or paper written by
>> someone who has a proven reputation for good, useful work in the field.
>
> " Oliver Heaviside criticised Helmholtz' electromagnetic theory because it
> allowed the existence of longitudinal waves" .From:
> http://www.answers.com/topic/hermann-von-helmholtz
>
> Do you know somebody who has more proven reputation in acoustic and
> electrodynamics than Helmholtz?

```
* Yes: the late John D Kraus. He was a practical engineer as well as a
theoretician and his native language was English. He managed to put into
practice a lot of the theory that others had written about and he recorded
his work lucidly. I've already named two of Kraus's books - can you cite
something written by any of your favourites that provides clear explanations
that you understand? Answers.com doesn't explain anything technical.

> Hertz was the pupil of Helmholtz.
> The Maxwell's equations (that from 1864) was the same like the Helmholtz'
> for fluid mechanics.
> Many textbooks inform us that it was a big Maxwell's mistake. He ignored
> atomic nature of electricity disovered by Faraday at electrolise.
```

> Helmholtz not ignored it.
> Maxwell (modified by Heaviside) is only a piece to teach the math.

* Heaviside's documentation is appaling! I remember going through a
catalogue of his work in an effort to get to the truth about the origin of
the 'Heaviside condition' - a lot of it was written in obfuscation babble, a
bit like some of the contributors to this group.

>
>>>>>>Sound waves are longitudinal because air pressure is a scalar, whereas
>>>>>>electric and magnetic fields are vectors - they have polarisation.
>>>>>
>>>>> The math has not to do here.
>>>>
>>>> * What 'math'? ... just the mention of scalars and vectors, in a group
>>>> devoted to antennas. Please.
>>>
>>> The first step should be dicovering which part of the oryginal Hertz
>>> dipole radiate:
>>>
http://people.seas.harvard.edu/~jones/cscie129/nu_lectures/lecture6/hertz/Hertz_exp.html
>>>
>>> The big sparks (current) or the plates (balls).
>>> Note that todays dipoles are quite different. Now no current between the
>>> tips.
>>>>
>>>>
>>>>> Here is the full acoustic analogy. The two loudspeakers work like the
>>>>> two monopoles.
>>>>
>>>> * Rubbish. What 'two loudspeakers'? Ever heard of a horn loudspeaker?
>>>> ... it produces longitudinal pressure waves.
>>>
>>> Why then the two loudspeaker and the two monopoles have the same
>>> directional patern?
>>
>> * What 'two loudspeaker'? If you're drawing comparison between a
>> direct-radiator loudspeaker and a dipole and using that as a basis for
>> saying that EM waves are longitudinal, as I suspect you are, then you
>> should also consider a horn loudspeaker. Sound is radiated from the
>> mouth of a horn 'speaker and the other side of the compression driver
>> diaphragm can be totally enclosed. There is no simple comparison with a
>> dipole antenna in this case.

* Why don't you look into horn louspeakers and then report back. You may
find them fascinating and very unlike dipoles.

Chris

>>
>>>>
>>>>

>>>>>> Also, antennas that radiate are fed with alternating current. The
>>>>>> terminal voltage is almost immaterial in comparison with the
>>>>>> current - that's what causes the radiation.
>>>>>>
>>>>>> If you want to discover what radiates I suggest you read one of the
>>>>>> normal text books on the subject, like Kraus 'Antennas', and stop
>>>>>> making up your own versions!
>>>>>
>>>>> To discower what radiates will be better to do experiments with
>>>>> tipping of monopole antenas.
>>>>
>>>> * Where do you get this stuff from? Please visit a library - you could
>>>> do yourself a lot of good.
>>>
>>> Now Maxwell is avaiable on line. It is interesting to take a glance at
>>> them.
>>> S*
>>
>> * It's even more interesting to read text books by writers such as Kraus
>> who have known provenance. Maxwell's equations are covered very well in
>> his books 'Antennas' and 'Electromagnetics' - I suggest you read them.
>> It appears a lot of what is published on the WWW is written by people who
>> haven't taken the time to learn the basic simple stuff; school pupils and
>> college students perhaps. You have to be very careful what you accept as
>> true when the internet is involved.
>
> Take a rest in reading and look at the oryginal Hertz apparatus as the two
> sources of longitudinal waves (radiated from ends). You should see the
> Luxembourg effect (frequency doubling) and directional pattern.
> S*

1758. Re: Corriolis force

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-06 22:07:47 UTC
From: christofire <christofire@btinternet.com>
Message-ID: <E7ydnf5tPNsrrznXnZ2dnUVZ8rSdnZ2d@bt.com>
Source record: 13370

"Richard Fry" <rfry@adams.net> wrote in message
news:0bd6d977-f7bc-4657-b66a-29cf46509716@o10g2000yqa.googlegroups.com...
On Sep 5, 7:00 pm, Art Unwin <arthurun...@gmail.com> wrote:

> > > * Where do you get this stuff from? Please visit a library - you could
> > > do
> > > yourself a lot of good.
> > > Chris
>
> > Chris, what I believe he is referring to is that computer programs
> > support a tipped vertical over one at right angles to earth. Computer
> > programs are supposed to be based on Maxwell's formula. Is this an
> > error and how do we fix it. If it is not an error then it supports the
> > presence of the Coriolis force in collusion with gravity. and not
> > gravity alone.

The NEC computer programs are not in error. The error is in
understanding how far-field patterns develop.

Art, please read the following link about "tipped verticals," which
hopefully will lead to a better understanding of this issue.

http://groups.google.com/group/rec.radio.amateur.antenna/browse_thread/thread/d419e5b91e29
e0be/a174e9df6d9d1aa9#a174e9df6d9d1aa9

RF

* Richard, thank you for that. I stand by what I have stated in several
places earlier in this thread, that if tipping-over a monopole or dipole
results in more gain in one direction then that will be counteracted by less
gain in another direction (i.e. azimuth) as your eznec pattern illustrates.
There is also the question of polarisation purity.

Chris

1759. Re: Corriolis force

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-06 22:18:14 UTC
From: Richard Fry <rfry@adams.net>
Message-ID: <d9a30a5a-077a-43a2-af20-cf7303b3e664@g23g2000yqh.googlegroups.com>
Source record: 13371

On Sep 6, 4:02 pm, Art Unwin <arthurun...@gmail.com> wrote:
> On Sep 6, 3:02 pm, Richard Fry <r...@adams.net> wrote:
> Now for your eznec set up. If it were me I would not quit so early but
> at least try to fill a quadrant so you can determine a step that
> appears logical

If you understood NEC programs and the underlying physical principles on which they are based, Art, you would realize that the graphic comparison I posted represents the BEST CASE for those two conditions. Average performance over a quadrant is even worse.

If you have another "step" that appears logical to you, and which you think proves your point, I'll be happy to model it if you will supply acceptable details.

But from your point of view, you'd have been better off not making such a statement.

RF

1760. Re: Corriolis force

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-06 22:42:30 UTC
From: Art Unwin <arthurunwin@gmail.com>
Message-ID: <2ef95c2f-62e3-4e92-a82a-5acd0d1ec9a4@k39g2000yqe.googlegroups.com>
Source record: 13372

On Sep 6, 5:18 pm, Richard Fry <r...@adams.net> wrote:
> On Sep 6, 4:02 pm, Art Unwin <arthurun...@gmail.com> wrote:> On Sep 6, 3:02 pm, Richard Fry <r...@adams.net> wrote:
> > > Now for your eznec set up. If it were me I would not quit so early but
> > > at least try to fill a quadrant so you can determine a step that
> > > appears logical
>
> -------
> If you understood NEC programs and the underlying physical principles
> on which they are based, Art, you would realize that the graphic
> comparison I posted represents the BEST CASE for those two
> conditions. Average performance over a quadrant is even worse.
>
> If you have another "step" that appears logical to you, and which you
> think proves your point, I'll be happy to model it if you will supply
> acceptable details.
>
> But from your point of view, you'd have been better off not making
> such a statement.
>
> RF

Ok I will drop it,
that way I an be called in error and not arrogant
At last the end

1761. Re: Corriolis force

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-06 22:53:27 UTC
From: JIMMIE <JIMMIEDEE123@YAHOO.COM>
Message-ID: <e2d2e105-3d5c-44e0-941f-e75edac0d687@r39g2000yqm.googlegroups.com>
Source record: 13373

On Sep 6, 5:07 pm, Art Unwin <arthurun...@gmail.com> wrote:
> On Sep 6, 1:16 pm, JIMMIE <JIMMIEDEE...@YAHOO.COM> wrote:
>
>
>
>
>
> > On Sep 5, 7:29 pm, Art Unwin <arthurun...@gmail.com> wrote:
>
> > > On Sep 5, 6:02 pm, JIMMIE <JIMMIEDEE...@YAHOO.COM> wrote:
>
> > > > On Sep 5, 6:37 pm, "christofire" <christof...@btinternet.com> wrote:
>
> > > > > "Art Unwin" <arthurun...@gmail.com> wrote in message
>
> > > > >news:3d0c7b2e-968e-4626-91a7-b35bd6c54756@w36g2000yqm.googlegroups.com...
> > > > > On Sep 5, 3:17 pm, "christofire" <christof...@btinternet.com> wrote:> "Szczepan
Bia³ek" <sz.bia...@wp.pl> wrote in message
>
> > > > > -- snip --
>
> > > > > >> If you want to discover what radiates I suggest you read one of the
> > > > > >> normal text books on the subject, like Kraus 'Antennas', and stop
> > > > > >> making
> > > > > >> up your own versions!
>
> > > > > > To discower what radiates will be better to do experiments with tipping
> > > > > > of
> > > > > > monopole antenas.
>
> > > > > * Where do you get this stuff from? Please visit a library - you could do
> > > > > yourself a lot of good.
> > > > > Chris
>
> > > > Chris, what I believe he is referring to is that computer programs
> > > > support a tipped vertical over one at right angles to earth. Computer
> > > > programs are supposed to be based on Maxwell's formula. Is this an
> > > > error and how do we fix it. If it is not an error then it supports the
> > > > presence of the Coriolis force in collusion with gravity. and not
> > > > gravity alone.
>
> > > * I don't doubt that it is possible to obtain results from a computer
> > > program that appear to contradict conventional theory. Interpretation of
> > > what comes out is always the responsibility of the operator so, whilst

> > > > > anyone can enter parameter values and hit 'go', not everyone will interpret
> > > > > the results correctly. In this respect it must help greatly to have a clear
> > > > > understanding of the basic principles of how antennas radiate and how the
> > > > > modelling programs operate; in most cases how the moment method works. My
> > > > > recommendation, as before, is to read an edition of 'Antennas' by Kraus (or
> > > > > an equivalent), cover to cover, before trying to make sense of the output of
> > > > > any antenna modelling program. Of course, I realise that some who 'publish'
> > > > > here feel this would be beneath them, or too hard ... but, really, it is
> > > > > neither.
>
> > > > > My own take on the effect of tilting a vertical antenna is that if its
> > > > > length is an appreciable fraction of a wavelength then tilting it will
> > > > > distort its radiation pattern and will upset the uniformity of its
> > > > > polarisation, which will impose a further effective radiation pattern. If
> > > > > this results in a bit of gain in one particular direction with respect to a
> > > > > particular polarisation then fine, and this may be of some use in amateur
> > > > > radio service although it isn't how vertical monopoles are most often used
> > > > > (i.e. their omni-directional pattern is their strength and there are many
> > > > > other, better ways, to obtain directional patterns).
>
> > > > > However, the theory on which all the well-known modelling programs is based
> > > > > is the simple stuff described by Kraus, et al, and probably in most cases
> > > > > follows from the original work that led to NEC
> > > > > (http://www.nec2.org/other/nec2prt1.pdf). It takes _no_ account of the
> > > > > Coriolis force or gravity (outside of its impact on the speed of light). If
> > > > > such a program produces output that the operator interprets as depending on
> > > > > the Coriolis force then, logically, this must be a mistake on the part of
> > > > > the operator - wouldn't you agree? However, if you believe the theory on
> > > > > which the program is based is in error then maybe you shouldn't use it.
>
> > > > > More to the point, it is common knoweledge that there is no full
> > > > > understanding of radiation available anywhere. Thus he is asking probing
> > > > > questions to fill in the
> > > > > gaps.
>
> > > > > * There is sufficient understanding of radiation and antennas out there, as
> > > > > widely documented, to have enabled practical radio, radar, and suchlike for
> > > > > more than a century. I understand that part of the point of amateur radio
> > > > > is to encourage experimentation, but I don't understand why experimenters
> > > > > should wish to shun the accepted, conventional theory and try to come up
> > > > > with their own, perhaps paraphysical, versions - especially when those
> > > > > people don't exhibit much understanding of the basics. Maybe they treat the
> > > > > subject a bit like art (no pun intended) instead of the science that it
> > > > > should be.
>
> > > > > Personaly I am not willing yet to say antenna programs are at fault
> > > > > until more explanations come about. Can you explain what he is
> > > > > commenting upon.?
>
> > > > > * It's possible he is being deliberately provocative.

>
> > > > > Chris
>
> > > > It is conceivable that the Coriolis effect may act upon EM radiation.
> > > > But given the speed of propagation of the radiowaves the effect would
> > > > truly be miniscule. I Art thinks the rotation of the earth has any
> > > > significant effect on EM propagation he should show some reference. Im
> > > > not going to hold my breath until that happens.
>
> > > > Jimmie
>
> > > I have always followed the particle approach over the EM route. The
> > > reason I have followed this path is that Gauss's law dictates it and
> > > computer programs support it. There has been no move to doubt programs
> > > so I assume they are according to Maxwell and the errors are else
> > > where. So let's go back and leave these assertions that have been
> > > erroniously pointed at me and look at the Gaussian/ Maxwell
> > > observation which I have pursued. I have posted the original statement
> > > and look for those who have expertise in the area to post their views
> > > and why. So Jimmie you have been prolific with your thoughts and
> > > insults, allow us to view the mechanics of what ever decision you make
> > > whether it is a repeat of David or one that shows your own method of
> > > thinking.
> > > Thanks in advance
> > > Art
> > > Dave has posted his reasons why he feels my assertion is false- Hide quoted text -
>
> > > - Show quoted text -
>
> > Art, it would be nice if you posted reason to why you think your
> > assertions are true instead of just posting random assertions. Why
> > should I waste my effort trying to explain why you are wrong when you
> > refuse to make any effort to show why you are right.
>
> > Jimmie
>
> If you have the academic background then post at the point of the
> problem. If not enjoy the Sun- Hide quoted text -
>
> - Show quoted text -

No problem and no point.

Jimmie

1762. Re: Corriolis force

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-06 23:00:36 UTC
From: "J. Mc Laughlin" <jcm@power-net.net>
Message-ID: <xludnSoR6K2PojnXnZ2dnUVZ_j6dnZ2d@bright.net>
Source record: 13374

Dear Group:
I applaud the suggestion to read my mentor's book on Antennas (any edition) to gain an understanding. The clarity of his writing is the best that I have found. However, recently a collaborator of Professor Kraus has written a small, inexpensive book just explaining Maxwell's compilation of equations.

Consider the purchase and study of: "A Student's Guide to Maxwell's Equations" by Daniel Fleisch. ISBN is 978-0-521-70147-1 The publisher is Cambridge University Press. Amazon has the book for about $23.

73, Mac N8TT
--
J. McLaughlin; Michigan, USA
Home: JCM@power-net.net

<<< I managed to clip "stuff" and attributions.

>
>
> * Yes: the late John D Kraus. He was a practical engineer as well as a
> theoretician and his native language was English. He managed to put into
> practice a lot of the theory that others had written about and he recorded
> his work lucidly. I've already named two of Kraus's books - can you cite
> something written by any of your favorites that provides clear
> explanations that you understand? Answers.com doesn't explain anything
> technical.
>
>

>>>
>>> * It's even more interesting to read text books by writers such as Kraus
>>> who have known provenance. Maxwell's equations are covered very well in
>>> his books 'Antennas' and 'Electromagnetics' - I suggest you read them.
>>> It appears a lot of what is published on the WWW is written by people
>>> who haven't taken the time to learn the basic simple stuff; school
>>> pupils and college students perhaps. You have to be very careful what
>>> you accept as true when the internet is involved.
>>

1763. Re: Corriolis force

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-06 23:06:26 UTC
From: richardharrison@webtv.net
Message-ID: <20199-4AA44072-3994@storefull-3173.bay.webtv.net>
Source record: 13376

Art wrote:
"I thought you had a trackrecord in academics so you had an
understanding of Maxwell`s laws."

Maxwell`s equations are necessary and sufficient to describe radiation from any antenna. I long ago suggested in this newsgroup that Art read a fine book, "Radio-Electronic Transmission Fundamentals" by B. Whitfield Griffith,Jr., now reprinted by Scitech Publishing Inc.

In the first chapter Griffith gives a brief history of electrical knowledge. On page 3 he says:

"We had, for instance, Coulomb`s law, relating to electric charge and the mechanical force it produces; Ampere`s Rule, connecting current and magnetism; Gauss` law, giving the relationship between electric charge and the field of the electric potential; Ohm`s law, relating voltage, current, and resistance; and Faraday`s law, concerning the relationship between the magnetic field and the induced voltage. Nothing seemed to tie these miscellanious relationships together, althoigh they appeared to pertain to the same general subject.

Perhaps it was the working of a fateful pattern, perhaps mere coincidennce, that there was born in the same year that Faraday made his great discovery the man who was destined to correlate and organize all these separate rules into the modern electromagnetic theory."

"Maxwell`s Generalization"

This posting is long enough so I`ll stop.

Best regards, Richard Harrison, KB5WZI

1764. Re: Burying Coax Feedlines & Control Cables

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-06 23:12:47 UTC
From: "J. Mc Laughlin" <jcm@power-net.net>
Message-ID: <8KudneINmNRw3DnXnZ2dnUVZ_jadnZ2d@bright.net>
Source record: 13375

Dear Mike: If you decide not to place wire in conduit, consider the use of PE jackets. Heliax seems to have PE jackets. The animals in Michigan love chewing on PVC jacked wire/coax. You might be far enough north not to have the sort of chewing animals common in Michigan.

My experience with 4 inch conduit (plastic, outdoor) is that one may pull one set of wire/coax while assembling and sealing ten foot sections, and then forget about pulling more wires.

Let us all know what you ended up doing. 73, Mac N8TT

--
J. McLaughlin; Michigan, USA
Home: JCM@power-net.net
"Jeff Liebermann" <jeffl@cruzio.com> wrote in message
news:8eg6a51rhp9la27dkh0nh3ut2mlbkpbqb6@4ax.com...

>
>>On Sep 5, 10:20 pm, "Mike, who else?" <h...@there.com> wrote:
>>> I have a 64 foot Trylon Titan Tower at 64 feet (with a 3 element
>>> Steppir)
>>> and it's 30 metres from my home. I intend on burying the feedlines (X2
>>> 1/2" heliax and x2 RG213 coax) plus rotators cable and Steppir cable. I
>>> was going to dig a 4" wide by 6" deep trench then just bury them. Yeah,
>>> that's alot of work with a shovel. Any better suggestions? This is my
>>> Labour Day weekend job (get the pun?).
>>>
>>> 73 de Mike VE6HMG
>>
>>That is my setup but I put large 4 inch plastic tubing in the trench
>>so that the innards could be easily removed, inspected and added to
>>without having to re dig the trench each time.
>>I left a heavy wire in place to make it easy to make changes over the
>>years. Because of the length underground and then the tower I used 7/8
>>heliax. I also placed a pipe into the tower concrete so I could place
>>the coax inside the tower if I wanted without the possibility of the
>>mower hitting it.
>
> I just hate to admit that Art is right (this time only). Conduit is
> the way to go. Don't direct bury the cables. Bury conduit and pull
> the cables through.
>
> Incidentally, a local state radio building went cheap and used direct
> burial cables. 3 months later, the whole mess failed. I popped the
> pull box cover and discovered that the gophers had chewed through the

> coax and control cables.
>
> I don't know what manner of ground you're working with, but you might
> consider horizontal drilling. See:
> <http://www.borit.com>
> About $250 or available from your local rental yard. Most plumbers
> and electricians have one or something like it for laying conduit
> under driveways and sidewalks. The standard back reamer is about 5"
> diameter, which is about right for 4" I.D. schedule 40.
>
> Otherwise, you get to do some trenching. Sweat or Ditch Witch from
> the rental yard. You decide. You'll need to go considerably deeper
> than 6 inches. Check your local electrical code, but as I vaguely
> recall, it's at least 2.5 ft. Putting 1.8" of dirt on top of a 4.2"
> diameter pipe just isn't going to work. The first time someone drive
> a vehicle over the conduit, it's going to crack. Dig deeper.
>
> Actually, I'm not sure that 4" diameter will work. Measure or
> calculate the required diameter. Just use a circle template and draw
> the bundle on a piece of paper. Leave PLENTY of extra room. Be
> prepared to leave extra space to pull the RF connectors through (one
> at a time) or you'll be cutting off some expensive Heliax connectors.
> Don't forget to leave a polypropylene pull line in the conduit for
> repairs and additions. You'll need 100 meters of line as you need to
> pull a new line through with every wire pull. 30 meters is a long way
> for a conduit pull. You may need to get some slimy cable lube to make
> it easier. You can try to pull the whole bundle through at once, but
> I don't think you'll make it, especially with 90 degree elbows at each
> end.
>
> Put some effort into making sure that the conduit is waterproof. This
> is best done by proper gluing and testing with an air compressor and
> bubble soap mix. I'm partial to sealing the ends and pressurizing the
> conduit, but that's overkill for the typical ham installation.
>
> You'll need a 90 degree elbow at each end. Use the largest radius you
> can get away with. Heliax does not like to be snaked around sharp
> corners. You'll also need some kind of protective cover or rams-head
> at the conduit ends. You don't want the open end of the conduit
> pointing up and acting as a funnel.
>
> You should also get some useful pointers from the Tower Talk mailing
> list:
> <http://www.contesting.com/FAQ/towertalk>
>
> In case you haven't noticed, this is a bit more than a weekend
> project. It's also not cheap. Good luck.
>
>
> --

> Jeff Liebermann jeffl@cruzio.com
> 150 Felker St #D http://www.LearnByDestroying.com
> Santa Cruz CA 95060 http://802.11junk.com
> Skype: JeffLiebermann AE6KS 831-336-2558

1765. Re: Corriolis force

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-06 23:41:17 UTC
From: christofire <christofire@btinternet.com>
Message-ID: <tbGdnVJkkbQ91TnXnZ2dnUVZ8iKdnZ2d@bt.com>
Source record: 13377

"J. Mc Laughlin" <jcm@power-net.net> wrote in message
news:xIudnSoR6K2PojnXnZ2dnUVZ_j6dnZ2d@bright.net...
> Dear Group:
> I applaud the suggestion to read my mentor's book on Antennas (any
> edition) to gain an understanding. The clarity of his writing is the best
> that I have found. However, recently a collaborator of Professor Kraus
> has written a small, inexpensive book just explaining Maxwell's
> compilation of equations.
>
> Consider the purchase and study of: "A Student's Guide to Maxwell's
> Equations" by Daniel Fleisch. ISBN is 978-0-521-70147-1 The publisher
> is Cambridge University Press. Amazon has the book for about $23.
>
> 73, Mac N8TT
> --
> J. McLaughlin; Michigan, USA
> Home: JCM@power-net.net
>
> <<< I managed to clip "stuff" and attributions.

... which I've further clipped (Chris).

* Thank you Mac. A voice of sense in the wilderness!

I'm aware that Fleisch collaborated with Kraus to compile the third edition of 'Antennas: for all applications' classified as ISBN 13: 978-0-07-112240-5 and ISBN 10: 0-07-112240-0. In my view this is one of the clearest editions of 'Antennas' so his guide to Maxwell's equations will certainly be worth investigating.

I found another, rather unexpected, source of lucid practical application of some of Maxwell's equations in a book that may be the 'bible' for those involved professionally in VHF/UHF aeronautical communications: 'Ultra High Frequency Propagation' by Reed, H.R. and Russell, C.M., Boston Technical Publishers, of which I have the second edition from1966. Chapter 4 therein. I bought my copy from one of the on-line second-hand book stores for something like 8 UKP. I recommend it to all who read this news group - it really is lucid on lots of matters of antennas and propagation, and not just at UHF.

Chris

1766. Re: Corriolis force

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-06 23:56:22 UTC
From: Art Unwin <arthurunwin@gmail.com>
Message-ID: <2ca29bec-dfaa-4f13-bf33-6b275bb3df6e@g19g2000yqo.googlegroups.com>
Source record: 13378

On Sep 6, 5:53 pm, JIMMIE <JIMMIEDEE...@YAHOO.COM> wrote:
> On Sep 6, 5:07 pm, Art Unwin <arthurun...@gmail.com> wrote:
>
>
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> > > > > * Where do you get this stuff from? Please visit a library - you could do
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> > > > Chris, what I believe he is referring to is that computer programs
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> > > > programs are supposed to be based on Maxwell's formula. Is this an
> > > > error and how do we fix it. If it is not an error then it supports the
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> > > > > > neither.
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> > > > > > My own take on the effect of tilting a vertical antenna is that if its
> > > > > > length is an appreciable fraction of a wavelength then tilting it will
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> > > > > > particular polarisation then fine, and this may be of some use in amateur
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> > > > > > the operator - wouldn't you agree? However, if you believe the theory on
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> > > > > > Chris
>
> > > > > It is conceivable that the Coriolis effect may act upon EM radiation.
> > > > > But given the speed of propagation of the radiowaves the effect would
> > > > > truly be miniscule. I Art thinks the rotation of the earth has any
> > > > > significant effect on EM propagation he should show some reference. Im
> > > > > not going to hold my breath until that happens.
>
> > > > > Jimmie
>
> > > > I have always followed the particle approach over the EM route. The
> > > > reason I have followed this path is that Gauss's law dictates it and
> > > > computer programs support it. There has been no move to doubt programs
> > > > so I assume they are according to Maxwell and the errors are else
> > > > where. So let's go back and leave these assertions that have been
> > > > erroniously pointed at me and look at the Gaussian/ Maxwell
> > > > observation which I have pursued. I have posted the original statement
> > > > and look for those who have expertise in the area to post their views
> > > > and why. So Jimmie you have been prolific with your thoughts and
> > > > insults, allow us to view the mechanics of what ever decision you make
> > > > whether it is a repeat of David or one that shows your own method of
> > > > thinking.
> > > > Thanks in advance
> > > > Art
> > > > Dave has posted his reasons why he feels my assertion is false- Hide quoted text -
>
> > > > - Show quoted text -
>
> > > Art, it would be nice if you posted reason to why you think your
> > > assertions are true instead of just posting random assertions. Why
> > > should I waste my effort trying to explain why you are wrong when you
> > > refuse to make any effort to show why you are right.
>
> > > Jimmie
>
> > If you have the academic background then post at the point of the
> > problem. If not enjoy the Sun- Hide quoted text -
>
> > - Show quoted text -
>
> No problem and no point.
>
> Jimmie

Well Jimmie it is very interesting so far. Two academics who came
forwards
presented a real clue on our differences which allows us to
concentrate on a single factor.
The point that they are making is that this is a rare exception to the

ability of turning a static field into a dynamic field ! This is the single point of disagreement on the validity of the starting of the trail that I undertook. Those two are comfortable with the understanding of Gauss and Maxwell where others were unsure. So the task is now simple which allows others to join in. What in this situation makes it different to other situations that does not allow a transformation to a dynamic field which is the norm of Classical Physics.
Short, clear, and to the point which is all inclusive to the discussion. It wipes out all the side talk and accusation of arragance and the use of the term babble when one cannot understand points made . I am real happy these two came forward because it essentially has high lighted our differences upon which we can concentrate on. What in terms of Classical Physics that is placed forward by these two prevents the change over to a dynamic field? Maybe they will tell us or maybe it is for the individual to identify which and what is correct and why.
Progress at last!
After all these years after discussion between suedo experts shooting from the hip and hitting themselves in the foot.

1767. Re: Corriolis force

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-07 00:10:18 UTC
From: tom <news4792@taring.org>
Message-ID: <4aa44fbd$0$42840$8046368a@newsreader.iphouse.net>
Source record: 13379

Art Unwin wrote:
> On Sep 6, 1:16 pm, JIMMIE <JIMMIEDEE...@YAHOO.COM> wrote:
<snip>
>> refuse to make any effort to show why you are right.
>>
>> Jimmie
>
> Jimmie the answer resides in the question posed. If you have a track
> record such as a degree where you can explain academically, place your
> input or be declared a follower.
> 2;1 against me so far but I need a couple more. So far there has been
> much more that have commented but I have to sort intuition from
> academics to decide on the playing field

Art

I don't remember what you stated as your alma mater. Could you please
enlighten us as to where you got your EE degree?

tom
K0TAR

1768. Re: Corriolis force

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-07 00:17:53 UTC
From: tom <news4792@taring.org>
Message-ID: <4aa4511e$0$28117$8046368a@newsreader.iphouse.net>
Source record: 13380

Dave wrote:
>
> "Szczepan Bialek" <sz.bialek@wp.pl> wrote in message
> news:h80hh5$199$1@node1.news.atman.pl...
>> Take a rest in reading and look at the oryginal Hertz apparatus as the
>> two sources of longitudinal waves (radiated from ends). You should see
>> the Luxembourg effect (frequency doubling) and directional pattern.
>> S*
>>
> but you don't because that is not how it works. the waves are radiated
> by the whole length of the connecting wire and are transverse... there
> is no frequency doubling as you explain it.

Dave

This getting to be as bad as the s.p.fusion and s.p.relativity groups.

Heck, Chris makes a lot more sense (s.p.fusion) and actually learns
things, provides results and admits mistakes while he tries to build his
fusion reactor in a London flat. He still claims the govt has
lobotimized him several times and "it grows back", but other than that
he's quite sane. Unlike Art and Szczpan.

tom
K0TAR

1769. Re: Corriolis force

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-07 00:38:10 UTC
From: Art Unwin <arthurunwin@gmail.com>
Message-ID: <1fb855e2-80e8-4c37-a7e1-9fc6902e55c9@g19g2000yqo.googlegroups.com>
Source record: 13382

On Sep 6, 5:07 pm, "christofire" <christof...@btinternet.com> wrote:
> "Richard Fry" <r...@adams.net> wrote in message
>
> news:0bd6d977-f7bc-4657-b66a-29cf46509716@o10g2000yqa.googlegroups.com...
> On Sep 5, 7:00 pm, Art Unwin <arthurun...@gmail.com> wrote:
>
> > > > * Where do you get this stuff from? Please visit a library - you could
> > > > do
> > > > yourself a lot of good.
> > > > Chris
>
> > > Chris, what I believe he is referring to is that computer programs
> > > support a tipped vertical over one at right angles to earth. Computer
> > > programs are supposed to be based on Maxwell's formula. Is this an
> > > error and how do we fix it. If it is not an error then it supports the
> > > presence of the Coriolis force in collusion with gravity. and not
> > > gravity alone.
>
> ------------
>
> The NEC computer programs are not in error. The error is in
> understanding how far-field patterns develop.
>
> Art, please read the following link about "tipped verticals," which
> hopefully will lead to a better understanding of this issue.
>
> http://groups.google.com/group/rec.radio.amateur.antenna/browse_threa...
>
> RF
>
> * Richard, thank you for that. I stand by what I have stated in several
> places earlier in this thread, that if tipping-over a monopole or dipole
> results in more gain in one direction then that will be counteracted by less
> gain in another direction (i.e. azimuth) as your eznec pattern illustrates.
> There is also the question of polarisation purity.
>
> Chris

Equilibrium is when there is no gain. When this occurs there is
polarisation purity.
Gain is not a factor in equilibrium so why muddy up the question. Or
is that being arrogant
because you disagree with me LOL

1770. Re: Corriolis force

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-07 00:38:25 UTC
From: christofire <christofire@btinternet.com>
Message-ID: <e6adnf8e3LCZyznXnZ2dnUVZ8lidnZ2d@bt.com>
Source record: 13381

"tom" <news4792@taring.org> wrote in message
news:4aa4511e$0$28117$8046368a@newsreader.iphouse.net...
> Dave wrote:
>>
>> "Szczepan Bialek" <sz.bialek@wp.pl> wrote in message
>> news:h80hh5$199$1@node1.news.atman.pl...
>>> Take a rest in reading and look at the oryginal Hertz apparatus as the
>>> two sources of longitudinal waves (radiated from ends). You should see
>>> the Luxembourg effect (frequency doubling) and directional pattern.
>>> S*
>>>
>> but you don't because that is not how it works. the waves are radiated
>> by the whole length of the connecting wire and are transverse... there is
>> no frequency doubling as you explain it.
>
> Dave
>
> This getting to be as bad as the s.p.fusion and s.p.relativity groups.
>
> Heck, Chris makes a lot more sense (s.p.fusion) and actually learns
> things, provides results and admits mistakes while he tries to build his
> fusion reactor in a London flat. He still claims the govt has lobotimized
> him several times and "it grows back", but other than that he's quite
> sane. Unlike Art and Szczpan.
>
> tom
> K0TAR

* Remarkably, Tom, you're quite correct in your assessment!

What am I doing here?

Chris

1771. Re: Corriolis force

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-07 00:46:45 UTC
From: tom <news4792@taring.org>
Message-ID: <4aa45848$0$42840$8046368a@newsreader.iphouse.net>
Source record: 13383

christofire wrote:
> "tom" <news4792@taring.org> wrote in message
> news:4aa4511e$0$28117$8046368a@newsreader.iphouse.net...
>> Dave wrote:
>>> "Szczepan Bialek" <sz.bialek@wp.pl> wrote in message
>>> news:h80hh5$199$1@node1.news.atman.pl...
>>>> Take a rest in reading and look at the oryginal Hertz apparatus as the
>>>> two sources of longitudinal waves (radiated from ends). You should see
>>>> the Luxembourg effect (frequency doubling) and directional pattern.
>>>> S*
>>>>
>>> but you don't because that is not how it works. the waves are radiated
>>> by the whole length of the connecting wire and are transverse... there is
>>> no frequency doubling as you explain it.
>> Dave
>>
>> This getting to be as bad as the s.p.fusion and s.p.relativity groups.
>>
>> Heck, Chris makes a lot more sense (s.p.fusion) and actually learns
>> things, provides results and admits mistakes while he tries to build his
>> fusion reactor in a London flat. He still claims the govt has lobotimized
>> him several times and "it grows back", but other than that he's quite
>> sane. Unlike Art and Szczpan.
>>
>> tom
>> K0TAR
>
>
> * Remarkably, Tom, you're quite correct in your assessment!
>
> What am I doing here?
>
> Chris
>
>

You're that Chris? If so, welcome. Your videos are very interesting,
as are your experiments.

tom
K0TAR

1772. Re: Corriolis force

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-07 00:54:45 UTC
From: tom <news4792@taring.org>
Message-ID: <4aa459c3$0$28112$8046368a@newsreader.iphouse.net>
Source record: 13384

Art Unwin wrote:
>
> Equilibrium is when there is no gain. When this occurs there is
> polarisation purity.
> Gain is not a factor in equilibrium so why muddy up the question. Or
> is that being arrogant
> because you disagree with me LOL

Another data point. Or better put, Art's babbling for today.

So now we have

Equilibrium ==

1) no reflections.

2) isotropic.

3) no gain.

Keep going Art.

If I missed one, step in Dave.

tom
K0TAR

1773. Re: Corriolis force

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-07 01:00:59 UTC
From: tom <news4792@taring.org>
Message-ID: <4aa45b38$0$28112$8046368a@newsreader.iphouse.net>
Source record: 13385

tom wrote:
> Art Unwin wrote:
>>
>> Equilibrium is when there is no gain. When this occurs there is
>> polarisation purity.
>> Gain is not a factor in equilibrium so why muddy up the question. Or
>> is that being arrogant
>> because you disagree with me LOL
>

Oops missed one right in front of my lying eyes.

Equilibrium ==

1) no reflections.

2) isotropic.

3) no gain.

4) polarization purity.

tom
K0TAR

1774. Re: Corriolis force

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-07 01:01:16 UTC
From: christofire <christofire@btinternet.com>
Message-ID: <3eidnZqnOa7CxjnXnZ2dnUVZ8k2dnZ2d@bt.com>
Source record: 13386

"Art Unwin" <arthurunwin@gmail.com> wrote in message
news:1fb855e2-80e8-4c37-a7e1-9fc6902e55c9@g19g2000yqo.googlegroups.com...
On Sep 6, 5:07 pm, "christofire" <christof...@btinternet.com> wrote:

-- snip --

> * Richard, thank you for that. I stand by what I have stated in several
> places earlier in this thread, that if tipping-over a monopole or dipole
> results in more gain in one direction then that will be counteracted by
> less
> gain in another direction (i.e. azimuth) as your eznec pattern
> illustrates.
> There is also the question of polarisation purity.
>
> Chris

Equilibrium is when there is no gain. When this occurs there is
polarisation purity.
Gain is not a factor in equilibrium so why muddy up the question. Or
is that being arrogant
because you disagree with me LOL

* I don't suppose it's arrogant to present reasoning derived from the work of those who have provided practical antenna designs for the masses for a century or more - it's just a case of reminding the readers of this NG what's already out there, freely available for them to investigate (as though most of them didn't already know!).

I do suppose it's arrogant to present new, unproven, possibly paraphysical, attempts at 'explanation' involving poorly-defined terms like 'equilibrium', in opposition to the conventional working and expecting those who read this NG to believe them, when the full working appears to be withheld.

Chris

1775. Re: Corriolis force

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-07 01:09:44 UTC
From: Richard Fry <rfry@adams.net>
Message-ID: <effd89e2-fb0a-489d-ba2e-c0ed634b0f94@r39g2000yqm.googlegroups.com>
Source record: 13387

On Sep 6, 7:38 pm, Art Unwin <arthurun...@gmail.com> wrote:
> Equilibrium is when there is no gain. When this occurs there is
> polarisation purity.

So you say, Art.

Note that a useful and practical antenna with "no gain," i.e., an isotropic radiator, does not exist in the real world.

So what good is your concept of "equilibrium?"

RF

1776. Re: Corriolis force

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-07 01:14:28 UTC
From: Art Unwin <arthurunwin@gmail.com>
Message-ID: <24549a0c-e176-4902-88d2-bee546b865fb@z30g2000yqz.googlegroups.com>
Source record: 13388

On Sep 6, 7:10 pm, tom <news4...@taring.org> wrote:
> Art Unwin wrote:
> > On Sep 6, 1:16 pm, JIMMIE <JIMMIEDEE...@YAHOO.COM> wrote:
> <snip>
> >> refuse to make any effort to show why you are right.
>
> >> Jimmie
>
> > Jimmie the answer resides in the question posed. If you have a track
> > record such as a degree where you can explain academically, place your
> > input or be declared a follower.
> > 2;1 against me so far but I need a couple more. So far there has been
> > much more that have commented but I have to sort intuition from
> > academics to decide on the playing field
>
> Art
>
> I don't remember what you stated as your alma mater. Could you please
> enlighten us as to where you got your EE degree?
>
> tom
> K0TAR

no

1777. Re: Corriolis force

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-07 01:20:44 UTC
From: tom <news4792@taring.org>
Message-ID: <4aa45fd9$0$28112$8046368a@newsreader.iphouse.net>
Source record: 13389

Art Unwin wrote:
> On Sep 6, 7:10 pm, tom <news4...@taring.org> wrote:
>> Art Unwin wrote:
>>> On Sep 6, 1:16 pm, JIMMIE <JIMMIEDEE...@YAHOO.COM> wrote:
>> <snip>
>>>> refuse to make any effort to show why you are right.
>>>> Jimmie
>>> Jimmie the answer resides in the question posed. If you have a track
>>> record such as a degree where you can explain academically, place your
>>> input or be declared a follower.
>>> 2;1 against me so far but I need a couple more. So far there has been
>>> much more that have commented but I have to sort intuition from
>>> academics to decide on the playing field
>> Art
>>
>> I don't remember what you stated as your alma mater. Could you please
>> enlighten us as to where you got your EE degree?
>>
>> tom
>> K0TAR
>
> no

So you demand of others what you will not provide.

Add hypocrite to your list of credits.

tom
K0TAR

1778. Re: Corriolis force

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-07 01:25:51 UTC
From: Art Unwin <arthurunwin@gmail.com>
Message-ID: <f33969d8-5ffa-40d9-8994-326fab672a10@v36g2000yqv.googlegroups.com>
Source record: 13390

On Sep 6, 8:09 pm, Richard Fry <r...@adams.net> wrote:
> On Sep 6, 7:38 pm, Art Unwin <arthurun...@gmail.com> wrote:> Equilibrium is when there is no gain. When this occurs there is
> > polarisation purity.
>
> ----------
>
> So you say, Art.
>
> Note that a useful and practical antenna with "no gain," i.e., an
> isotropic radiator, does not exist in the real world.
>
> So what good is your concept of "equilibrium?"
>
> RF

Enough! You did not get on the stage with respect to the laws of Gauss and Maxwell so I must assume you are shooting from the hip.It is not to late to add to the static /dynamic boundary question assuming you are an engineer of some sort. Other than that.....

1779. Re: Corriolis force

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-07 01:49:14 UTC
From: Richard Fry <rfry@adams.net>
Message-ID: <9a699866-d4aa-4b45-a555-360c9f0b56ba@x37g2000yqj.googlegroups.com>
Source record: 13391

On Sep 6, 8:25 pm, Art Unwin <arthurun...@gmail.com> wrote:
> Enough! You did not get on the stage with respect to the laws of Gauss
> and Maxwell so I must assume you are shooting from the hip...

Probably most readers of your posts on this subject (including yours truly) don't wish even to _appear_ to support your stated point of view on this subject, so far.

Still, I suspect that most/all of us are willing to be convinced otherwise, if you can supply any legitimate reason(s) for us to do so.

The next step is yours, Art.

RF

1780. Magnetic monopoles

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-07 02:07:38 UTC
From: tom <news4792@taring.org>
Message-ID: <4aa46b3d$0$42843$8046368a@newsreader.iphouse.net>
Source record: 13392

Someone mentioned magnetic monopoles with respect to an antenna in a post in the last week or so. I don't remember what thread or what context.

Regardless, here is a link to a claim that they have been found and verified -

http://science.slashdot.org/article.pl?sid=09/09/04/1226227

tom
K0TAR

1781. Re: Corriolis force

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-07 02:15:03 UTC
From: JIMMIE <JIMMIEDEE123@YAHOO.COM>
Message-ID: <f9917eda-f6fa-4b6e-9503-f1d5ccf50db5@t2g2000yqn.googlegroups.com>
Source record: 13393

> After all these years after discussion between suedo experts shooting
> from the hip and hitting themselves in the foot.- Hide quoted text -
>
> - Show quoted text -

Gee that's a great way to start off a civil conversation. That is the main reason I for the most part prefer not to converse with you. You sound more like the typecast ugly American than a British gentleman.

Jimmie

1782. Re: Corriolis force

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-07 02:31:11 UTC
From: richardharrison@webtv.net
Message-ID: <1364-4AA4706F-3695@storefull-3172.bay.webtv.net>
Source record: 13394

Art wrote:
"Equilibrium is when there is no gain."

I for one appreciate that statement because from my standpoint it is the first intelligible statement I remember from Art defining "equilibrium". If you tip a ground-mounted vertical antenna, you lose "equilibrium" because you disrort its normal omnidirectional pattern. The result is a gain in some directions and a loss in others. Gain and directivity are two sides of the same coin.

Light beams and radio beams are very similiar except light is visible. I`ve seen no gravitational effects on light beams and were radio waves visible, I`d wager you would see no gravitational effects on them either. The same for the Coriolis effect.

Best regards, Richard Harrison, KB5WZI

1783. Re: Corriolis force

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-07 03:04:38 UTC
From: Mike Coslo <mjc5@psu.edu>
Message-ID: <h81t85$co0u$1@tr22n12.aset.psu.edu>
Source record: 13395

Szczepan Białż˝ek wrote:
>
> "Mike Coslo" <mjc5@psu.edu> wrote

>> We do have the needed resolution of measurement to make that test.
>
> You must measure the mass after the halve of the cycle.

Even if this were the case..... So?

What about after a quarter of the cycle?

- Mike -

1784. Re: Corriolis force

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-07 03:06:48 UTC
From: Mike Coslo <mjc5@psu.edu>
Message-ID: <h81tc7$co0u$2@tr22n12.aset.psu.edu>
Source record: 13396

christofire wrote:

> * You haven't cited a reference.

It's a lot easier to argue these points without references. ;^)

- 73 de Mike N3LI -

1785. Re: Corriolis force

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-07 03:09:18 UTC
From: Mike Coslo <mjc5@psu.edu>
Message-ID: <h81tgt$co0u$3@tr22n12.aset.psu.edu>
Source record: 13397

Dave wrote:

> because art is the consummate Democrat...

Awesome, Dave.

- 73 de Mike N3LI -

1786. Re: Corriolis force

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-07 03:16:57 UTC
From: Mike Coslo <mjc5@psu.edu>
Message-ID: <h81tvb$co10$1@tr22n12.aset.psu.edu>
Source record: 13398

Cecil Moore wrote:
> Mike Coslo wrote:
>> Somewhere along the line something has to lose mass, unless magic or
>> supernatural forces are involved.
>
> You seem to be missing the fact of physics that mass
> and energy are equivalent forms related by constants.

I'm also missing the citations about how mass is removed and gained from antennas at the same time.

-73 de Mike N3LI -

1787. Re: Corriolis force

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-07 03:52:47 UTC
From: richardharrison@webtv.net
Message-ID: <20199-4AA4838F-4132@storefull-3173.bay.webtv.net>
Source record: 13399

Szczepan wrote:
"Christofire wrote: "Would you care to cite a reference where it is stated that EM waves in the far field of a transmitting antenna contain a significant logitudinal component? Many respected authors, such as Kraus, have illustrated the cintrary."

Add Terman to Kraus. On page 1 of Terman`s 1955 opus Terman says: "Electrical energy that has escaped into free space exists in the form of electromagtnetic waves. These waves, which are commonly called radio waves, travel with the velocity of light and consist of mahnetic and electric fields that are at right angles to each other and also at right angles to the direction of travel."

Szczepan also wrote: You should see the Luxembourg effect (frequency foubling) and directional pattern."

That would interest me. I worked four years in a European shortwave broadcast station and I don`t remember any frequency doubling but we aspired to hit the ionosphere with enough power to drive it into extreme nonlinearity end impose our signal en all the others in the area ala Luxembourg.

Best regards, Richard Harrison, KB5WZI

1788. Re: Burying Coax Feedlines & Control Cables

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-07 05:33:52 UTC
From: "Sal M. Onella" <salmonella@food.poisoning.org>
Message-ID: <6X0pm.142095$sC1.133272@newsfe17.iad>
Source record: 13400

"Jeff Liebermann" <jeffl@cruzio.com> wrote in message
news:8eg6a51rhp9la27dkh0nh3ut2mlbkpbqb6@4ax.com...

> Conduit is the way to go. Don't direct bury the cables. Bury
> conduit and pull the cables through.

Oh, yes -- please. I did my satellite dish that way in 1985 and have had no
problems.

> You'll need a 90 degree elbow at each end. Use the largest radius you
> can get away with.

To the OP: A sweep elbow is that "large radius" section. Sweep elbows are
available in various large radii, like 36", and will treat your Heliax or
other cable bends kindly. The plumbing trades use them, too.

This picture shows a half-buried sweep elbow

<http://sugarmtnfarm.com/blog/uploaded_images2009/UGElectric/UGElectPedestal
OpenT6799w.jpg>

It's from http://sugarmtnfarm.com/blog/2009/08/underground-electric.html

The article may provide the OP some tips.

RELATED: With my dish install, I picked too-small PVC and couldn't pull the
whole length. I had to cut the PVC into sections, pull the conduit through
each section (and through new couplings) and then glue the sections back
together. My mistake wasted half a day. Check your "pull-ability" before
gluing your parts into a unit.

Sal

1789. Seeking New FAQ/Intro Maintainers for rec.radio.amateur.*

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-07 06:05:01 UTC
From: rram@panix.com
Message-ID: <radio/ham-radio/recruitment-1-1252303500@panix.com>
Source record: 13301
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.dx,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.policy,rec.radio.info

```
Posted-By: auto-faq 3.3.2 beta (PGPMoose V2.0, Perl 5.005)
Archive-name: radio/ham-radio/recruitment
Revision: 1.1 2007/09/29 18:42:47
Posting-Frequency: posted monthly
URL: http://www.faqs.org/faqs/radio/personal-intro/

Changes followed by "|".

The rec.radio.info newsgroup, first established in 1993, has been
recently revived by an active moderation team. We are currently seeking
suitable information, FAQ, and bulletin articles from the entire
rec.radio.* newsgroup hierarchy for simultaneous cross-posting to our
newsgroup.

We are seeking a replacement maintainer for the following information
bulletin formerly posted to rec.radio.amateur.* (and currently archived
at http://www.faqs.org/faqs/radio/personal-intro/ ):

radio/personal-intro
Subject: Guide to the rec.radio Newsgroups
Maintainer: jeffreyh@Hawaii.Edu (Jeffrey Herman)
Last Posted: 9 Nov 2001 06:18:17 GMT
Posting-Frequency: 15th of each month

We are willing to provide any technical support necessary to get this
article updated and automatically posted again at a regular interval.
This would include establishing contact with the original maintainer for
any necessary permissions. We would prefer to seek a new, dedicated
maintainer at this time, rather than start auto-posting the original
article ourselves.

For more information about our newsgroup, see:

http://www.panix.com/~rram/usenet/rri/index.html

Please direct any comments, questions, or criticisms to
rec-radio-info-request@panix.com.
```

1790. Re: Are Sunspots Disappearing?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-07 07:07:54 UTC
From: Szczepan Białek <sz.bialek@wp.pl>
Message-ID: <h820hn$7h3$1@node1.news.atman.pl>
Source record: 13302

"Peter" <pm@hotmail.com> wrote
news:i4udnbakpMPfWz7XnZ2dnUVZ8k6dnZ2d@westnet.com.au...
> Interesting article at science@nasa regarding speculation of future
> sunspots activity or should I say the lack of activity.
>
> Whatever happens, notes Hathaway, "the sun is behaving in an interesting
> way and I believe we're about to learn something new."
>
> http://science.nasa.gov/headlines/y2009/03sep_sunspots.htm

It is not new: "If sunspots do go away, it wouldn't be the first time. In the 17th century, the sun plunged into a 70-year period of spotlessness known as the Maunder Minimum that still baffles scientists. The sunspot drought began in 1645 and lasted until 1715; during that time, some of the best astronomers in history (e.g., Cassini) monitored the sun and failed to count more than a few dozen sunspots per year, compared to the usual thousands."
S*

1791. Re: Burying Coax Feedlines & Control Cables

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-07 07:10:09 UTC
From: Jeff Liebermann <jeffl@cruzio.com>
Message-ID: <a7b9a5tgv8pfu4niuppr0tqs0himnpu606@4ax.com>
Source record: 13303

On Sun, 6 Sep 2009 22:33:52 -0700, "Sal M. Onella"
<salmonella@food.poisoning.org> wrote:

>To the OP: A sweep elbow is that "large radius" section. Sweep elbows are
>available in various large radii, like 36", and will treat your Heliax or
>other cable bends kindly. The plumbing trades use them, too.

I've often thought I would try a 45 degree elbow, and then a straight
section of pipe coming out of the ground at an angle. That makes it
much easier to pull but does look a bit odd. It also has the
advantage that I might be able to use some manner of power assist to
pull the cables through the conduit. Pulling on a 90 degree elbow is
a sure way of breaking it. 45 degrees can be handled with a pully or
careful positioning of the winch. Disclaimer: I've never done this so
beware of surprises.

>RELATED: With my dish install, I picked too-small PVC and couldn't pull the
>whole length. I had to cut the PVC into sections, pull the conduit through
>each section (and through new couplings) and then glue the sections back
>together. My mistake wasted half a day. Check your "pull-ability" before
>gluing your parts into a unit.

One tower owner had a 90 degree elbow projecting out of the ground
near the outside of the concrete tower pad. He tried to pull the
entire cable bundle through at one time with a winch hooked to a pully
on the tower from above. Instead, he pulled the 90 degree elbow and
about 10ft of pipe out of the ground. I didn't see it happen but was
involved in the subsequent cleanup job.

Moral: Don't let the cable bundle get twisted as it enters the
conduit or it will develop a "lump" and jam.

Tower drivel:
<http://www.agl-mag.com>
It's totally for commerical tower owners, doesn't have anything on
construction, is stuffed with tower politics, but does make
interesting reading. Full issues are downloadable.
<http://www.qmags.com/magazines/PubHomePage.asp?publication=89>

--
Jeff Liebermann jeffl@cruzio.com
150 Felker St #D http://www.LearnByDestroying.com
Santa Cruz CA 95060 http://802.11junk.com
Skype: JeffLiebermann AE6KS 831-336-2558

1792. Re: Corriolis force

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-07 07:46:08 UTC
From: Szczepan Białek <sz.bialek@wp.pl>
Message-ID: <h822pc$7tb$1@node1.news.atman.pl>
Source record: 13304

"Richard Harrison" <richardharrison@webtv.net> wrote
news:20199-4AA44072-3994@storefull-3173.bay.webtv.net...
> Art wrote:
> "I thought you had a trackrecord in academics so you had an
> understanding of Maxwell`s laws."
>
> Maxwell`s equations are necessary and sufficient to describe radiation
> from any antenna. I long ago suggested in this newsgroup that Art read a
> fine book, "Radio-Electronic Transmission Fundamentals" by B. Whitfield
> Griffith,Jr., now reprinted by Scitech Publishing Inc.
>
> In the first chapter Griffith gives a brief history of electrical
> knowledge. On page 3 he says:
>
> "We had, for instance, Coulomb`s law, relating to electric charge and
> the mechanical force it produces; Ampere`s Rule, connecting current and
> magnetism;

Ampere do not connect current and magnetism. For Ampere (and Gauss, Weber
and many others) magnetism is an illusion.

>Gauss` law, giving the relationship between electric charge
> and the field of the electric potential; Ohm`s law, relating voltage,
> current, and resistance; and Faraday`s law, concerning the relationship
> between the magnetic field and the induced voltage. Nothing seemed to
> tie these miscellanious relationships together, althoigh they appeared
> to pertain to the same general subject."

The same means the one. Which of the three: gravity, electricity and
magnetism?

>
> Perhaps it was the working of a fateful pattern, perhaps mere
> coincidennce, that there was born in the same year that Faraday made his
> great discovery the man who was destined to correlate and organize all
> these separate rules into the modern electromagnetic theory."

He corelated not all but only the two. In EM the two exist. We need
eliminate the two from the three.
>
> "Maxwell`s Generalization"
>
> This posting is long enough so I`ll stop.

The most important is: "althoigh they appeared to pertain to the same
general subject."

Art is trying to organize them.
It seems to me that he (like many of you) discovered that antennas radiated
something from the ends.
Do you see it also?
S*

1793. Re: Corriolis force

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-07 09:03:50 UTC
From: Szczepan Białek <sz.bialek@wp.pl>
Message-ID: <h827b2$8jm$1@node1.news.atman.pl>
Source record: 13305

"Richard Harrison" <richardharrison@webtv.net> wrote
news:20199-4AA4838F-4132@storefull-3173.bay.webtv.net...
> Szczepan wrote:
> "Christofire wrote: "Would you care to cite a reference where it is
> stated that EM waves in the far field of a transmitting antenna contain
> a significant logitudinal component? Many respected authors, such as
> Kraus, have illustrated the cintrary."
>
> Add Terman to Kraus. On page 1 of Terman`s 1955 opus Terman says:
> "Electrical energy that has escaped into free space exists in the form
> of electromagtnetic waves. These waves, which are commonly called radio
> waves, travel with the velocity of light and consist of mahnetic and
> electric fields that are at right angles to each other and also at right
> angles to the direction of travel."
>
> Szczepan also wrote: You should see the Luxembourg effect (frequency
> foubling) and directional pattern."
>
> That would interest me. I worked four years in a European shortwave
> broadcast station and I don`t remember any frequency doubling but we
> aspired to hit the ionosphere with enough power to drive it into extreme
> nonlinearity end impose our signal en all the others in the area ala
> Luxembourg.

You have read too lot. Mike is right: "It's a lot easier to argue these
points without references"

Hertz did not hit the ionosphere. Look at his apparatus:
http://people.seas.harvard.edu/~jones/cscie129/nu_lectures/lecture6/hertz/Hertz_exp.html

You know that "According to theory, if electromagnetic waves were spreading
from the oscillator sparks, they would induce a current in the loop that
would send sparks across the gap."

According to EM theory the frequency is one and no the lobs in directional
patern.

But you can assume that the capacitor plates are the two seperate sources of
electric waves (of course not in phase).
In such case the frequency in the receiver will be its orientation
dependent. But there are only the two possibilities: the same or doubled.
Similar will be with the directional patern. There has place the normal
interference.

Of course the monopole antennas are free from such phenomenon. What are with
dipole arrays I do not know. People from a phase radar know.

Not all vertical dipole exhibit it. The both ends must be above a landscape.
The famous Luxembourg mast was on the tip of a mount.
The Warsaw was on flat so the effect was obserwed only in Austria mountains.

This is only one theory among many (choosen by teachers to teach the math):
"These waves, which are commonly called radio waves, travel with the
velocity of light and consist of mahnetic and electric fields that are at
right angles to each other and also at right angles to the direction of
travel."

Each famous scientist wrote his own Electrodynamics.
Best regards,S*

1794. Re: Magnetic monopoles

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-07 10:56:01 UTC
From: Dave <noone@nowhere.com>
Message-ID: <5F5pm.1407$Jd7.795@nwrddc02.gnilink.net>
Source record: 13306

"tom" <news4792@taring.org> wrote in message
news:4aa46b3d$0$42843$8046368a@newsreader.iphouse.net...
> Someone mentioned magnetic monopoles with respect to an antenna in a post
> in the last week or so. I don't remember what thread or what context.
>
> Regardless, here is a link to a claim that they have been found and
> verified -
>
> http://science.slashdot.org/article.pl?sid=09/09/04/1226227
>
> tom
> K0TAR

great! now we can start working on real monopole antennas!!

1795. Re: Corriolis force

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-07 10:57:55 UTC
From: Dave <noone@nowhere.com>
Message-ID: <TG5pm.1409$Jd7.604@nwrddc02.gnilink.net>
Source record: 13307

"tom" <news4792@taring.org> wrote in message
news:4aa45b38$0$28112$8046368a@newsreader.iphouse.net...
> tom wrote:
>> Art Unwin wrote:
>>>
>>> Equilibrium is when there is no gain. When this occurs there is
>>> polarisation purity.
>>> Gain is not a factor in equilibrium so why muddy up the question. Or
>>> is that being arrogant
>>> because you disagree with me LOL
>>
>
> Oops missed one right in front of my lying eyes.
>
> Equilibrium ==
>
> 1) no reflections.
>
> 2) isotropic.
>
> 3) no gain.
>
> 4) polarization purity.
>
> tom
> K0TAR

isotropic == no gain
so you can take one of them off the list.

1796. Re: Corriolis force

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-07 11:00:40 UTC
From: Dave <noone@nowhere.com>
Message-ID: <sJ5pm.1410$Jd7.865@nwrddc02.gnilink.net>
Source record: 13308

"Richard Harrison" <richardharrison@webtv.net> wrote in message
news:1364-4AA4706F-3695@storefull-3172.bay.webtv.net...
> Art wrote:
> "Equilibrium is when there is no gain."
>
> I for one appreciate that statement because from my standpoint it is the
> first intelligible statement I remember from Art defining "equilibrium".
> If you tip a ground-mounted vertical antenna, you lose "equilibrium"
> because you disrort its normal omnidirectional pattern. The result is a
> gain in some directions and a loss in others. Gain and directivity are
> two sides of the same coin.
>
> Light beams and radio beams are very similiar except light is visible.
> I`ve seen no gravitational effects on light beams and were radio waves
> visible, I`d wager you would see no gravitational effects on them
> either. The same for the Coriolis effect.
>
> Best regards, Richard Harrison, KB5WZI
>

look at the plots, when you tip it you reduce the vertical null so you are
making it less directive. remember, the ham 'omnidirectional' use means
only in 2 dimensions... art has taken the leap to 3 dimensions!

1797. Re: Corriolis force

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-07 11:06:51 UTC
From: Dave <noone@nowhere.com>
Message-ID: <fP5pm.1411$Jd7.1010@nwrddc02.gnilink.net>
Source record: 13309

"Szczepan Bialek" <sz.bialek@wp.pl> wrote in message
news:h827b2$8jm$1@node1.news.atman.pl...

> Each famous scientist wrote his own Electrodynamics.
> Best regards,S*

i think you and art should get together and write one, it is sure to be a best seller for years! i would buy one just to read when i need a good laugh!

1798. Fourier Transform Tutorial

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-07 11:58:18 UTC
From: brent <bulegoge@columbus.rr.com>
Message-ID: <9eff7a75-e281-4747-929e-09cb0b9929fe@x37g2000yqj.googlegroups.com>
Source record: 13310

Hi,

I have created a Fourier Transform tutorial. It is located here:

http://www.fourier-series.com/f-transform/index.html

It uses interactive flash programs to help you see how the fourier transform works. There are currently 5 flash modules with lots of embedded audio in each module.

The site also includes tutorials on the fourier series, complex numbers, the discrete fourier transform and some radio frequency topics.

1799. Coax Cable Question (Receiving Application Only)

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-07 12:04:00 UTC
From: Robert11 <rgsros@xnotme.invalid>
Message-ID: <h82srgldt1@news.eternal-september.org>
Source record: 13311

Hello,

A few years ago I ran coax from the attic Scantenna down to a downstairs room for my GRE Scanner.

Hard to remember now, but I believe I did it with the good low-loss LMR 100A from the Wireman Co. with BNC connectors installed.

Have to move things around a bit now, and was wondering for these scanner frequencies, as I need a
patch cable length of only a foot or two, does it really matter what type of coax I use as long as the connectors are, e.g., BNC.

If I use the off the shelf stuff like RG58, is the only consideration the coax attenuation for 2 feet, which I guess would be negligible (assuming BNC connectors on it, though):

Do you agree that this would be O.K. to do, and that I probably would never notice any difference
for a run of only 2 feet, irrespective of what type of cable I would use ? (Receiving only application)

Thanks,
Bob

1800. Re: Coax Cable Question (Receiving Application Only)

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-07 12:50:48 UTC
From: Dave <noone@nowhere.com>
Message-ID: <lk7pm.1418$Jd7.600@nwrddc02.gnilink.net>
Source record: 13312

"Robert11" <rgsros@xnotme.invalid> wrote in message
news:h82srgldt1@news.eternal-september.org...
> Hello,
>
> A few years ago I ran coax from the attic Scantenna down to a downstairs
> room for my GRE Scanner.
>
> Hard to remember now, but I believe I did it with the good low-loss LMR
> 100A from the Wireman Co. with BNC connectors installed.
>
> Have to move things around a bit now, and was wondering for these scanner
> frequencies, as I need a
> patch cable length of only a foot or two, does it really matter what type
> of coax I use as long as the connectors are, e.g., BNC.
>
> If I use the off the shelf stuff like RG58, is the only consideration the
> coax attenuation for 2 feet, which I guess would be negligible (assuming
> BNC connectors on it, though):
>
> Do you agree that this would be O.K. to do, and that I probably would
> never notice any difference
> for a run of only 2 feet, irrespective of what type of cable I would use ?
> (Receiving only application)
>
> Thanks,
> Bob

agreed, you will never notice the difference, except in your wallet.

1801. Coax Connectors Question

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-07 13:23:40 UTC
From: Robert11 <rgsros@xnotme.invalid>
Message-ID: <h831gs$n1b$1@news.eternal-september.org>
Source record: 13313

Hi,

Great group; really appreciate the help.

Do receiving only.

Have been going around a bit in trying to configure several radios and antennas, including HF receivers and Scanners, with multiple antennas. If I use "good" quality multi-position switches to do it, the $ are getting up a bit.

Since I don't really switch all that often, two or three times a day perhaps, I was wondering about just forgetting the switches and just make a simple plug panel using, I imagine, BNC connectors and coax.

So, what kind of life might I expect with BNC's, plugging and unplugging them ?
They certainly weren't designed with multiple in and outs in mind, but they are kind of
well built, and I imagine they would take a fair amount of usage this way; perhaps ?

Anyone have any experience with this kind of an application ?
What would degrade first in them; the center pin ?

Any better coax connectors for this kind of patch panel usage in your opinions ?

Thanks again,
Bob

1802. Re: Corriolis force

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-07 13:46:19 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <c98pm.26085$Y83.6792@newsfe21.iad>
Source record: 13314

Art Unwin wrote:
> What you refer to as a photon I refer to as a particle

So do I. "The photon is the gauge boson for electro-
magnetism." Particles are easier to understand than fields.
According to quantum (particle) physics, everything that
exists in reality is a particle, i.e. everything that exists
is quantized.

http://en.wikipedia.org/wiki/Standard_model

> Would you have it that a capacitor retains
> protons which is a particle?

A capacitor retains electrons which can be collected
on a capacitor plate. (Photons cannot stand still and,
by definition, always travel at the speed of light in
the particular medium. This includes photons in standing
waves.)

"In the Standard Model of particle physics, electrons belong
to the group of subatomic particles called leptons ..."

> With my analysis it has a trail but yours seem to be just snippets.

My snippets are sections from the standard model about
which I will choose to stand on the shoulders of giants.
--
73, Cecil, IEEE, OOTC, http://www.w5dxp.com

1803. Re: Corriolis force

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-07 13:47:31 UTC
From: christofire <christofire@btinternet.com>
Message-ID: <3P6dnS6USZhrkzjXnZ2dnUVZ8t2dnZ2d@bt.com>
Source record: 13315

"tom" <news4792@taring.org> wrote in message
news:4aa45848$0$42840$8046368a@newsreader.iphouse.net...

--snip--

>>> This getting to be as bad as the s.p.fusion and s.p.relativity groups.
>>>
>>> Heck, Chris makes a lot more sense (s.p.fusion) and actually learns
>>> things, provides results and admits mistakes while he tries to build his
>>> fusion reactor in a London flat. He still claims the govt has
>>> lobotimized him several times and "it grows back", but other than that
>>> he's quite sane. Unlike Art and Szczpan.
>>>
>>> tom
>>> K0TAR
>>
>>
>> * Remarkably, Tom, you're quite correct in your assessment!
>>
>> What am I doing here?
>>
>> Chris
>
> You're that Chris? If so, welcome. Your videos are very interesting, as
> are your experiments.
>
> tom
> K0TAR

Tom, no I can't masquerade as someone else. I live near London, I'm not building a reactor (at the moment) and I think I'm quite sane.

The reason I'm here is simply the presence of 'antenna' in the name of the NG but I've been aware throughout my career that this topic is subject to charlatans and cranks perhaps more than any other topic in electronic engineering. That's probably because the majority on non-academics have trouble thinking 3-dimensionally which makes vector calculus very difficult which, in turn, makes Maxwell's equations difficult to comprehend and apply. The fraud squad appear to seize this opportunity and use it as a smokescreen!

Chris

1804. Re: Corriolis force

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-07 13:49:29 UTC
From: christofire <christofire@btinternet.com>
Message-ID: <lPidnb2yY5j2kjjXnZ2dnUVZ8t2dnZ2d@bt.com>
Source record: 13316

"Mike Coslo" <mjc5@psu.edu> wrote in message
news:h81tc7$co0u$2@tr22n12.aset.psu.edu...
> christofire wrote:
>
>> * You haven't cited a reference.
>
> It's a lot easier to argue these points without references. ;^)
>
> - 73 de Mike N3LI -

... you're right, it's utterly breathtaking!

Chris

1805. Re: Coax Connectors Question

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-07 14:04:04 UTC
From: "Geoffrey S. Mendelson" <gsm@mendelson.com>
Message-ID: <slrnhaa4g9.kl6.gsm@cable.mendelson.com>
Source record: 13317

Robert11 wrote:
> Do receiving only.
>
> Have been going around a bit in trying to configure several radios and
> antennas, including HF receivers and Scanners, with multiple antennas. If I
> use "good" quality multi-position switches to do it, the $ are getting up a
> bit.

The cheap coax switches that Radio Shack used to sell (and may still do)
will do fine. They are 75 ohm if any reasonable impedence instead of 50,
which should not matter at all for reception.

The better ones have 75 ohm dummy loads switched to the unused positions,
it helps isolate them. I use one to swtich between a dipole and satellite
TV box on my computer TV card and there is enough leakage that I don't have
to switch, the satellite box leaks through enough. :-)

Geoff.

--
Geoffrey S. Mendelson, Jerusalem, Israel gsm@mendelson.com N3OWJ/4X1GM

1806. Re: Corriolis force

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-07 14:11:31 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <Rw8pm.142589$sC1.119939@newsfe17.iad>
Source record: 13319

Art Unwin wrote:
> Interesting you
> quote the electron gun. ... So where did this photon emerge from?

The electron is the gun, the photons are the bullets.
Quoting Feynman's "QED": "So now, I present to you the
three basic actions, from which all of the phenomena
of light and electrons arise.

-Action #1: A photon goes from place to place.
-Action #2: An electron goes from place to place.
-Action #3: An electron emits or absorbs a photon."

For an RF antenna radiator, the electrons go from
place to place in (on) the conductor in the form
of free electrons. The photons go from place to place
in the space surrounding the conductor. Only the
photons can move at the speed of light from the
feedpoint to the ends of a dipole. Electrons move
hardly at all.
--
73, Cecil, IEEE, OOTC, http://www.w5dxp.com

1807. Re: Corriolis force

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-07 14:12:25 UTC
From: tom <news4792@taring.org>
Message-ID: <4aa51519$0$42839$8046368a@newsreader.iphouse.net>
Source record: 13318

Dave wrote:
>
> isotropic == no gain
> so you can take one of them off the list.

You are correct sir.

Art's equilibrium nuggets.

Equilibrium ==

1) no reflections.

2) isotropic/no gain.

3) polarization purity.

1808. Re: Corriolis force

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-07 14:15:03 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <7A8pm.142601$sC1.9826@newsfe17.iad>
Source record: 13321

Art Unwin wrote:
> Maybe but waves are an adjective ...

An ocean "wave" is an adjective?
--
73, Cecil, IEEE, OOTC, http://www.w5dxp.com

1809. Re: Corriolis force

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-07 14:15:23 UTC
From: tom <news4792@taring.org>
Message-ID: <4aa515cb$0$42839$8046368a@newsreader.iphouse.net>
Source record: 13320

christofire wrote:
>
>
> Tom, no I can't masquerade as someone else. I live near London, I'm not
> building a reactor (at the moment) and I think I'm quite sane.
>
> The reason I'm here is simply the presence of 'antenna' in the name of the
> NG but I've been aware throughout my career that this topic is subject to
> charlatans and cranks perhaps more than any other topic in electronic
> engineering. That's probably because the majority on non-academics have
> trouble thinking 3-dimensionally which makes vector calculus very difficult
> which, in turn, makes Maxwell's equations difficult to comprehend and apply.
> The fraud squad appear to seize this opportunity and use it as a
> smokescreen!
>
> Chris
>
>

I'd noticed you weren't posting very much lately. Well, I hope you're
experiments, of whatever sort they might be, continue and that you tell
us about them over in the other group.

Good luck!

tom
K0TAR

1810. Re: Coax Cable Question (Receiving Application Only)

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-07 14:21:02 UTC
From: Ralph Mowery <rmowery28146@earthlink.net>
Message-ID: <pZKdnQSfO4nEizjXnZ2dnUVZ_j6dnZ2d@earthlink.com>
Source record: 13322

"Robert11" <rgsros@xnotme.invalid> wrote in message
news:h82srgldt1@news.eternal-september.org...
> Hello,
>
> A few years ago I ran coax from the attic Scantenna down to a downstairs
> room for my GRE Scanner.
>
> Hard to remember now, but I believe I did it with the good low-loss LMR
> 100A from the Wireman Co. with BNC connectors installed.
>
> Have to move things around a bit now, and was wondering for these scanner
> frequencies, as I need a
> patch cable length of only a foot or two, does it really matter what type
> of coax I use as long as the connectors are, e.g., BNC.
>
> If I use the off the shelf stuff like RG58, is the only consideration the
> coax attenuation for 2 feet, which I guess would be negligible (assuming
> BNC connectors on it, though):
>
> Do you agree that this would be O.K. to do, and that I probably would
> never notice any difference
> for a run of only 2 feet, irrespective of what type of cable I would use ?
> (Receiving only application)
>
> Thanks,
> Bob

Lmr 100 is some very small (about 1/8 inch) coax. If this is what you used,
almost any coax will have lower loss.

MOre likely you used some of the lmr 200 which is about 1/4 inch in dimeter.
In any case the loss in 2 feet of about anything will not be noticed on
receive. Even a piece of rg6 would be ok in your case. You might even want
to replace the whole run with the rg6 coax even if it is 70 ohm stuff
instead of 50 ohm coax.

1811. Re: Corriolis force

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-07 14:28:01 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <iM8pm.142642$sC1.119109@newsfe17.iad>
Source record: 13323

Mike Coslo wrote:
> I'm also missing the citations about how mass is removed and gained from
> antennas at the same time.

I gave those a few postings ago. Here they are again.

e = mc^2 energy supplied by the source

m = e/c^2 mass lost to radiation

--
73, Cecil, IEEE, OOTC, http://www.w5dxp.com

1812. Grove Pushbutton Switch ?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-07 14:42:48 UTC
From: Robert11 <rgsros@xnotme.invalid>
Message-ID: <h83662$s6p$2@news.eternal-september.org>
Source record: 13324

Hello,

Regarding this pushbutton antenna switch that Grove offers:

http://www.grove-ent.com/SWC01.html
$19.95 SWC01

Was wondering if anyone is using it, or has any opinions on it ?
Sure is cheap enough.

They claim "usable" up to 2.0 GHz.

My application would be HF thru the vhf/uhf scanner frequencies,
BUT Receiving only.

Any thoughts on would be most appreciated.

Thanks,
Bob

1813. Re: Coax Connectors Question

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-07 15:35:15 UTC
From: JB <nospam@goofball.net>
Message-ID: <TK9pm.1429$Jd7.948@nwrddc02.gnilink.net>
Source record: 13325

"Robert11" <rgsros@xnotme.invalid> wrote in message
news:h831gs$n1b$1@news.eternal-september.org...
> Hi,
>
> Great group; really appreciate the help.
>
> Do receiving only.
>
> Have been going around a bit in trying to configure several radios and
> antennas, including HF receivers and Scanners, with multiple antennas. If
I
> use "good" quality multi-position switches to do it, the $ are getting up
a
> bit.
>
> Since I don't really switch all that often, two or three times a day
> perhaps, I was wondering about just forgetting the switches and just make
a
> simple plug panel using, I imagine, BNC connectors and coax.
>
> So, what kind of life might I expect with BNC's, plugging and unplugging
> them ?
> They certainly weren't designed with multiple in and outs in mind, but
they
> are kind of
> well built, and I imagine they would take a fair amount of usage this way;
> perhaps ?
>
> Anyone have any experience with this kind of an application ?
> What would degrade first in them; the center pin ?
>
> Any better coax connectors for this kind of patch panel usage in your
> opinions ?
>
> Thanks again,
> Bob
>
BNC connectors can be had for as low as 50 cents. They last a long time if
you are careful and I have many surplus connectors in use. I never bothered
with patch panels, but it would be a natural if you are using Hardline or
1/2" cables up the tower anyway. Heavier coax to N connectors then 2-3 ft
rg 58c patch cables to radios. There are Cable connectors to BNC but you
might want to shop around. It might be cheaper than using N - BNC adapters.
I have never had to replace any connectors, but wear and tear has had me

replace a few patch cables. About once a year I smash a Q tip and soak it in 90% Isopropyl and clean the grunge that gets down in the connectors.

There have been a few radios, scanners, that I have modified with bulkhead BNC females

At one point I was a factory tech for a several HT models and would add crystals and align en masse. The radios all had TNC connectors (Threaded rather than Bayonet) After removing the bayonet shell from the patch cable, it was a quick disconnect for either BNC or TNC. Not particularly proper but fast. In any case Stock BNC is quick and good to 2Gig but I wouldn't put more than 50 watts through them at that frequency.

1814. Re: Coax Connectors Question

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-07 15:44:14 UTC
From: Jeff <jeff@local.host>
Message-ID: <4aa52b85$0$2392$834e42db@reader.greatnowhere.com>
Source record: 13328

>> So, what kind of life might I expect with BNC's, plugging and unplugging
>> them ?
>> They certainly weren't designed with multiple in and outs in mind, but
> they
>> are kind of
>> well built, and I imagine they would take a fair amount of usage this
>> way;
>> perhaps ?
>>
>> Anyone have any experience with this kind of an application ?
>> What would degrade first in them; the center pin ?
>>

Just use BNC's and don't worry about it, they will last for ever.
After all almost every bit of test equipment uses BNC's and they endure
multiple connections/disconnections without worry.

73
Jeff

1815. Re: Burying Coax Feedlines & Control Cables

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-07 15:45:44 UTC
From: "Mike, who else?" <here@there.com>
Message-ID: <IU9pm.153290$cf6.61903@newsfe16.iad>
Source record: 13326

Thank you all for your responses. I definitely need to review the best approach. I've gone through a lot to put this tower up and don't need to have a weak link in the system. I'll look into getting conduit that meets electrical code for Alberta. As far a critters are concerned, I have field & deer mice along with voles so to keep this little buggers out, this is the best way to tackle the job. I do have an electrician coming to my home for other upgrades and just may have him work on the conduit piping, too. Time is against me as I have approximately 6 weeks before the ground freezes. Oh yes, I have about 2 feet of beautiful Alberta topsoil before I hit clay. I'll keep the newsgroup up to date with my progress. Once again, I thank everyone for their ideas.

73 de Mike VE6HMG

1816. Re: Coax Connectors Question

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-07 15:54:21 UTC
From: Jeff Liebermann <jeffl@cruzio.com>
Message-ID: <u8aaa55aj0mfgfk86ggm13l1j1o79se5n5@4ax.com>
Source record: 13327

On Mon, 7 Sep 2009 09:23:40 -0400, "Robert11" <rgsros@xnotme.invalid>
wrote:

>So, what kind of life might I expect with BNC's, plugging and unplugging
>them ?

Lousy. The ears on the BNC jack will get worn fairly quickly. Some
of my walkie talkies have BNC connectors for the antenna connector,
all with worn out ears.

>What would degrade first in them; the center pin ?

The two ears on the jack will wear out. The electrical connections
will be fine for many years if you don't care about mechanical
retention.

>Any better coax connectors for this kind of patch panel usage in your
>opinions ?

For scanning, almost any kind of coax switch will work. A mechanical
(not electronic) 75 ohm video switch or IBM 3270 network switch will
do just fine. You'll never notice the impedance mismatch and losses,
except perhaps at 800MHz trunking frequencies.
<http://www.blackbox.com/Store/Results.aspx/search-bnc+switch>
The mechanical switch might also use phono connectors, not BNC.
Adapters are common. Of course, you can build your own.

--
Jeff Liebermann jeffl@cruzio.com
150 Felker St #D http://www.LearnByDestroying.com
Santa Cruz CA 95060 http://802.11junk.com
Skype: JeffLiebermann AE6KS 831-336-2558

1817. Re: Grove Pushbutton Switch ?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-07 16:01:24 UTC
From: Jeff Liebermann <jeffl@cruzio.com>
Message-ID: <h6baa51f6k7s8eknlosi52rmt89e790c5d@4ax.com>
Source record: 13329

On Mon, 7 Sep 2009 10:42:48 -0400, "Robert11" <rgsros@xnotme.invalid>
wrote:

>Regarding this pushbutton antenna switch that Grove offers:
>http://www.grove-ent.com/SWC01.html
>$19.95 SWC01
>
>Was wondering if anyone is using it, or has any opinions on it ?
>Sure is cheap enough.
>They claim "usable" up to 2.0 GHz.
>My application would be HF thru the vhf/uhf scanner frequencies,
>BUT Receiving only.

That's an A/B switch from a dual coax CATV system. The connectors are
Type-F which will require adapters to BNC. The switch is rated to
1GHz and probably works well above that frequency. A more modern
version is commonly available from CATV and Satellite TV vendors:
<http://www.sadoun.com/Sat/Products/Perfect/Perfect_Vision_A_B_Switch.htm>
$5/ea plus tax and shipping.

--
Jeff Liebermann jeffl@cruzio.com
150 Felker St #D http://www.LearnByDestroying.com
Santa Cruz CA 95060 http://802.11junk.com
Skype: JeffLiebermann AE6KS 831-336-2558

1818. Re: Coax Connectors Question

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-07 16:26:22 UTC
From: Dave Holford <holford@cogeco.ca>
Message-ID: <Muapm.166643$O23.26711@newsfe11.iad>
Source record: 13330

"Robert11" <rgsros@xnotme.invalid> wrote in message
news:h831gs$n1b$1@news.eternal-september.org...
> Hi,
>
> Great group; really appreciate the help.
>
> Do receiving only.
>
> Have been going around a bit in trying to configure several radios and
> antennas, including HF receivers and Scanners, with multiple antennas. If
> I use "good" quality multi-position switches to do it, the $ are getting
> up a bit.
>
> Since I don't really switch all that often, two or three times a day
> perhaps, I was wondering about just forgetting the switches and just make
> a simple plug panel using, I imagine, BNC connectors and coax.
>
> So, what kind of life might I expect with BNC's, plugging and unplugging
> them ?
> They certainly weren't designed with multiple in and outs in mind, but
> they are kind of
> well built, and I imagine they would take a fair amount of usage this way;
> perhaps ?
>
> Anyone have any experience with this kind of an application ?
> What would degrade first in them; the center pin ?
>
> Any better coax connectors for this kind of patch panel usage in your
> opinions ?
>
> Thanks again,
> Bob
>

That's exactly what BNCs were designed for; plugging and unplugging.
Take a look at all the test equipment using BNCs.
The big advantage of BNC over others is the ease on
connecting/disconnecting; they are extensively used in commercial and
military patch panels. Surplus patch panels are often a good source of
excellent connectors.

They are weatherproof, assuming you use good quality ones and not
el-cheapos; and install them correctly. I have used BNCs outside where they
have been in use through more than 20 Canadian winters and when I checked
them each spring and fall were perfectly clean inside - although the outside

showed definite signs of weathering.

The only failures I have ever observed in a properly installed BNC has been the failure of the fingers in female receptacles on cheap connectors used in some consumer devices - especially scanners. I usually take a close look at any BNC on any non-professional device I purchase and if it looks suspect - a good sign is only two fingers in the receptacle - I replace it because the odds are it will eventually fail.
Any BNC connector which doesn't have a name and/or number on it is probably not a good idea!

The only precaution I would take is if you have to leave a BNC - or for that matter any connector - disconnected for any length of time outside is to protect it from the elements. If you don't have a proper protector (they can be hard to find) then put a piece of plastic bag over it and seal it with a ty-wrap. I have just such a spare cable sitting out in the weather for the last 4 years and with two layers of plastic bag material the outer layer was starting to deteriorate after 3 years so I replaced both layers this spring.

Hope this helps.
Dave VE3HLU

1819. Re: Corriolis force

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-07 16:55:10 UTC
From: Szczepan Białek <sz.bialek@wp.pl>
Message-ID: <h832uk$c9f$1@node1.news.atman.pl>
Source record: 13331

"Dave" <noone@nowhere.com> wrote
news:fP5pm.1411$Jd7.1010@nwrddc02.gnilink.net...
>
> "Szczepan Bialek" <sz.bialek@wp.pl> wrote in message
> news:h827b2$8jm$1@node1.news.atman.pl...
>
>> Each famous scientist wrote his own Electrodynamics.
>> Best regards,S*
>
> i think you and art should get together and write one, it is sure to be a
> best seller for years! i would buy one just to read when i need a good
> laugh!

Almost nobody read this famous. Here is the list:
http://www.df.lth.se/~snorkelf/Longitudinal/node4.html

Time for writting such is over. Now people produce the antennas and do not worry who from giants is right. They use empirical methods.

Each of them proposed the version different from the known. The result is like that:

"In this chapter we have analysed the Ampere electrodynamics and compared it with the Maxwell stress approach. We have seen how these are two sides of the same coin -- one focusing on charge carriers, and the other on the field properties. The forces predicted are of the same magnitude as the well known pinch forces, but act in other directions."

I prefer Ampere - you Maxwell. Nothing wrong.
S*
>

1820. Re: Corriolis force

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-07 17:02:09 UTC
From: Szczepan Białek <sz.bialek@wp.pl>
Message-ID: <h833bm$cb0$1@node1.news.atman.pl>
Source record: 13332

"christofire" <christofire@btinternet.com> wrote
news:Z6Odnd4yd6wqtjnXnZ2dnUVZ8m6dnZ2d@bt.com...
>
> "Dave" <noone@nowhere.com> wrote in message
> news:p6Tom.1350$Jd7.609@nwrddc02.gnilink.net...
>>
>> "Szczepan Bialek" <sz.bialek@wp.pl> wrote in message
>> news:h80hh5$199$1@node1.news.atman.pl...
>>> Take a rest in reading and look at the oryginal Hertz apparatus as the
>>> two sources of longitudinal waves (radiated from ends). You should see
>>> the Luxembourg effect (frequency doubling) and directional pattern.
>>> S*
>>>
>> but you don't because that is not how it works. the waves are radiated
>> by the whole length of the connecting wire and are transverse... there is
>> no frequency doubling as you explain it.
>
> ... and the so-called 'Luxembourg effect' is not frequency doubling but
> cross modulation; that is, generation in the ionosphere of intermodulation
> products that carry the modulation of both sources.

So you should be able to repeat the phenomena. Richard did not: " I worked
four years in a European shortwave
broadcast station and I don`t remember any frequency doubling but we
aspired to hit the ionosphere with enough power to drive it into extreme
nonlinearity end impose our signal en all the others in the area ala
Luxembourg."

Help him.
S*

1821. Re: Corriolis force

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-07 17:36:48 UTC
From: Szczepan Białek <sz.bialek@wp.pl>
Message-ID: <h835clcla1@node1.news.atman.pl>
Source record: 13333

"christofire" <christofire@btinternet.com> wrote
news:iNudnbnPYb5psjnXnZ2dnUVZ8gqdnZ2d@bt.com...
>
> "Szczepan Biaďż˝ek" <sz.bialek@wp.pl> wrote in message
> news:h80hh5$199$1@node1.news.atman.pl...
>>
>>> -- snip --
>>>
>>>
>>>>> * Would you care to cite a reference where it is stated that EM waves
>>>>> in the far field of a transmitting antenna contain a significant
>>>>> longitudinal component? Many respected authors, such as Kraus, have
>>>>> illustrated the contrary, but their work isn't limited to paper;
>>>>> people like Kraus have designed real antennas of types that are still
>>>>> in use today.
>>>>
>>>> Maxwell ASSUMED that the aether is a solid body and ASSUMED that there
>>>> are the transversal waves. Next he do the math to it. To prove it he
>>>> asks Michelson to measure the movements of the Earth in this solid
>>>> body. In 1878 (about) Michelson did not detect 30km/s. In 1925 he
>>>> detect 0.4 km/s. It means that the eather is not a solid body. The EM
>>>> theory is only math (a piece to teach).
>>>
>>> * You haven't cited a reference. The words you have written here do not
>>> demonstrate that EM waves are longitudinal. A 'reference', if you
>>> didn't understand the term, means a passage from a book or paper written
>>> by someone who has a proven reputation for good, useful work in the
>>> field.
>>
>> " Oliver Heaviside criticised Helmholtz' electromagnetic theory because
>> it allowed the existence of longitudinal waves" .From:
>> http://www.answers.com/topic/hermann-von-helmholtz
>>
>> Do you know somebody who has more proven reputation in acoustic and
>> electrodynamics than Helmholtz?
>
>
> * Yes: the late John D Kraus. He was a practical engineer as well as a
> theoretician and his native language was English. He managed to put into
> practice a lot of the theory that others had written about and he recorded
> his work lucidly. I've already named two of Kraus's books - can you cite
> something written by any of your favourites that provides clear
> explanations that you understand? Answers.com doesn't explain anything
> technical.

For practical engineers the math theory is useless.
>
>
>> Hertz was the pupil of Helmholtz.
>> The Maxwell's equations (that from 1864) was the same like the Helmholtz'
>> for fluid mechanics.
>> Many textbooks inform us that it was a big Maxwell's mistake. He ignored
>> atomic nature of electricity disovered by Faraday at electrolise.
>> Helmholtz not ignored it.
>> Maxwell (modified by Heaviside) is only a piece to teach the math.
>
>
> * Heaviside's documentation is appaling! I remember going through a
> catalogue of his work in an effort to get to the truth about the origin of
> the 'Heaviside condition' - a lot of it was written in obfuscation babble,
> a bit like some of the contributors to this group.

He is the father of the hydraulic analogy where the electricity is the
incompressble masless flud.
Electrons in antenns are compressible and have mass. What is electricity in
J. D. Kraus?
>
>>
>>>>>>>Sound waves are longitudinal because air pressure is a scalar,
>>>>>>>whereas electric and magnetic fields are vectors - they have
>>>>>>>polarisation.
>>>>>>
>>>>>> The math has not to do here.
>>>>>
>>>>> * What 'math'? ... just the mention of scalars and vectors, in a group
>>>>> devoted to antennas. Please.
>>>>
>>>> The first step should be dicovering which part of the oryginal Hertz
>>>> dipole radiate:
>>>>
http://people.seas.harvard.edu/~jones/cscie129/nu_lectures/lecture6/hertz/Hertz_exp.html
>>>>
>>>> The big sparks (current) or the plates (balls).
>>>> Note that todays dipoles are quite different. Now no current between
>>>> the tips.
>>>>>
>>>>>
>>>>>> Here is the full acoustic analogy. The two loudspeakers work like the
>>>>>> two monopoles.
>>>>>
>>>>> * Rubbish. What 'two loudspeakers'? Ever heard of a horn
>>>>> loudspeaker? ... it produces longitudinal pressure waves.
>>>>
>>>> Why then the two loudspeaker and the two monopoles have the same
>>>> directional patern?
>>>

>>> * What 'two loudspeaker'? If you're drawing comparison between a
>>> direct-radiator loudspeaker and a dipole and using that as a basis for
>>> saying that EM waves are longitudinal, as I suspect you are, then you
>>> should also consider a horn loudspeaker. Sound is radiated from the
>>> mouth of a horn 'speaker and the other side of the compression driver
>>> diaphragm can be totally enclosed. There is no simple comparison with a
>>> dipole antenna in this case.

The horn is a monopole. See:
http://paws.kettering.edu/~drussell/Demos/rad2/mdq.html
The unboxed loudspeaker is a dipole.
>
> * Why don't you look into horn louspeakers and then report back. You may
> find them fascinating and very unlike dipoles.

Like fascinating is the two monopoles antennas (your dipoles).
S*
>
> Chris
>

1822. Re: Corriolis force

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-07 17:40:01 UTC
From: christofire <christofire@btinternet.com>
Message-ID: <C92dnYGeyPDm2DjXnZ2dnUVZ8tadnZ2d@bt.com>
Source record: 13334

"Szczepan Bia&#65533;ek" <sz.bialek@wp.pl> wrote in message
news:h833bm$cb0$1@node1.news.atman.pl...
>
> "christofire" <christofire@btinternet.com> wrote
> news:Z6Odnd4yd6wqtjnXnZ2dnUVZ8m6dnZ2d@bt.com...
>>
>> "Dave" <noone@nowhere.com> wrote in message
>> news:p6Tom.1350$Jd7.609@nwrddc02.gnilink.net...
>>>
>>> "Szczepan Bialek" <sz.bialek@wp.pl> wrote in message
>>> news:h80hh5$199$1@node1.news.atman.pl...
>>>> Take a rest in reading and look at the oryginal Hertz apparatus as the
>>>> two sources of longitudinal waves (radiated from ends). You should see
>>>> the Luxembourg effect (frequency doubling) and directional pattern.
>>>> S*
>>>>
>>> but you don't because that is not how it works. the waves are radiated
>>> by the whole length of the connecting wire and are transverse... there
>>> is no frequency doubling as you explain it.
>>
>> ... and the so-called 'Luxembourg effect' is not frequency doubling but
>> cross modulation; that is, generation in the ionosphere of
>> intermodulation products that carry the modulation of both sources.
>
> So you should be able to repeat the phenomena. Richard did not: " I worked
> four years in a European shortwave
> broadcast station and I don`t remember any frequency doubling but we
> aspired to hit the ionosphere with enough power to drive it into extreme
> nonlinearity end impose our signal en all the others in the area ala
> Luxembourg."
>
> Help him.
> S*

Huh?

What Richard wrote means he didn't encounter frequency doubling but he did
try to cause cross modulation, as in the 'Luxembourg effect'.

What I wrote doesn't conflict with that.

Perhaps it's a language difficulty on your part.

Chris

1823. Re: Corriolis force

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-07 17:48:15 UTC
From: christofire <christofire@btinternet.com>
Message-ID: <6LmdnZJnmaj_2jjXnZ2dnUVZ8sudnZ2d@bt.com>
Source record: 13335

"Cecil Moore" <nospam@w5dxp.com> wrote in message
news:Rw8pm.142589$sC1.119939@newsfe17.iad...
> Art Unwin wrote:
>> Interesting you
>> quote the electron gun. ... So where did this photon emerge from?
>
> The electron is the gun, the photons are the bullets.
> Quoting Feynman's "QED": "So now, I present to you the
> three basic actions, from which all of the phenomena
> of light and electrons arise.
>
> -Action #1: A photon goes from place to place.
> -Action #2: An electron goes from place to place.
> -Action #3: An electron emits or absorbs a photon."
>
> For an RF antenna radiator, the electrons go from
> place to place in (on) the conductor in the form
> of free electrons. The photons go from place to place
> in the space surrounding the conductor. Only the
> photons can move at the speed of light from the
> feedpoint to the ends of a dipole. Electrons move
> hardly at all.
> --
> 73, Cecil, IEEE, OOTC, http://www.w5dxp.com

I like the statement that the electrons in one's house wiring are mostly the same ones that were there when the house was built (or last re-wired).

'Charge' is a funny one though - a bit like debt, it can take effect almost instantaneously (does debt travel at the speed of light - I guess it often does nowadays).

Chris

1824. Re: Corriolis force

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-07 17:50:53 UTC
From: Mike Coslo <mjc5@psu.edu>
Message-ID: <h83h5u$9c1a$1@tr22n12.aset.psu.edu>
Source record: 13336

Cecil Moore wrote:
> Mike Coslo wrote:
>> I'm also missing the citations about how mass is removed and gained
>> from antennas at the same time.
>
> I gave those a few postings ago. Here they are again.
>
> e = mc^2 energy supplied by the source
>
> m = e/c^2 mass lost to radiation

That isn't a cite, that's a formula.

So I guess that you apply the idea that photons have mass.

Never mind.

- 73 de Mike N3LI -

1825. Re: Corriolis force

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-07 18:29:15 UTC
From: christofire <christofire@btinternet.com>
Message-ID: <i4GdnZ8zrsNjzTjXnZ2dnUVZ8kadnZ2d@bt.com>
Source record: 13338

"Szczepan Bia&#65533;ek" <sz.bialek@wp.pl> wrote in message
news:h835clcla1@node1.news.atman.pl...
>
-- snip --

>>> Do you know somebody who has more proven reputation in acoustic and
>>> electrodynamics than Helmholtz?
>>
>>
>> * Yes: the late John D Kraus. He was a practical engineer as well as a
>> theoretician and his native language was English. He managed to put into
>> practice a lot of the theory that others had written about and he
>> recorded his work lucidly. I've already named two of Kraus's books - can
>> you cite something written by any of your favourites that provides clear
>> explanations that you understand? Answers.com doesn't explain anything
>> technical.
>
> For practical engineers the math theory is useless.

* No, that's quite wrong. Practical engineers use mathematics a great deal.
Amateurs may not, but they're not all engineers. To make a statement like
that it would appear you have never worked successfully as a practical
engineer using the conventional definition of 'engineer': a person trained
in any branch of engineering.

>> * Heaviside's documentation is appaling! I remember going through a
>> catalogue of his work in an effort to get to the truth about the origin
>> of the 'Heaviside condition' - a lot of it was written in obfuscation
>> babble, a bit like some of the contributors to this group.
>
> He is the father of the hydraulic analogy where the electricity is the
> incompressble masless flud.
> Electrons in antenns are compressible and have mass. What is electricity
> in J. D. Kraus?

* It's the passage of charge through conductors, the same as it is
everywhere else, of course. Compressibilty of electrons doesn't feateure in
any of Kraus's books that I've read, which must mean it is not a necessary
concept for normal, physical, antennas and propagation.

>>> * What 'two loudspeaker'? If you're drawing comparison between a
>>>> direct-radiator loudspeaker and a dipole and using that as a basis for
>>>> saying that EM waves are longitudinal, as I suspect you are, then you
>>>> should also consider a horn loudspeaker. Sound is radiated from the
>>>> mouth of a horn 'speaker and the other side of the compression driver
>>>> diaphragm can be totally enclosed. There is no simple comparison with

>>>> a dipole antenna in this case.
>
> The horn is a monopole. See:
> http://paws.kettering.edu/~drussell/Demos/rad2/mdq.html
> The unboxed loudspeaker is a dipole.
>>
>> * Why don't you look into horn louspeakers and then report back. You may
>> find them fascinating and very unlike dipoles.
>
> Like fascinating is the two monopoles antennas (your dipoles).
> S*

* You claimed that EM waves are longitudinal, like sound waves, and you used some comparison between a loudspeaker and a dipole as justification. So now you understand that not all loudspeakers behave that way ... so what? Do you still believe EM waves are longitudinal or have you changed your mind? If you believe Dan Russell then where on his site does he state that EM waves are longitudinal? Of course, he doesn't.

On second thought, don't bother replying - this dialogue is going nowhere and is a waste of our time.

Chris

1826. Re: Corriolis force

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-07 18:32:13 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <p8kaa5ttkbu0q8bt9irvpliee0trlo5rm3@4ax.com>
Source record: 13337

On Mon, 07 Sep 2009 13:50:53 -0400, Mike Coslo <mjc5@psu.edu> wrote:

>Never mind.

Hi Mike,

You are NEVER going to get a straight answer that reveals the height
of stupidity that originated the discussion. You couldn't sensibly
put enough zeros after the decimal on the written page to give the
mass.

73's
Richard Clark, KB7QHC

1827. Re: Coax Connectors Question

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-07 18:42:12 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <0rkaa599npqa0ka0p4d3agrjte1a6vi0ke@4ax.com>
Source record: 13339

On Mon, 7 Sep 2009 09:23:40 -0400, "Robert11" <rgsros@xnotme.invalid>
wrote:

> I was wondering about just forgetting the switches and just make a
>simple plug panel using, I imagine, BNC connectors and coax.

This is your best option offering the greatest flexibility, best
isolation, lowest loss, and lowest cost.

>So, what kind of life might I expect with BNC's, plugging and unplugging
>them ?

They will last forever at your described usage.

73's
Richard Clark, KB7QHC

1828. NEED NYC DOB ESQ or PE

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-07 18:48:46 UTC
From: ml <m@di.net>
Message-ID: <m-BADC55.14484607092009@news.optonline.net>
Source record: 13340

Hi

I am specifically looking to consult with (or hire) a NYC lawyer who specifically deals with the NYC Building Department (permit) codes, and knows them inside out.

Realize that some NYS licensed PE's may also have a similar knowledge of the NYC DOB codes, thats ok too.

Lastly, if someone happens to work at the NYC DOB in a similar capacity (code knowledge), that would be great too.....

Had a question with respect to antenna installation (non tower). Need a authorized legal /official response in writing, or advice how to obtain, from Lawyer, PE , or DOB officials.

Understanding that if my question requires a formal payment that is understood and ok.

Please contact me at myles at- DTI dot-- n et.

thanks very much

1829. Re: Corriolis force

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-07 19:02:28 UTC
From: Dave <noone@nowhere.com>
Message-ID: <8Ncpm.1450$Jd7.559@nwrddc02.gnilink.net>
Source record: 13341

```
"Szczepan Bialek" <sz.bialek@wp.pl> wrote in message
news:h835cl$cla$1@node1.news.atman.pl...
>
> "christofire" <christofire@btinternet.com> wrote
> news:iNudnbnPYb5psjnXnZ2dnUVZ8gqdnZ2d@bt.com...
>>
>> "Szczepan Biaï¿½ek" <sz.bialek@wp.pl> wrote in message
>> news:h80hh5$199$1@node1.news.atman.pl...
>>>
>>>> -- snip --
>>>>
>>>>
>>>>>> * Would you care to cite a reference where it is stated that EM waves
>>>>>> in the far field of a transmitting antenna contain a significant
>>>>>> longitudinal component? Many respected authors, such as Kraus, have
>>>>>> illustrated the contrary, but their work isn't limited to paper;
>>>>>> people like Kraus have designed real antennas of types that are still
>>>>>> in use today.
>>>>>
>>>>> Maxwell ASSUMED that the aether is a solid body and ASSUMED that there
>>>>> are the transversal waves. Next he do the math to it. To prove it he
>>>>> asks Michelson to measure the movements of the Earth in this solid
>>>>> body. In 1878 (about) Michelson did not detect 30km/s. In 1925 he
>>>>> detect 0.4 km/s. It means that the eather is not a solid body. The EM
>>>>> theory is only math (a piece to teach).
>>>>
>>>> * You haven't cited a reference. The words you have written here do
>>>> not demonstrate that EM waves are longitudinal. A 'reference', if you
>>>> didn't understand the term, means a passage from a book or paper
>>>> written by someone who has a proven reputation for good, useful work in
>>>> the field.
>>>
>>> " Oliver Heaviside criticised Helmholtz' electromagnetic theory because
>>> it allowed the existence of longitudinal waves" .From:
>>> http://www.answers.com/topic/hermann-von-helmholtz
>>>
>>> Do you know somebody who has more proven reputation in acoustic and
>>> electrodynamics than Helmholtz?
>>
>>
>> * Yes: the late John D Kraus. He was a practical engineer as well as a
>> theoretician and his native language was English. He managed to put into
>> practice a lot of the theory that others had written about and he
>> recorded his work lucidly. I've already named two of Kraus's books - can
```

>> you cite something written by any of your favourites that provides clear
>> explanations that you understand? Answers.com doesn't explain anything
>> technical.
>
> For practical engineers the math theory is useless.
>>
>>
>>> Hertz was the pupil of Helmholtz.
>>> The Maxwell's equations (that from 1864) was the same like the
>>> Helmholtz' for fluid mechanics.
>>> Many textbooks inform us that it was a big Maxwell's mistake. He ignored
>>> atomic nature of electricity disovered by Faraday at electrolise.
>>> Helmholtz not ignored it.
>>> Maxwell (modified by Heaviside) is only a piece to teach the math.
>>
>>
>> * Heaviside's documentation is appaling! I remember going through a
>> catalogue of his work in an effort to get to the truth about the origin
>> of the 'Heaviside condition' - a lot of it was written in obfuscation
>> babble, a bit like some of the contributors to this group.
>
> He is the father of the hydraulic analogy where the electricity is the
> incompressble masless flud.
> Electrons in antenns are compressible and have mass. What is electricity
> in J. D. Kraus?
>>
>>>
>>>>>>>>Sound waves are longitudinal because air pressure is a scalar,
>>>>>>>>whereas electric and magnetic fields are vectors - they have
>>>>>>>>polarisation.
>>>>>>>
>>>>>>> The math has not to do here.
>>>>>>
>>>>>> * What 'math'? ... just the mention of scalars and vectors, in a
>>>>>> group devoted to antennas. Please.
>>>>>
>>>>> The first step should be dicovering which part of the oryginal Hertz
>>>>> dipole radiate:
>>>>>
http://people.seas.harvard.edu/~jones/cscie129/nu_lectures/lecture6/hertz/Hertz_exp.html
>>>>>
>>>>> The big sparks (current) or the plates (balls).
>>>>> Note that todays dipoles are quite different. Now no current between
>>>>> the tips.
>>>>>>
>>>>>>
>>>>>>> Here is the full acoustic analogy. The two loudspeakers work like
>>>>>>> the two monopoles.
>>>>>>
>>>>>> * Rubbish. What 'two loudspeakers'? Ever heard of a horn

>>>>>> loudspeaker? ... it produces longitudinal pressure waves.
>>>>>
>>>>> Why then the two loudspeaker and the two monopoles have the same
>>>>> directional patern?
>>>>
>>>> * What 'two loudspeaker'? If you're drawing comparison between a
>>>> direct-radiator loudspeaker and a dipole and using that as a basis for
>>>> saying that EM waves are longitudinal, as I suspect you are, then you
>>>> should also consider a horn loudspeaker. Sound is radiated from the
>>>> mouth of a horn 'speaker and the other side of the compression driver
>>>> diaphragm can be totally enclosed. There is no simple comparison with
>>>> a dipole antenna in this case.
>
> The horn is a monopole. See:
> http://paws.kettering.edu/~drussell/Demos/rad2/mdq.html
> The unboxed loudspeaker is a dipole.
>>
>> * Why don't you look into horn louspeakers and then report back. You may
>> find them fascinating and very unlike dipoles.
>
> Like fascinating is the two monopoles antennas (your dipoles).
> S*
>>
>> Chris
>>
>
as long as you keep holding on to the acoustic analogies you will be wrong.
some of the waves 'look' similar, but only because of the poor capability of
computers to visualize time varying fields in 3d.

1830. Re: Corriolis force

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-07 19:04:28 UTC
From: Dave <noone@nowhere.com>
Message-ID: <0Pcpm.1451$Jd7.188@nwrddc02.gnilink.net>
Source record: 13342

"christofire" <christofire@btinternet.com> wrote in message
news:i4GdnZ8zrsNjzTjXnZ2dnUVZ8kadnZ2d@bt.com...
>
> "Szczepan Biaï¿½ek" <sz.bialek@wp.pl> wrote in message
> news:h835clcla1@node1.news.atman.pl...
>>
> -- snip --
>
>>>> Do you know somebody who has more proven reputation in acoustic and
>>>> electrodynamics than Helmholtz?
>>>
>>>
>>> * Yes: the late John D Kraus. He was a practical engineer as well as a
>>> theoretician and his native language was English. He managed to put
>>> into practice a lot of the theory that others had written about and he
>>> recorded his work lucidly. I've already named two of Kraus's books -
>>> can you cite something written by any of your favourites that provides
>>> clear explanations that you understand? Answers.com doesn't explain
>>> anything technical.
>>
>> For practical engineers the math theory is useless.
>
> * No, that's quite wrong. Practical engineers use mathematics a great
> deal. Amateurs may not, but they're not all engineers. To make a
> statement like that it would appear you have never worked successfully as
> a practical engineer using the conventional definition of 'engineer': a
> person trained in any branch of engineering.
>
>
>>> * Heaviside's documentation is appaling! I remember going through a
>>> catalogue of his work in an effort to get to the truth about the origin
>>> of the 'Heaviside condition' - a lot of it was written in obfuscation
>>> babble, a bit like some of the contributors to this group.
>>
>> He is the father of the hydraulic analogy where the electricity is the
>> incompressble masless flud.
>> Electrons in antenns are compressible and have mass. What is electricity
>> in J. D. Kraus?
>
> * It's the passage of charge through conductors, the same as it is
> everywhere else, of course. Compressibilty of electrons doesn't feateure
> in any of Kraus's books that I've read, which must mean it is not a
> necessary concept for normal, physical, antennas and propagation.
>

>
>>>> * What 'two loudspeaker'? If you're drawing comparison between a
>>>>> direct-radiator loudspeaker and a dipole and using that as a basis for
>>>>> saying that EM waves are longitudinal, as I suspect you are, then you
>>>>> should also consider a horn loudspeaker. Sound is radiated from the
>>>>> mouth of a horn 'speaker and the other side of the compression driver
>>>>> diaphragm can be totally enclosed. There is no simple comparison with
>>>>> a dipole antenna in this case.
>>
>> The horn is a monopole. See:
>> http://paws.kettering.edu/~drussell/Demos/rad2/mdq.html
>> The unboxed loudspeaker is a dipole.
>>>
>>> * Why don't you look into horn louspeakers and then report back. You
>>> may find them fascinating and very unlike dipoles.
>>
>> Like fascinating is the two monopoles antennas (your dipoles).
>> S*
>
> * You claimed that EM waves are longitudinal, like sound waves, and you
> used some comparison between a loudspeaker and a dipole as justification.
> So now you understand that not all loudspeakers behave that way ... so
> what? Do you still believe EM waves are longitudinal or have you changed
> your mind? If you believe Dan Russell then where on his site does he state
> that EM waves are longitudinal? Of course, he doesn't.
>
> On second thought, don't bother replying - this dialogue is going nowhere
> and is a waste of our time.
>
> Chris

only if you take it seriously... i consider it great entertainment!

1831. Re: Corriolis force

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-07 19:17:42 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <Y%cpm.185013$Qg6.150298@newsfe14.iad>
Source record: 13343

christofire wrote:
> 'Charge' ... can take effect almost instantaneously ...

It's akin to a 100 foot long tube of marbles.
Hit one end of the tube with a hammer and
measure the time it takes the energy impulse
to reach the other end of the tube. How fast
and how far did the energy impulse travel?
How fast and how far did each marble travel?
--
73, Cecil, IEEE, OOTC, http://www.w5dxp.com

1832. Re: Corriolis force

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-07 19:19:38 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <G1dpm.185014$Qg6.23810@newsfe14.iad>
Source record: 13344

Mike Coslo wrote:
> That isn't a cite, that's a formula.

It's a cite from Einstein, et al.

> So I guess that you apply the idea that photons have mass.

Of course, photons have energy - therefore photons have mass.
--
73, Cecil, IEEE, OOTC, http://www.w5dxp.com

1833. Re: Corriolis force

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-07 20:27:40 UTC
From: Mike Coslo <mjc5@psu.edu>
Message-ID: <h83qbr$547s$1@tr22n12.aset.psu.edu>
Source record: 13345

Richard Clark wrote:
> On Mon, 07 Sep 2009 13:50:53 -0400, Mike Coslo <mjc5@psu.edu> wrote:
>
>> Never mind.
>
> Hi Mike,
>
> You are NEVER going to get a straight answer that reveals the height
> of stupidity that originated the discussion. You couldn't sensibly
> put enough zeros after the decimal on the written page to give the
> mass.

'Twould appear that way. The concept that materials go away and come back via energy applied to them is interesting. I suppose that the energy applied to an aluminum wire by a copper wire ends up turning the Aluminum into copper, while the power lines turn into whatever the turbine generator's wires are, and the turbine itself eventually turns into steam.

What is old is new again - the alchemists were right!

- 73 de Mike N3LI -

1834. Re: Corriolis force

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-07 21:43:40 UTC
From: christofire <christofire@btinternet.com>
Message-ID: <WuWdncDHvtUN4zjXnZ2dnUVZ8iKdnZ2d@bt.com>
Source record: 13346

"Cecil Moore" <nospam@w5dxp.com> wrote in message
news:Y%cpm.185013$Qg6.150298@newsfe14.iad...
> christofire wrote:
>> 'Charge' ... can take effect almost instantaneously ...
>
> It's akin to a 100 foot long tube of marbles.
> Hit one end of the tube with a hammer and
> measure the time it takes the energy impulse
> to reach the other end of the tube. How fast
> and how far did the energy impulse travel?
> How fast and how far did each marble travel?
> --
> 73, Cecil, IEEE, OOTC, http://www.w5dxp.com

Absolutely. When the old lady in the flat below bangs on her ceiling with her walking stick, the end of the stick hits the ceiling instantly as she pushes it upwards. Extrapolating, if an incompressible/inextensible rod or string could be made, wouldn't that permit communication faster than the speed of light?

I guess inextensible and incompressible are difficult to achieve, but if either were possible would the communication still be limited to the speed of light?

Chris

1835. Re: Corriolis force

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-07 22:00:00 UTC
From: jimp@specsol.spam.sux.com
Message-ID: <0ccgn6-u9i.ln1@mail.specsol.com>
Source record: 13347

christofire <christofire@btinternet.com> wrote:
>
> "Cecil Moore" <nospam@w5dxp.com> wrote in message
> news:Y%cpm.185013$Qg6.150298@newsfe14.iad...
>> christofire wrote:
>>> 'Charge' ... can take effect almost instantaneously ...
>>
>> It's akin to a 100 foot long tube of marbles.
>> Hit one end of the tube with a hammer and
>> measure the time it takes the energy impulse
>> to reach the other end of the tube. How fast
>> and how far did the energy impulse travel?
>> How fast and how far did each marble travel?
>> --
>> 73, Cecil, IEEE, OOTC, http://www.w5dxp.com
>
>
> Absolutely. When the old lady in the flat below bangs on her ceiling with
> her walking stick, the end of the stick hits the ceiling instantly as she
> pushes it upwards. Extrapolating, if an incompressible/inextensible rod or
> string could be made, wouldn't that permit communication faster than the
> speed of light?

Nope, the energy in both the tube of marbles and the walking stick
travels at the speed of sound in the medium.

> I guess inextensible and incompressible are difficult to achieve, but if
> either were possible would the communication still be limited to the speed
> of light?
>
> Chris

Yes.

--
Jim Pennino

Remove .spam.sux to reply.

1836. Re: Corriolis force

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-07 22:09:28 UTC
From: Dave <noone@nowhere.com>
Message-ID: <swfpm.1475$Jd7.1348@nwrddc02.gnilink.net>
Source record: 13348

"christofire" <christofire@btinternet.com> wrote in message
news:WuWdncDHvtUN4zjXnZ2dnUVZ8iKdnZ2d@bt.com...
>
> "Cecil Moore" <nospam@w5dxp.com> wrote in message
> news:Y%cpm.185013$Qg6.150298@newsfe14.iad...
>> christofire wrote:
>>> 'Charge' ... can take effect almost instantaneously ...
>>
>> It's akin to a 100 foot long tube of marbles.
>> Hit one end of the tube with a hammer and
>> measure the time it takes the energy impulse
>> to reach the other end of the tube. How fast
>> and how far did the energy impulse travel?
>> How fast and how far did each marble travel?
>> --
>> 73, Cecil, IEEE, OOTC, http://www.w5dxp.com
>
>
> Absolutely. When the old lady in the flat below bangs on her ceiling with
> her walking stick, the end of the stick hits the ceiling instantly as she
> pushes it upwards. Extrapolating, if an incompressible/inextensible rod
> or string could be made, wouldn't that permit communication faster than
> the speed of light?
>
> I guess inextensible and incompressible are difficult to achieve, but if
> either were possible would the communication still be limited to the speed
> of light?
>
> Chris
>

predicting the properties of something that is impossible to make is
impossible.

1837. Re: Corriolis force

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-07 23:06:48 UTC
From: christofire <christofire@btinternet.com>
Message-ID: <kZadnV4nU-iWDzjXnZ2dnUVZ8kqdnZ2d@bt.com>
Source record: 13349

"Dave" <noone@nowhere.com> wrote in message
news:swfpm.1475$Jd7.1348@nwrddc02.gnilink.net...
>
> "christofire" <christofire@btinternet.com> wrote in message
> news:WuWdncDHvtUN4zjXnZ2dnUVZ8iKdnZ2d@bt.com...
>>
>> "Cecil Moore" <nospam@w5dxp.com> wrote in message
>> news:Y%cpm.185013$Qg6.150298@newsfe14.iad...
>>> christofire wrote:
>>>> 'Charge' ... can take effect almost instantaneously ...
>>>
>>> It's akin to a 100 foot long tube of marbles.
>>> Hit one end of the tube with a hammer and
>>> measure the time it takes the energy impulse
>>> to reach the other end of the tube. How fast
>>> and how far did the energy impulse travel?
>>> How fast and how far did each marble travel?
>>> --
>>> 73, Cecil, IEEE, OOTC, http://www.w5dxp.com
>>
>>
>> Absolutely. When the old lady in the flat below bangs on her ceiling
>> with her walking stick, the end of the stick hits the ceiling instantly
>> as she pushes it upwards. Extrapolating, if an
>> incompressible/inextensible rod or string could be made, wouldn't that
>> permit communication faster than the speed of light?
>>
>> I guess inextensible and incompressible are difficult to achieve, but if
>> either were possible would the communication still be limited to the
>> speed of light?
>>
>> Chris
>>
>
> predicting the properties of something that is impossible to make is
> impossible.

Agreed, but c is finite so is there a degree of compressibility or
expansibility below which faster-than-c communication would be possible? ...
or would the whole principle be scuppered by Lorentz contraction?

Chris

PS: oh dear, I hope no-one applies the Coriolis effect to turn this into
Penrose-Terrell rotation

(http://en.wikipedia.org/wiki/Penrose-Terrell_rotation)!

1838. Re: Corriolis force

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-07 23:07:50 UTC
From: tom <news4792@taring.org>
Message-ID: <4aa5922e$0$28112$8046368a@newsreader.iphouse.net>
Source record: 13350

Szczepan Biaďż˝ek wrote:
>
> For practical engineers the math theory is useless.

But for real engineers math is everything. If you can't back it up with figures, you're only guessing.

tom
K0TAR

1839. Re: Corriolis force

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-07 23:21:06 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <Q4CdnemtGt_-CDjXnZ2dnUVZ_t-dnZ2d@giganews.com>
Source record: 13201

Dave wrote:
>
> predicting the properties of something that is impossible to make is
> impossible.

Egad, not at all.

The elements we use in circuit analysis, for example -- pure resistances, capacitances, inductances, sources, and so forth -- are all impossible to make. Yet we know their properties in exacting detail. One cannot cut a stick to a length of exactly pi meters, yet the properties of pi are precisely known. For that matter, we can't even make a stick that's exactly one meter long, but the meter is very well defined.

Those are just a very few of the vast number of things which are impossible to make yet whose properties are known. Math, science and engineering wouldn't be possible without them.

Roy Lewallen, W7EL

1840. The ultimate tilted monopole

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-07 23:44:41 UTC
From: christofire <christofire@btinternet.com>
Message-ID: <IZCdnYV7GKh2BzjXnZ2dnUVZ8q-dnZ2d@bt.com>
Source record: 13202

In the words of the great Basil Fawlty "you'll like this one"!

It appears to be believed, by one or two who frequent this NG, that a tilted monopole provides more gain and somehow 'better' EM radiation than a vertical one. However, we've seen that tilting a vertical monopole distorts its radiation pattern so it is no longer truly omni-directional in the horizontal plane. Then why not create an array of such tilted monopoles, all tilted in different directions, to restore the omni-directional pattern.

The result is a discone antenna, or a discage like the one illustrated at http://gvarc.us/GVARCFrames/Titan/Discone/Launch4life002.jpg. I wonder what the 'new-age theorists' would make of this. Does it require the Coriolis effect to analyse it, or is the old-fashioned version provided by Schellkunoff & Friis(#) still adequate?

Chris

Schellkunoff, S.A., and Friis, H.T. Antennas, theory and practice. John Wiley & Sons Inc., New York, 1952. pp 104 to 106.

... and if that isn't enough, how about the Racal Antennas 'Difan' http://www.racalantennas.com/products/ground/omnidirectional/hf/difan-antennas-16-30mhz--45-30mhz.aspx?

1841. Re: Corriolis force

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-07 23:59:01 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <4l6ba5171nmr3n5coee327p5htu7i7bbmk@4ax.com>
Source record: 13203

On Mon, 07 Sep 2009 16:27:40 -0400, Mike Coslo <mjc5@psu.edu> wrote:

>What is old is new again - the alchemists were right!

Hi Mike,

Of late, I have been reading Herman Melville's "The Confidence Man." I won't go into the plot (it strained the conventions of the day - 1850s) but mention one vignette where a kid was hustling two gentlemen on a river boat on the Mississippi. When the kid struck a deal, he sweetened it with a pamphlet on how to recognize counterfeit paper money.

It seems that pamphlets like this wete very necessary back when any bank could print their own bills (something like the great hornswaggle of Wall Street). The banks then had to print pamphlets on how to recognize the exquisite detail work of engraving on their bills so you would recognize the 'real stuff.'

What is interesting is that the counterfeiters wrote their own pamphlets too, describing the exquisite details in their engraving....

73's
Richard Clark, KB7QHC

1842. Re: The ultimate tilted monopole

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-08 00:52:00 UTC
From: Dale Parfitt <parinc1@verizon.net>
Message-ID: <QUhpm.1646$tl3.650@nwrddc01.gnilink.net>
Source record: 13204

"christofire" <christofire@btinternet.com> wrote in message
news:IZCdnYV7GKh2BzjXnZ2dnUVZ8q-dnZ2d@bt.com...
> In the words of the great Basil Fawlty "you'll like this one"!
>
> It appears to be believed, by one or two who frequent this NG, that a
> tilted monopole provides more gain and somehow 'better' EM radiation than
> a vertical one. However, we've seen that tilting a vertical monopole
> distorts its radiation pattern so it is no longer truly omni-directional
> in the horizontal plane. Then why not create an array of such tilted
> monopoles, all tilted in different directions, to restore the
> omni-directional pattern.
>
> The result is a discone antenna, or a discage like the one illustrated at
> http://gvarc.us/GVARCFrames/Titan/Discone/Launch4life002.jpg. I wonder
> what the 'new-age theorists' would make of this. Does it require the
> Coriolis effect to analyse it, or is the old-fashioned version provided by
> Schellkunoff & Friis(#) still adequate?
>
> Chris
>
>
> # Schellkunoff, S.A., and Friis, H.T. Antennas, theory and practice.
> John Wiley & Sons Inc., New York, 1952. pp 104 to 106.
>
>
>
> ... and if that isn't enough, how about the Racal Antennas 'Difan'
> http://www.racalantennas.com/products/ground/omnidirectional/hf/difan-antennas-16-30mhz-
-45-30mhz.aspx?

It makes one wonder how they "stumbled" onto these designs without a
knowledge of equalibrium and coriolis.

I can already see Art's reply- how do you know they did not take these into
account?
My only answer is- because you're the only one that does.
Dale W4OP

1843. Re: The ultimate tilted monopole

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-08 03:30:32 UTC
From: "Sal M. Onella" <salmonella@food.poisoning.org>
Message-ID: <gTkpm.219516$ZN.80980@newsfe23.iad>
Source record: 13205

"christofire" <christofire@btinternet.com> wrote in message
news:IZCdnYV7GKh2BzjXnZ2dnUVZ8q-dnZ2d@bt.com...
> In the words of the great Basil Fawlty "you'll like this one"!
>
> It appears to be believed, by one or two who frequent this NG, that a
tilted
> monopole provides more gain and somehow 'better' EM radiation than a
> vertical one. However, we've seen that tilting a vertical monopole
distorts
> its radiation pattern so it is no longer truly omni-directional in the
> horizontal plane. Then why not create an array of such tilted monopoles,
> all tilted in different directions, to restore the omni-directional
pattern.
>
> The result is a discone antenna, or a discage like the one illustrated at
> http://gvarc.us/GVARCFrames/Titan/Discone/Launch4life002.jpg. I wonder
what
> the 'new-age theorists' would make of this. Does it require the Coriolis
> effect to analyse it, or is the old-fashioned version provided by
> Schellkunoff & Friis(#) still adequate?
>

Also a receive-only HF antenna the Navy mounted on the forward gun mount. I
struggled to find a picture of a ship with one showing but no luck. The
elements were about five to seven feet long and arranged as the OP describes

1844. Re: The ultimate tilted monopole

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-08 04:22:31 UTC
From: "Sal M. Onella" <salmonella@food.poisoning.org>
Message-ID: <d_kpm.219517$ZN.112800@newsfe23.iad>
Source record: 13206

"christofire" <christofire@btinternet.com> wrote in message
news:IZCdnYV7GKh2BzjXnZ2dnUVZ8q-dnZ2d@bt.com...
> In the words of the great Basil Fawlty "you'll like this one"!
>
> It appears to be believed, by one or two who frequent this NG, that a
tilted
> monopole provides more gain and somehow 'better' EM radiation than a
> vertical one. However, we've seen that tilting a vertical monopole
distorts
> its radiation pattern so it is no longer truly omni-directional in the
> horizontal plane. Then why not create an array of such tilted monopoles,
> all tilted in different directions, to restore the omni-directional
pattern.
>
> The result is a discone antenna, or a discage like the one illustrated at
> http://gvarc.us/GVARCFrames/Titan/Discone/Launch4life002.jpg. I wonder
what
> the 'new-age theorists' would make of this. Does it require the Coriolis
> effect to analyse it, or is the old-fashioned version provided by
> Schellkunoff & Friis(#) still adequate?
>

Such a design also appears as a self-supporting HF receive antenna the Navy
mounted on the forward gun mount. I
struggled to find a picture of a ship with one showing but no luck. The
elements were about five to seven feet long and arranged as the OP
describes.

1845. Re: The ultimate tilted monopole

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-08 04:22:36 UTC
From: "Sal M. Onella" <salmonella@food.poisoning.org>
Message-ID: <i_kpm.219518$ZN.162840@newsfe23.iad>
Source record: 13207

"christofire" <christofire@btinternet.com> wrote in message
news:IZCdnYV7GKh2BzjXnZ2dnUVZ8q-dnZ2d@bt.com...
> In the words of the great Basil Fawlty "you'll like this one"!
>
> It appears to be believed, by one or two who frequent this NG, that a
tilted
> monopole provides more gain and somehow 'better' EM radiation than a
> vertical one. However, we've seen that tilting a vertical monopole
distorts
> its radiation pattern so it is no longer truly omni-directional in the
> horizontal plane. Then why not create an array of such tilted monopoles,
> all tilted in different directions, to restore the omni-directional
pattern.
>
> The result is a discone antenna, or a discage like the one illustrated at
> http://gvarc.us/GVARCFrames/Titan/Discone/Launch4life002.jpg. I wonder
what
> the 'new-age theorists' would make of this. Does it require the Coriolis
> effect to analyse it, or is the old-fashioned version provided by
> Schellkunoff & Friis(#) still adequate?
>

Such a design also appears as a self-supporting HF receive antenna the Navy
mounted on the forward gun mount. I
struggled to find a picture of a ship with one showing but no luck. The
elements were about five to seven feet long and arranged as the OP
describes.

1846. Re: Corriolis force

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-08 08:02:48 UTC
From: Szczepan Białek <sz.bialek@wp.pl>
Message-ID: <h84o43jid1@node1.news.atman.pl>
Source record: 13208

```
"christofire" <christofire@btinternet.com>wrote
news:C92dnYGeyPDm2DjXnZ2dnUVZ8tadnZ2d@bt.com...
>
> "Szczepan Biaďż˝ek" <sz.bialek@wp.pl> wrote in message
> news:h833bm$cb0$1@node1.news.atman.pl...
>>
>> "christofire" <christofire@btinternet.com> wrote
>> news:Z6Odnd4yd6wqtjnXnZ2dnUVZ8m6dnZ2d@bt.com...
>>>
>>> "Dave" <noone@nowhere.com> wrote in message
>>> news:p6Tom.1350$Jd7.609@nwrddc02.gnilink.net...
>>>>
>>>> "Szczepan Bialek" <sz.bialek@wp.pl> wrote in message
>>>> news:h80hh5$199$1@node1.news.atman.pl...
>>>>> Take a rest in reading and look at the oryginal Hertz apparatus as the
>>>>> two sources of longitudinal waves (radiated from ends). You should see
>>>>> the Luxembourg effect (frequency doubling) and directional pattern.
>>>>> S*
>>>>>
>>>> but you don't because that is not how it works. the waves are radiated
>>>> by the whole length of the connecting wire and are transverse... there
>>>> is no frequency doubling as you explain it.
>>>
>>> ... and the so-called 'Luxembourg effect' is not frequency doubling but
>>> cross modulation; that is, generation in the ionosphere of
>>> intermodulation products that carry the modulation of both sources.
>>
>> So you should be able to repeat the phenomena. Richard did not: " I
>> worked four years in a European shortwave
>> broadcast station and I don`t remember any frequency doubling but we
>> aspired to hit the ionosphere with enough power to drive it into extreme
>> nonlinearity end impose our signal en all the others in the area ala
>> Luxembourg."
>>
>> Help him.
>> S*
>
>
> Huh?
>
> What Richard wrote means he didn't encounter frequency doubling but he did
> try to cause cross modulation, as in the 'Luxembourg effect'.
```

In the 'Luxembourg effect' was the frequency doubling. The LW were receiwed
as the MW.

>
> What I wrote doesn't conflict with that.
>
> Perhaps it's a language difficulty on your part.

"the waves are radiated by the whole length of the connecting wire and are
transverse... there is no frequency doubling as you explain it."
You prefer the cross modulation - I prefer the two sources.
S*

1847. Re: Corriolis force

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-08 08:09:23 UTC
From: Szczepan Białek <sz.bialek@wp.pl>
Message-ID: <h84oge$jn4$1@node1.news.atman.pl>
Source record: 13209

"tom" <news4792@taring.org> wrote
news:4aa5922e$0$28112$8046368a@newsreader.iphouse.net...
> Szczepan Biaďż˝ek wrote:
>>
>> For practical engineers the math theory is useless.
>
> But for real engineers math is everything. If you can't back it up with
> figures, you're only guessing.

The figures are also in empiric equations. Engineers use only such.
S*

1848. Re: Corriolis force

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-08 08:37:42 UTC
From: Szczepan Białek <sz.bialek@wp.pl>
Message-ID: <h84q5h$k0h$1@node1.news.atman.pl>
Source record: 13210

```
"christofire" <christofire@btinternet.com> wrote
news:i4GdnZ8zrsNjzTjXnZ2dnUVZ8kadnZ2d@bt.com...
>
> "Szczepan Biaďż˝ek" <sz.bialek@wp.pl> wrote in message
> news:h835cl$cla$1@node1.news.atman.pl...
>>
> -- snip --
>
>>>> Do you know somebody who has more proven reputation in acoustic and
>>>> electrodynamics than Helmholtz?
>>>
>>>
>>> * Yes: the late John D Kraus. He was a practical engineer as well as a
>>> theoretician and his native language was English. He managed to put
>>> into practice a lot of the theory that others had written about and he
>>> recorded his work lucidly. I've already named two of Kraus's books -
>>> can you cite something written by any of your favourites that provides
>>> clear explanations that you understand? Answers.com doesn't explain
>>> anything technical.
>>
>> For practical engineers the math theory is useless.
>
> * No, that's quite wrong. Practical engineers use mathematics a great
> deal.

They make calculations using empirical equations.

> Amateurs may not, but they're not all engineers. To make a statement like
> that it would appear you have never worked successfully as a practical
> engineer using the conventional definition of 'engineer': a person trained
> in any branch of engineering.

It si very funny to read this. Todays engineers use the Ampere,Gauss, Weber
Electrodynamisc but are sure that they use the Maxwell's.
>
>
>>> * Heaviside's documentation is appaling! I remember going through a
>>> catalogue of his work in an effort to get to the truth about the origin
>>> of the 'Heaviside condition' - a lot of it was written in obfuscation
>>> babble, a bit like some of the contributors to this group.
>>
>> He is the father of the hydraulic analogy where the electricity is the
>> incompressble masless flud.
>> Electrons in antenns are compressible and have mass. What is electricity
>> in J. D. Kraus?
```

>
> * It's the passage of charge through conductors, the same as it is
> everywhere else, of course. Compressibilty of electrons doesn't feateure
> in any of Kraus's books that I've read, which must mean it is not a
> necessary concept for normal, physical, antennas and propagation.

He use (probably) the term voltage. Voltage is the same as pressure or the
electron density. Is the voltage the necessary concept or no?
And what about the mass of electrons in the books?
>
>>>> * What 'two loudspeaker'? If you're drawing comparison between a
>>>>> direct-radiator loudspeaker and a dipole and using that as a basis for
>>>>> saying that EM waves are longitudinal, as I suspect you are, then you
>>>>> should also consider a horn loudspeaker. Sound is radiated from the
>>>>> mouth of a horn 'speaker and the other side of the compression driver
>>>>> diaphragm can be totally enclosed. There is no simple comparison with
>>>>> a dipole antenna in this case.
>>
>> The horn is a monopole. See:
>> http://paws.kettering.edu/~drussell/Demos/rad2/mdq.html
>> The unboxed loudspeaker is a dipole.
>>>
>>> * Why don't you look into horn louspeakers and then report back. You
>>> may find them fascinating and very unlike dipoles.
>>
>> Like fascinating is the two monopoles antennas (your dipoles).
>> S*
>
> * You claimed that EM waves are longitudinal,
Not me. It is Helmholtz and many others.

> like sound waves, and you used some comparison between a loudspeaker and a
> dipole as justification. So now you understand that not all loudspeakers
> behave that way ... so what? Do you still believe EM waves are
> longitudinal or have you changed your mind? If you believe Dan Russell
> then where on his site does he state that EM waves are longitudinal? Of
> course, he doesn't.

Dan Russel do not state enything about EM. EM waves will be always
transversal because such we assumed before writting the math. Real electric
waves radiated by one monopole end two monopoles you can see on this
animation.
>
> On second thought, don't bother replying - this dialogue is going nowhere
> and is a waste of our time.

Dave is right: "only if you take it seriously... i consider it great
entertainment"

It is very funny that radio enginners do not know that they do not use the
Maxwell's model of the eather.
S*

1849. Re: The ultimate tilted monopole

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-08 10:39:45 UTC
From: Richard Fry <rfry@adams.net>
Message-ID: <10abd7f6-e658-49ec-a9ef-7ab92d265def@r39g2000yqm.googlegroups.com>
Source record: 13211

On Sep 7, 6:44 pm, "christofire" <christof...@btinternet.com> wrote:
> It appears to be believed, by one or two who frequent this NG, that a tilted
> monopole provides more gain and somehow 'better' EM radiation than a
> vertical one. However, we've seen that tilting a vertical monopole distorts
> its radiation pattern so it is no longer truly omni-directional in the
> horizontal plane. Then why not create an array of such tilted monopoles,
> all tilted in different directions, to restore the omni-directional pattern.

The radiation pattern of such an antenna is the about the same as that
of a single, vertical ("untipped") monopole. But for the same
conductor diameter, the multi-conductor, or cage version can have much
greater VSWR bandwidth.

John Kraus has a brief section on such designs in Antennas, 3rd
edition, starting at page 719.

The following link also describes them...

http://www.tpub.com/content/et/14092/css/14092_38.htm

RF

1850. Re: Corriolis force

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-08 10:56:28 UTC
From: Keith Dysart <keith.dysart@gmail.com>
Message-ID: <a10b8e64-9a84-438c-871b-0c56941c12b0@g23g2000yqh.googlegroups.com>
Source record: 13212

On Sep 7, 6:00 pm, j...@specsol.spam.sux.com wrote:
> Nope, the energy in both the tube of marbles and the walking stick
> travels at the speed of sound in the medium.

What happens when the walking stick is traveling faster than
the speed of sound?

...Keith

1851. Re: The ultimate tilted monopole

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-08 11:00:05 UTC
From: christofire <christofire@btinternet.com>
Message-ID: <bdSdnbV8U9WkpDvXnZ2dnUVZ8rWdnZ2d@bt.com>
Source record: 13213

"Sal M. Onella" <salmonella@food.poisoning.org> wrote in message
news:i_kpm.219518$ZN.162840@newsfe23.iad...
>
> "christofire" <christofire@btinternet.com> wrote in message
> news:IZCdnYV7GKh2BzjXnZ2dnUVZ8q-dnZ2d@bt.com...
>> In the words of the great Basil Fawlty "you'll like this one"!
>>
>> It appears to be believed, by one or two who frequent this NG, that a
> tilted
>> monopole provides more gain and somehow 'better' EM radiation than a
>> vertical one. However, we've seen that tilting a vertical monopole
> distorts
>> its radiation pattern so it is no longer truly omni-directional in the
>> horizontal plane. Then why not create an array of such tilted monopoles,
>> all tilted in different directions, to restore the omni-directional
> pattern.
>>
>> The result is a discone antenna, or a discage like the one illustrated at
>> http://gvarc.us/GVARCFrames/Titan/Discone/Launch4life002.jpg. I wonder
> what
>> the 'new-age theorists' would make of this. Does it require the Coriolis
>> effect to analyse it, or is the old-fashioned version provided by
>> Schellkunoff & Friis(#) still adequate?
>>
>
>
> Such a design also appears as a self-supporting HF receive antenna the
> Navy
> mounted on the forward gun mount. I
> struggled to find a picture of a ship with one showing but no luck. The
> elements were about five to seven feet long and arranged as the OP
> describes.

USS Missouri http://www.kh6bb.org/photos2.html

Chris

1852. Re: Corriolis force

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-08 11:26:15 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <Tbrpm.144601$sC1.136778@newsfe17.iad>
Source record: 13214

christofire wrote:
> Extrapolating, if an incompressible/inextensible rod or
> string could be made, wouldn't that permit communication faster than the
> speed of light?

Faster than light communications has already happened.
Entangled particles communicate with each other
instantaneously over any distance. Some say it
proves that reality is non-local but is being
projected from somewhere else. Question is: Who is
running the projector? :-)
--
73, Cecil, IEEE, OOTC, http://www.w5dxp.com

1853. Re: Corriolis force

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-08 11:31:21 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <Fgrpm.144602$sC1.52659@newsfe17.iad>
Source record: 13215

christofire wrote:
> Agreed, but c is finite so is there a degree of compressibility or
> expansibility below which faster-than-c communication would be possible? ...
> or would the whole principle be scuppered by Lorentz contraction?

Years ago, quantum tunneling was reported to have passed
information at faster than the speed of light. I haven't
heard anything about that lately.
--
73, Cecil, IEEE, OOTC, http://www.w5dxp.com

1854. Re: Corriolis force

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-08 11:39:39 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <sorpm.144605$sC1.51604@newsfe17.iad>
Source record: 13216

Keith Dysart wrote:
> What happens when the walking stick is traveling faster than
> the speed of sound?

Exactly how much faster?
--
73, Cecil, IEEE, OOTC, http://www.w5dxp.com

1855. Re: Corriolis force

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-08 13:57:13 UTC
From: JIMMIE <JIMMIEDEE123@YAHOO.COM>
Message-ID: <2a9b18a8-9898-4b11-8600-aef90b12b904@a21g2000yqc.googlegroups.com>
Source record: 13217

On Sep 8, 7:31 am, Cecil Moore <nos...@w5dxp.com> wrote:
> christofire wrote:
> > Agreed, but c is finite so is there a degree of compressibility or
> > expansibility below which faster-than-c communication would be possible? ...
> > or would the whole principle be scuppered by Lorentz contraction?
>
> Years ago, quantum tunneling was reported to have passed
> information at faster than the speed of light. I haven't
> heard anything about that lately.
> --
> 73, Cecil, IEEE, OOTC, http://www.w5dxp.com

I think there are two main avenues of thinking on the phenomenon known
as quantum tunneling being faster than the speed of light. One is
that other dimensions are involved. Data is not traveling faster than
the speed of light, it is just taking a short cut. The other is that
the data was wrong.

Jimmie

1856. Re: Corriolis force

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-08 15:45:00 UTC
From: jimp@specsol.spam.sux.com
Message-ID: <5u9in6-d7r.ln1@mail.specsol.com>
Source record: 13218

Keith Dysart <keith.dysart@gmail.com> wrote:
> On Sep 7, 6:00 pm, j...@specsol.spam.sux.com wrote:
>> Nope, the energy in both the tube of marbles and the walking stick
>> travels at the speed of sound in the medium.
>
> What happens when the walking stick is traveling faster than
> the speed of sound?
>
> ...Keith

It makes a big hole in the old lady's ceiling.

Actually, the energy travels through the building structure at the speed
of sound, not the walking stick, which has energy of momentum until it
hits the ceiling.

--
Jim Pennino

Remove .spam.sux to reply.

1857. Re: The ultimate tilted monopole

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-08 16:00:36 UTC
From: Richard Fry <rfry@adams.net>
Message-ID: <cd9f07ce-f2ce-4a1b-8243-b24b1d732804@o41g2000yqb.googlegroups.com>
Source record: 13219

In the case of a single monopole mounted with its base at earth level, adding tilt to it makes very little difference in its gain at elevation angles up to +60 degrees or so, at any azimuth. It does partially fill the elevation null at the zenith produced by the vertical monopole, as well as to produce a small amount of h-pol radiation over most of the compass.

Modeling this in NEC for a 1 MHz, 1/4-wave, straight monopole by moving its top 10 meters out of plumb changed its peak gain by about 0.01 dB compared to the untilted version, at any azimuth.

RF

1858. Re: ART vs. W8JI

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-08 16:38:27 UTC
From: Michael Coslo <mjc5@psu.edu>
Message-ID: <h861a3$s840$1@tr22n12.aset.psu.edu>
Source record: 13220

tom wrote:
> Cecil Moore wrote:
>> Art Unwin wrote:
>>> I will wait for that day.
>>
>> No need to wait. It's easy to make the measurements
>> for yourself. I have already done it to prove that
>> standing wave current, with its unchanging phase
>> relative to the feedpoint current, cannot be used
>> to measure the phase delay through a loading coil.
>>
>> If a current probe is used to measure a traveling
>> wave, the amplitude will be constant. If the amplitude
>> changes from point to point, it contains a standing wave.
>
> Art? Measure something? You must be kidding.
>
> Next you'll expect him to tell us how to build one of his antennas. Then
> we'd all know for sure what a fraud he is.

Actually, Art gave me directions for building his 160 meter antenna, the one people call "The Shoebox". SO you're not quite right on that point.

I looked at it, and decided that it very closely resembled an EH antenna, with a tuned circuit on top of some coax. Those type of antennas work after a fashion, probably through feed line radiation in this case. So you could likely build it, install it, and make some contacts with it. Whether that makes it a good antenna is up for discussion. I'd probably go with something else.

- 73 de Mike N3LI -

1859. Re: The ultimate tilted monopole

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-08 17:30:01 UTC
From: Art Unwin <arthurunwin@gmail.com>
Message-ID: <9a83d710-1e73-41b9-aaf3-0bdd18e33ebb@38g2000yqr.googlegroups.com>
Source record: 13221

On Sep 8, 11:00 am, Richard Fry <r...@adams.net> wrote:
> In the case of a single monopole mounted with its base at earth level,
> adding tilt to it makes very little difference in its gain at
> elevation angles up to +60 degrees or so, at any azimuth. It does
> partially fill the elevation null at the zenith produced by the
> vertical monopole, as well as to produce a small amount of h-pol
> radiation over most of the compass.
>
> Modeling this in NEC for a 1 MHz, 1/4-wave, straight monopole by
> moving its top 10 meters out of plumb changed its peak gain by about
> 0.01 dB compared to the untilted version, at any azimuth.
>
> RF

Gain has never been as issue in tipping the radiator except for some
who which to interject it.
Pointing's vector shows a radiation patterm that is spherical and in a
state of equilibrium
It is not the radiation pattern of a donut which all are familiar
with. Thus if one wants coverage in all directions one must pursue an
array or conductor in equilibrium.
The present state of the art only considers gravity as being outside
the arbitrary border
such that the equal and opposite vecter is exactly that. ie at right
angles to the Earth's surface. Now we all know that the radiation
pattern of such does not remotely resemble that of Pointings vector!
To get to the point of a spherical radiation pattern one must
recognize that there is an additional vector outside the boundary that
one must consider to obtain equilibrium. So far you have shown
progress by tipping the radiator where it started to fill the void at
the center of the donut. This alone confirms the idea that another
vector has to be considered outside the arbitrary border. Now
rotation is an essential property
of the Universe as fracture of an arbitrary boundary is created by two
forces which are not on a common plane. This is a shear force which
also creates torque or spin ,so it stands to reason that the other
force in combination with gravity is a force of torque or rotation.
If Coriolis is not that vector what other characteristic fits the
bill?

1860. Re: The ultimate tilted monopole

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-08 18:02:05 UTC
From: Richard Fry <rfry@adams.net>
Message-ID: <379e873f-b719-4598-b862-c88af59beea9@o9g2000yqj.googlegroups.com>
Source record: 13222

On Sep 8, 12:30 pm, Art Unwin <arthurun...@gmail.com> wrote:
> So far you have shown
> progress by tipping the radiator where it started to fill the void at
> the center of the donut. This alone confirms the idea that another
> vector has to be considered outside the arbitrary border

The change in the elevation pattern shape and gains seen in the "tipped" NEC plot I posted are NOT due to equilibrium, vectors outside boundaries, shear forces, torque, spin etc.

The change in the pattern of the tipped vertical dipole are due to changes in the amount and direction of the energy radiated toward the earth by, and near the antenna, and the net field that results by the vector addition of that reflection with the energy radiated in a given direction by the dipole itself.

Suggest you use NEC to model a vertical dipole in free space, at several physical rotation angles away from plumb. See if the gain and shape of the radiation pattern changes (they won't, if your model is valid).

Also note that the Poynting vector does not take the form of a perfect sphere for any linear antenna -- only for a (non-existent) isotropic radiator.

RF

1861. Re: The ultimate tilted monopole

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-08 18:42:42 UTC
From: Art Unwin <arthurunwin@gmail.com>
Message-ID: <644bac33-7c2f-4ed0-b723-0efca6bc45c6@l9g2000yqi.googlegroups.com>
Source record: 13223

On Sep 8, 1:02 pm, Richard Fry <r...@adams.net> wrote:
> On Sep 8, 12:30 pm, Art Unwin <arthurun...@gmail.com> wrote:
>
> > So far you have shown
> > progress by tipping the radiator where it started to fill the void at
> > the center of the donut. This alone confirms the idea that another
> > vector has to be considered outside the arbitrary border
>
> The change in the elevation pattern shape and gains seen in the
> "tipped" NEC plot I posted are NOT due to equilibrium, vectors outside
> boundaries, shear forces, torque, spin etc.
>
> The change in the pattern of the tipped vertical dipole are due to
> changes in the amount and direction of the energy radiated toward the
> earth by, and near the antenna, and the net field that results by the
> vector addition of that reflection with the energy radiated in a given
> direction by the dipole itself.
>
> Suggest you use NEC to model a vertical dipole in free space, at
> several physical rotation angles away from plumb. See if the gain and
> shape of the radiation pattern changes (they won't, if your model is
> valid).
>
> Also note that the Poynting vector does not take the form of a perfect
> sphere for any linear antenna -- only for a (non-existent) isotropic
> radiator.
>
> RF

We have now come to the end of my input.
We choose to disagree. I can go along with that
just to get you and others off my back. I will go away
and let all mumble about things between themselves.
I need a vacation this year anyway and the kids are back in school
so it is a good time and the weather is just right.
This month will be momentous at the UN so a seat in the gallery sound
good
We will see.

1862. Re: Corriolis force

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-08 20:13:45 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <6geda5hiarkiir2j3gee1ag702ld8auprf@4ax.com>
Source record: 13224

On Tue, 8 Sep 2009 06:57:13 -0700 (PDT), JIMMIE
<JIMMIEDEE123@YAHOO.COM> wrote:

>I think there are two main avenues of thinking on the phenomenon known
>as quantum tunneling being faster than the speed of light.

As quantum tunneling occurs millions to billions of times per second
in every antenna in the world, it would seem that faster-than-light
operation would have been observed by now (something of an oxymoron
there in this irony, isn't it?).

73's
Richard Clark, KB7QHC

1863. Re: Corriolis force

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-08 22:09:51 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <IDApm.152314$8B7.47345@newsfe20.iad>
Source record: 13225

Richard Clark wrote:
> As quantum tunneling occurs millions to billions of times per second
> in every antenna in the world, ...

"For (quantum tunneling) effects to occur there must
be a situation where a thin region of 'medium type 2'
is sandwiched between two regions of 'medium type 1'"

In an aluminum/copper antenna, what exactly makes
up the two medium 1 regions and what exactly makes
up the thin region of medium 2?
--
73, Cecil, IEEE, OOTC, http://www.w5dxp.com

1864. Re: NEED NYC DOB ESQ or PE

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-08 22:26:21 UTC
From: ml <m@di.net>
Message-ID: <m-BD6830.18262108092009@news.optonline.net>
Source record: 13226

<<< HI

Any help on this is greatly appreciated all I am missing to get on
the air!

In article <m-BADC55.14484607092009@news.optonline.net>, ml <m@di.net>
wrote:

> Hi
>
>
> I am specifically looking to consult with (or hire) a NYC lawyer who
> specifically deals with the NYC Building Department (permit) codes, and
> knows them inside out.
>
>
> Realize that some NYS licensed PE's may also have a similar knowledge
> of the NYC DOB codes, thats ok too.
>
> Lastly, if someone happens to work at the NYC DOB in a similar
> capacity (code knowledge), that would be great too.....
>
>
> Had a question with respect to antenna installation (non tower).
> Need a authorized legal /official response in writing, or advice how to
> obtain, from Lawyer, PE , or DOB officials.
>
>
> Understanding that if my question requires a formal payment that is
> understood and ok.
>
>
> Please contact me at myles at- DTI dot-- n et.
>
>
> thanks very much

1865. Re: Corriolis force

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-08 22:44:17 UTC
From: Dave <noone@nowhere.com>
Message-ID: <57Bpm.1565$Jd7.495@nwrddc02.gnilink.net>
Source record: 13227

```
"Szczepan Bialek" <sz.bialek@wp.pl> wrote in message
news:h84oge$jn4$1@node1.news.atman.pl...
>
> "tom" <news4792@taring.org> wrote
> news:4aa5922e$0$28112$8046368a@newsreader.iphouse.net...
>> Szczepan Biaï¿½ek wrote:
>>>
>>> For practical engineers the math theory is useless.
>>
>> But for real engineers math is everything. If you can't back it up with
>> figures, you're only guessing.
>
> The figures are also in empiric equations. Engineers use only such.
> S*
>
you have obviously never been an engineer... except maybe the type that
drives a train.
```

1866. Re: The ultimate tilted monopole

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-08 23:49:52 UTC
From: Richard Fry <rfry@adams.net>
Message-ID: <413d0d62-bd58-41fa-9519-d31e4224ad80@e12g2000yqi.googlegroups.com>
Source record: 13228

On Sep 7, 6:44 pm, "christofire" <christof...@btinternet.com> wrote:
> ... and if that isn't enough, how about the Racal Antennas at http://www.racalantennas.com/products/ground/omnidirectional/hf/difan-antennas-16-30mhz--45-30mhz.aspx?

I just now looked at this link, and see that it states that this radiator configuration is horizontally polarized.

That polarization appears to be "implausible" for this configuration.

Does any scientific documentation exist, or do any measured, real-world performance results prove that this configuration truly is horizontally polarized?

RF

1867. Re: The ultimate tilted monopole

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-09 00:19:28 UTC
From: Art Unwin <arthurunwin@gmail.com>
Message-ID: <e77bab40-d637-4ea3-84c4-c4b064b7b0c7@l9g2000yqi.googlegroups.com>
Source record: 13229

On Sep 8, 6:49 pm, Richard Fry <r...@adams.net> wrote:
> On Sep 7, 6:44 pm, "christofire" <christof...@btinternet.com> wrote:
>
> > ... and if that isn't enough, how about the Racal Antennas
athttp://www.racalantennas.com/products/ground/omnidirectional/hf/difan...
>
> I just now looked at this link, and see that it states that this
> radiator configuration is horizontally polarized.
>
> That polarization appears to be "implausible" for this configuration.
>
> Does any scientific documentation exist, or do any measured, real-
> world performance results prove that this configuration truly is
> horizontally polarized?
>
> RF

You are so dumb! Look at the center pole as being a vector in
opposition to the gravity vector. Then add the two tilted vectors
which represents the vectors of the Coriolis force.
(Yes, you add both of the vectors for Coriollis because it is a
rotational force) You are then left with a horizontal vector that
balances the above vectors. Thus you have horizontal polarization.
Why? Because the vectors outside the boundary are a combination of
two vectors which is gravity and the Coriolis. Now somebody mentioned
the question of polarization purity ! When you include the Coriolis
effect you get exactly that, a pure horizontal polarization which is
very useful in determining whether forces in shear conditions exist at
airports as views of reflection of transmissions are confusing if
you transfer a mixture in the first place. This way they have purity
in radiation so that reflections are more clearer for their
determinations as to what weather conditions exist and hopefully not
"wind shear" where a plane instantly loses altitude.
You are fortunate that you caught me before I left.

1868. Re: The ultimate tilted monopole

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-09 01:38:10 UTC
From: tom <news4792@taring.org>
Message-ID: <4aa706e4$0$28113$8046368a@newsreader.iphouse.net>
Source record: 13230

Art Unwin wrote:
> On Sep 8, 6:49 pm, Richard Fry <r...@adams.net> wrote:
>> On Sep 7, 6:44 pm, "christofire" <christof...@btinternet.com> wrote:
>>
>>> ... and if that isn't enough, how about the Racal Antennas
athttp://www.racalantennas.com/products/ground/omnidirectional/hf/difan...
>> I just now looked at this link, and see that it states that this
>> radiator configuration is horizontally polarized.
>>
>> That polarization appears to be "implausible" for this configuration.
>>
>> Does any scientific documentation exist, or do any measured, real-
>> world performance results prove that this configuration truly is
>> horizontally polarized?
>>
>> RF
>
> You are so dumb! Look at the center pole as being a vector in

Art

You expect people to treat you with respect and complain when they don't.

And then you treat others like SH T.

And you wonder why we don't respect you.

tom
K0TAR

1869. Re: The ultimate tilted monopole

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-09 01:54:16 UTC
From: tom <news4792@taring.org>
Message-ID: <4aa70b11$0$42841$8046368a@newsreader.iphouse.net>
Source record: 13231

Art Unwin wrote:
>
> You are so dumb! Look at the center pole as being a vector in
> opposition to the gravity vector. Then add the two tilted vectors
> which represents the vectors of the Coriolis force.
> (Yes, you add both of the vectors for Coriollis because it is a
> rotational force) You are then left with a horizontal vector that
> balances the above vectors. Thus you have horizontal polarization.
> Why? Because the vectors outside the boundary are a combination of
> two vectors which is gravity and the Coriolis. Now somebody mentioned
> the question of polarization purity ! When you include the Coriolis
> effect you get exactly that, a pure horizontal polarization which is
> very useful in determining whether forces in shear conditions exist at
> airports as views of reflection of transmissions are confusing if
> you transfer a mixture in the first place. This way they have purity
> in radiation so that reflections are more clearer for their
> determinations as to what weather conditions exist and hopefully not
> "wind shear" where a plane instantly loses altitude.
> You are fortunate that you caught me before I left.

And I have to say, WHAT A LOAD OF RUBBISH!!

Give me the vectors for all forces involved. The description alone is
not acceptable. And none of your obfuscation BullSh t. Just do it,
otherwise I know you're lying, as usual.

It's not that I don't trust you, but I don't trust you.

tom
K0TAR

1870. Re: The ultimate tilted monopole

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-09 03:11:43 UTC
From: JIMMIE <JIMMIEDEE123@YAHOO.COM>
Message-ID: <d85ab326-935c-4164-9bf7-10a0748a1d3a@q7g2000yqi.googlegroups.com>
Source record: 13232

On Sep 8, 8:19 pm, Art Unwin <arthurun...@gmail.com> wrote:
> On Sep 8, 6:49 pm, Richard Fry <r...@adams.net> wrote:
>
> > On Sep 7, 6:44 pm, "christofire" <christof...@btinternet.com> wrote:
>
> > > ... and if that isn't enough, how about the Racal Antennas
athttp://www.racalantennas.com/products/ground/omnidirectional/hf/difan...
>
> > I just now looked at this link, and see that it states that this
> > radiator configuration is horizontally polarized.
>
> > That polarization appears to be "implausible" for this configuration.
>
> > Does any scientific documentation exist, or do any measured, real-
> > world performance results prove that this configuration truly is
> > horizontally polarized?
>
> > RF
>
> You are so dumb! Look at the center pole as being a vector in
> opposition to the gravity vector. Then add the two tilted vectors
> which represents the vectors of the Coriolis force.
> (Yes, you add both of the vectors for Coriollis because it is a
> rotational force) You are then left with a horizontal vector that
> balances the above vectors. Thus you have horizontal polarization.
> Why? Because the vectors outside the boundary are a combination of
> two vectors which is gravity and the Coriolis. Now somebody mentioned
> the question of polarization purity ! When you include the Coriolis
> effect you get exactly that, a pure horizontal polarization which is
> very useful in determining whether forces in shear conditions exist at
> airports as views of reflection of transmissions are confusing if
> you transfer a mixture in the first place. This way they have purity
> in radiation so that reflections are more clearer for their
> determinations as to what weather conditions exist and hopefully not
> "wind shear" where a plane instantly loses altitude.
> You are fortunate that you caught me before I left.

ROTFLAMO

1871. Re: The ultimate tilted monopole

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-09 03:25:42 UTC
From: orfus <orfus@orfus.net>
Message-ID: <4AA72036.3080703@orfus.net>
Source record: 13233

There are many spelling mistakes in your random word generator.
olivier

Art Unwin wrote:
> On Sep 8, 11:00 am, Richard Fry <r...@adams.net> wrote:
>> In the case of a single monopole mounted with its base at earth level,
>> adding tilt to it makes very little difference in its gain at
>> elevation angles up to +60 degrees or so, at any azimuth. It does
>> partially fill the elevation null at the zenith produced by the
>> vertical monopole, as well as to produce a small amount of h-pol
>> radiation over most of the compass.
>>
>> Modeling this in NEC for a 1 MHz, 1/4-wave, straight monopole by
>> moving its top 10 meters out of plumb changed its peak gain by about
>> 0.01 dB compared to the untilted version, at any azimuth.
>>
>> RF
>
> Gain has never been as issue in tipping the radiator except for some
> who which to interject it.
> Pointing's vector shows a radiation patterm that is spherical and in a
> state of equilibrium
> It is not the radiation pattern of a donut which all are familiar
> with. Thus if one wants coverage in all directions one must pursue an
> array or conductor in equilibrium.
> The present state of the art only considers gravity as being outside
> the arbitrary border
> such that the equal and opposite vecter is exactly that. ie at right
> angles to the Earth's surface. Now we all know that the radiation
> pattern of such does not remotely resemble that of Pointings vector!
> To get to the point of a spherical radiation pattern one must
> recognize that there is an additional vector outside the boundary that
> one must consider to obtain equilibrium. So far you have shown
> progress by tipping the radiator where it started to fill the void at
> the center of the donut. This alone confirms the idea that another
> vector has to be considered outside the arbitrary border. Now
> rotation is an essential property
> of the Universe as fracture of an arbitrary boundary is created by two
> forces which are not on a common plane. This is a shear force which
> also creates torque or spin ,so it stands to reason that the other
> force in combination with gravity is a force of torque or rotation.
> If Coriolis is not that vector what other characteristic fits the
> bill?

1872. Re: The ultimate tilted monopole

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-09 07:02:42 UTC
From: "Sal M. Onella" <salmonella@food.poisoning.org>
Message-ID: <oqlpm.219705$ZN.129133@newsfe23.iad>
Source record: 13234

"christofire" <christofire@btinternet.com> wrote in message
news:bdSdnbV8U9WkpDvXnZ2dnUVZ8rWdnZ2d@bt.com...

< snip >

> >
> > Such a design also appears as a self-supporting HF receive antenna the
> > Navy
> > mounted on the forward gun mount. I
> > struggled to find a picture of a ship with one showing but no luck. The
> > elements were about five to seven feet long and arranged as the OP
> > describes.
>
>
> USS Missouri http://www.kh6bb.org/photos2.html
>
> Chris
>
>

Chris, that's the discone/cage, a transmit antenna with two individual
feedlines from the Radio Room. Some people call it the discage, as on the
website, but I never did.

The cage portion radiates 4 - 12 MHz and the discone portion radiates 10-30.
IIRC, it stands more than 20 feet high.

The antenna I'm trying to remember was receive only and was less than 6 feet
high. It had a shape that sort of resembled a squat wire basket.

Sal

1873. Re: The ultimate tilted monopole

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-09 07:34:08 UTC
From: christofire <christofire@btinternet.com>
Message-ID: <SfadnYi1i4LpxzrXnZ2dnUVZ8qOdnZ2d@bt.com>
Source record: 13235

"Sal M. Onella" <salmonella@food.poisoning.org> wrote in message
news:oqIpm.219705$ZN.129133@newsfe23.iad...
>
> "christofire" <christofire@btinternet.com> wrote in message
> news:bdSdnbV8U9WkpDvXnZ2dnUVZ8rWdnZ2d@bt.com...
>
> < snip >
>
>> >
>> > Such a design also appears as a self-supporting HF receive antenna the
>> > Navy
>> > mounted on the forward gun mount. I
>> > struggled to find a picture of a ship with one showing but no luck.
>> > The
>> > elements were about five to seven feet long and arranged as the OP
>> > describes.
>>
>>
>> USS Missouri http://www.kh6bb.org/photos2.html
>>
>> Chris
>>
>>
>
> Chris, that's the discone/cage, a transmit antenna with two individual
> feedlines from the Radio Room. Some people call it the discage, as on the
> website, but I never did.
>
> The cage portion radiates 4 - 12 MHz and the discone portion radiates
> 10-30.
> IIRC, it stands more than 20 feet high.
>
> The antenna I'm trying to remember was receive only and was less than 6
> feet
> high. It had a shape that sort of resembled a squat wire basket.
>
> Sal

Sal,

There's a directory of antennas used at one time or another by the US Navy at http://www.combatindex.com/hardware/hardware_sensor_main.html. Could it be the AS-2231? The 'discage' appears to be the AS-2802. Also, a contributor to this group, Richard Clark, has some photos at http://home.comcast.net/~kb7qhc/antennas/navy/.

I was aware that the discage in at least one of its incarnations had two separate feed lines, and the combination of two antennas in one 'package' gives rise to its particular shape. However, it has always intrigued me that a single element of similar shape has been used since the early 50s by the British Navy in the AJE/UK-SRA-102:
http://middle-watch.com/communications.htm and
http://rnmuseumradarandcommunications2006.org.uk/AJE.pdf. This could be a coincidence or it could be that F. A. Kitchen, the designer of the AJE, had been influenced by having previously seen a discage (his paper about development of the AJE doesn't really explain where the shape comes from). So I wonder when the AS-2802 'discage' came into use?

Chris

1874. Re: Corriolis force

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-09 08:00:25 UTC
From: Szczepan Białek <sz.bialek@wp.pl>
Message-ID: <h87cb1$1m0$1@node1.news.atman.pl>
Source record: 13236

"Dave" <noone@nowhere.com> wrote
news:57Bpm.1565$Jd7.495@nwrddc02.gnilink.net...
>
> "Szczepan Bialek" <sz.bialek@wp.pl> wrote in message
> news:h84oge$jn4$1@node1.news.atman.pl...
>>
>> "tom" <news4792@taring.org> wrote
>> news:4aa5922e$0$28112$8046368a@newsreader.iphouse.net...
>>> Szczepan Biaďż˝ek wrote:
>>>>
>>>> For practical engineers the math theory is useless.
>>>
>>> But for real engineers math is everything. If you can't back it up with
>>> figures, you're only guessing.
>>
>> The figures are also in empiric equations. Engineers use only such.
>> S*
>>
> you have obviously never been an engineer... except maybe the type that
> drives a train.

In this book:
http://books.google.pl/books?id=f3asJreno0YC&pg=PA220&lpg=PA220&dq=long-wire+traveling-wave+antennas.&source=bl&ots=06br76iFKO&sig=ckX_KlwUcZtJrINE73VACALqw-E&hl=pl&ei=wKKmSqHvM8eK-Qa7_8TGCA&sa=X&oi=book_result&ct=result&resnum=1#v=onepage&q=&f=false

no equations, no terms like transversal and so on. Sometimes the Authors
include a math theory. Each math theory has some simplifications. In nature
not separate transverse and longitudinal waves. The math is separate.
Maxwell was the genius. He made the ether model as a solid body. For Him it
was very easy. He also wrote 60 pages of equations for the Saturn rings. He
was also able to write a math for liquid or gas ether. But he lived too
short.

I wanted to know if radio people observe the frequency doubling when
receiving signals from a dipole. It should be easy to check it.
For me is enough to know (from this Group) that such was observed and is
known as the Luxembourg effect.
S*

1875. Re: The ultimate tilted monopole

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-09 08:08:46 UTC
From: "Sal M. Onella" <salmonella@food.poisoning.org>
Message-ID: <noJpm.219706$ZN.212277@newsfe23.iad>
Source record: 13237

"christofire" <christofire@btinternet.com> wrote in message
news:SfadnYi1i4LpxzrXnZ2dnUVZ8qOdnZ2d@bt.com...

< snip >

> > The antenna I'm trying to remember was receive only and was less than 6
> > feet
> > high. It had a shape that sort of resembled a squat wire basket.
> >
> > Sal
>
>
> Sal,
>
> There's a directory of antennas used at one time or another by the US Navy
> at http://www.combatindex.com/hardware/hardware_sensor_main.html. Could
it
> be the AS-2231?

No, that's called a sleeve, I think, but I moused over the MIL nomenclatures
and looked at each picture. The antenna I was thinking of is the
AS-2866/SRR. I am surprised to see in the write-up that it's only 24 inches
tall. I thought twice that.

I used that website many times when I was working (prior to June, 2007) and
was wishing I had saved the link on my home computer. Now I have it again
:-)))

>
> I was aware that the discage in at least one of its incarnations had two
> separate feed lines, and the combination of two antennas in one 'package'
> gives rise to its particular shape. However, it has always intrigued me
> that a single element of similar shape has been used since the early 50s
by
> the British Navy in the AJE/UK-SRA-102:
> http://middle-watch.com/communications.htm and
> http://rnmuseumradarandcommunications2006.org.uk/AJE.pdf. This could be a
> coincidence or it could be that F. A. Kitchen, the designer of the AJE,
had
> been influenced by having previously seen a discage (his paper about
> development of the AJE doesn't really explain where the shape comes from).
> So I wonder when the AS-2802 'discage' came into use?
>
I think it was removed from USS Dubuque (LPD-7) during the ship's overhaul
in 1982/83. I was there but the memory gets a little hazy about such
details. If that recollection is correct, it predates the 1980s.

1876. Re: The ultimate tilted monopole

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-09 08:20:03 UTC
From: christofire <christofire@btinternet.com>
Message-ID: <mt2dneJD-YWl-DrXnZ2dnUVZ8mydnZ2d@bt.com>
Source record: 13238

"Art Unwin" <arthurunwin@gmail.com> wrote in message
news:e77bab40-d637-4ea3-84c4-c4b064b7b0c7@l9g2000yqi.googlegroups.com...
On Sep 8, 6:49 pm, Richard Fry <r...@adams.net> wrote:
> On Sep 7, 6:44 pm, "christofire" <christof...@btinternet.com> wrote:
>
> > ... and if that isn't enough, how about the Racal Antennas
> > athttp://www.racalantennas.com/products/ground/omnidirectional/hf/difan...
>
> I just now looked at this link, and see that it states that this
> radiator configuration is horizontally polarized.
>
> That polarization appears to be "implausible" for this configuration.
>
> Does any scientific documentation exist, or do any measured, real-
> world performance results prove that this configuration truly is
> horizontally polarized?
>
> RF

You are so dumb! Look at the center pole as being a vector in
opposition to the gravity vector. Then add the two tilted vectors
which represents the vectors of the Coriolis force.
(Yes, you add both of the vectors for Coriollis because it is a
rotational force) You are then left with a horizontal vector that
balances the above vectors. Thus you have horizontal polarization.
Why? Because the vectors outside the boundary are a combination of
two vectors which is gravity and the Coriolis. Now somebody mentioned
the question of polarization purity ! When you include the Coriolis
effect you get exactly that, a pure horizontal polarization which is
very useful in determining whether forces in shear conditions exist at
airports as views of reflection of transmissions are confusing if
you transfer a mixture in the first place. This way they have purity
in radiation so that reflections are more clearer for their
determinations as to what weather conditions exist and hopefully not
"wind shear" where a plane instantly loses altitude.
You are fortunate that you caught me before I left.

None of that sounds very plausible.

What little experience I have of Racal Antennas would suggest they'll be
keeping the details proprietary, but there are some clues in the words of
their advertisement. A 'delta travelling wave antenna' is like half a
rhombic and deltas (i.e. 'V's) can be seen amongst the rigging - horizontal
ones and upward-tilted ones (as well as vertical ones, but they're probably
not driven differentially). A delta supports waves that have the electric

field developed between the two wires so a delta in the horizontal plane would yield horizontal polarisation.

However, the drawing doesn't make it obvious which pairs of wires are driven as the deltas, particularly when there appear be eight legs in the outer ring and three in the inner ring. The words say there are three 'pairs of delta travelling wave antennas' which probably means three deltas, that is, three pairs of wires driven differentially - clear English was never their strong point.

Googling 'difan' didn't yield anything useful so this may be Racal's own design.

Chris

1877. Re: The ultimate tilted monopole

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-09 11:30:32 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <VIMpm.186904$Qg6.48537@newsfe14.iad>
Source record: 13239

Richard Fry wrote:
> I just now looked at this link, and see that it states that this
> radiator configuration is horizontally polarized.
> That polarization appears to be "implausible" for this configuration.

Do we know the phasing among the feedpoints?
--
73, Cecil, IEEE, OOTC, http://www.w5dxp.com

1878. Ordering Pre-Made Coax Assy's & Adapters ?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-09 11:39:10 UTC
From: Robert11 <rgsros@xnotme.invalid>
Message-ID: <h8844t$7tg$1@news.eternal-september.org>
Source record: 13240

Hi,

Was wondering where you folks order small quantities of made up coax assemblies, adapters (such as SMA to BNC) and the like from ?

Grove and Universal always seem to have only about 75% or so of what i need in stock.
Deliveries from the Wireman the last time I ordered, about a year ago, were pretty long.

Any good source(s) for these kind of things that usually have them in stock ?

There are zillions of sources, apparently, if you do a Google, but i was wondering if there are any you guys use that you know are really good and stock a large and divergent supply of these types of things ?

Thanks,
Bob

1879. Re: Corriolis force

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-09 11:48:08 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <yCMpm.414165$Ta5.233803@newsfe15.iad>
Source record: 13241

Szczepan Białż˝ek wrote:
> In nature not separate transverse and longitudinal waves.

Longitudinal waves require a medium. For many years,
empty space was considered to be empty. We now know
that "empty" space is not empty and has a structure
that teems with quantum particles, i.e. the "aether"
actually exists although not in the conventional
matter form that was earlier assumed.

> I wanted to know if radio people observe the frequency doubling when
> receiving signals from a dipole.

Frequency doubling can occur in non-linear systems.
Every powered transistor stage has a certain degree
of non-linearity. A passive antenna system is usually
linear.
--
73, Cecil, IEEE, OOTC, http://www.w5dxp.com

1880. Re: The ultimate tilted monopole

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-09 12:48:10 UTC
From: christofire <christofire@btinternet.com>
Message-ID: <PqmdndKp3bOMOTrXnZ2dnUVZ8lOdnZ2d@bt.com>
Source record: 13242

"Cecil Moore" <nospam@w5dxp.com> wrote in message
news:VlMpm.186904$Qg6.48537@newsfe14.iad...
> Richard Fry wrote:
>> I just now looked at this link, and see that it states that this
>> radiator configuration is horizontally polarized.
>> That polarization appears to be "implausible" for this configuration.
>
> Do we know the phasing among the feedpoints?
> --
> 73, Cecil, IEEE, OOTC, http://www.w5dxp.com

... well certainly not from that web page. The question becomes - does anyone read this NG who has worked for Racal Antennas or the British military who has experience of the antenna and would be allowed to tell us?

Chris

1881. Re: The ultimate tilted monopole

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-09 13:02:20 UTC
From: Michael Coslo <mjc5@psu.edu>
Message-ID: <h8890v$k444$1@tr22n12.aset.psu.edu>
Source record: 13243

Art Unwin wrote:
> On Sep 8, 11:00 am, Richard Fry <r...@adams.net> wrote:
>> In the case of a single monopole mounted with its base at earth level,
>> adding tilt to it makes very little difference in its gain at
>> elevation angles up to +60 degrees or so, at any azimuth. It does
>> partially fill the elevation null at the zenith produced by the
>> vertical monopole, as well as to produce a small amount of h-pol
>> radiation over most of the compass.
>>
>> Modeling this in NEC for a 1 MHz, 1/4-wave, straight monopole by
>> moving its top 10 meters out of plumb changed its peak gain by about
>> 0.01 dB compared to the untilted version, at any azimuth.
>>
>> RF
>
> Gain has never been as issue in tipping the radiator except for some
> who which to interject it.
> Pointing's vector shows a radiation patterm that is spherical and in a
> state of equilibrium
> It is not the radiation pattern of a donut which all are familiar
> with. Thus if one wants coverage in all directions one must pursue an
> array or conductor in equilibrium.

The "donut" is a red herring. It's a visualization, not a blob of RF coming off the antenna. All antennas radiate in all directions. Some directions are higher intensity than others, but all directions none the less. The donut just exists to help us put a number on what is happening.

> rotation is an essential property
> of the Universe as fracture of an arbitrary boundary is created by two
> forces which are not on a common plane. This is a shear force which
> also creates torque or spin ,so it stands to reason that the other
> force in combination with gravity is a force of torque or rotation.
> If Coriolis is not that vector what other characteristic fits the
> bill?

So Coriolis needs re-defined also as not a mechanical *effect*, but as an electrical *force* that compels objects or energy to rotate.

I'll not be so beholden to summarily reject what you are saying, but what you are talking about wold have to be something other than Coriolis effect, it would have to be a as yet undefined and un named force.

- 73 de Mike N3LI -

1882. Re: Corriolis force

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-09 13:07:17 UTC
From: Michael Coslo <mjc5@psu.edu>
Message-ID: <h889a5$k444$2@tr22n12.aset.psu.edu>
Source record: 13244

Cecil Moore wrote:
> Mike Coslo wrote:
>> That isn't a cite, that's a formula.
>
> It's a cite from Einstein, et al.

So that's what his middle name is! 8^)

- 73 de Mike N3LI -

1883. Re: NEED NYC DOB ESQ or PE

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-09 13:10:27 UTC
From: Michael Coslo <mjc5@psu.edu>
Message-ID: <h889g3$k444$3@tr22n12.aset.psu.edu>
Source record: 13245

ml wrote:
> <<< HI
>
> Any help on this is greatly appreciated all I am missing to get on
> the air!

You might try the ARRL. They have contacts with lawyers who work with amateurs fro antenna issues. I think a noumber of them are pro-bono too.

- 73 de Mike N3LI -

1884. Re: Ordering Pre-Made Coax Assy's & Adapters ?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-09 15:59:40 UTC
From: Dale Parfitt <parinc1@verizon.net>
Message-ID: <MhQpm.1829$tl3.1795@nwrddc01.gnilink.net>
Source record: 13246

"Robert11" <rgsros@xnotme.invalid> wrote in message
news:h8844t$7tg$1@news.eternal-september.org...
> Hi,
>
> Was wondering where you folks order small quantities of made up coax
> assemblies, adapters (such as SMA to BNC) and the like from ?
>
> Grove and Universal always seem to have only about 75% or so of what i
> need in stock.
> Deliveries from the Wireman the last time I ordered, about a year ago,
> were pretty long.
>
> Any good source(s) for these kind of things that usually have them in
> stock ?
>
> There are zillions of sources, apparently, if you do a Google, but i was
> wondering if there are any you guys use that you know are really good and
> stock a large and divergent supply of these types of things ?
>
> Thanks,
> Bob
Give Joel a call at The RF C0nnection in Gaithersburg, MD.
www.therfc.com
great service and product.

Dale W4OP

1885. Re: Ordering Pre-Made Coax Assy's & Adapters ?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-09 16:35:37 UTC
From: Jeff Liebermann <jeffl@cruzio.com>
Message-ID: <9pkfa55bgp1aob8872fgmgluvkh85eslo6@4ax.com>
Source record: 13247

On Wed, 9 Sep 2009 07:39:10 -0400, "Robert11" <rgsros@xnotme.invalid>
wrote:

>Was wondering where you folks order small quantities of made up coax
>assemblies, adapters (such as SMA to BNC) and the like from ?

If you really need "small quantities", then consider do it thyself.

Stock up on an assortments of connectors, a few crimpers:
<http://802.11junk.com/jeffl/antennas/Misc/slides/crimpers.html>
and a thermal wire stripper:
<http://www.teledyneinterconnect.com/products/wire_strippers/wirestrip.asp>
Crimpers cost about $35/ea. A used thermal stripper is about $50 on
eBay. RF Industries connectors are $3/ea to $7/ea. There are plenty
for sale from other vendors on eBay. I stock LMR-100, LMR-240,
LMR-400, and the usual RG-6/u and RG-58/cu for CATV and jumper cables.
For the hams, I grudgingly stock UHF connectors, but most of my stuff
is SMA, RP-SMA, RP-TNC, BNC, and Type N.

If you do more than a few LMR-400 cables, consider investing in a $25
stripping tool such as:
<http://www.jefatech.com/product/T400STRIP/Low_Loss_400_Strip_Tool.html>
or an overpriced version:
<http://www.jefatech.com/product/T400PREP/Low_Loss_400_Connector_Prep_Tool.html>

Buy a supply of shrink tube and a heat gun for a professional look
(and to hide the mess).

I have a TDR for testing long cables, but an ohms-guesser and pull
test are usually good enough for checking just continuity and for
shorts.

Whether this is an economical solution depends on how many cables are
in a "small quantity" and how often you need to make them.

--
Jeff Liebermann jeffl@cruzio.com
150 Felker St #D http://www.LearnByDestroying.com
Santa Cruz CA 95060 http://802.11junk.com
Skype: JeffLiebermann AE6KS 831-336-2558

1886. Re: Corriolis force

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-09 18:02:17 UTC
From: Szczepan Białek <sz.bialek@wp.pl>
Message-ID: <h88fjb$7n1$1@node1.news.atman.pl>
Source record: 13248

"Cecil Moore" <nospam@w5dxp.com> wrote
news:yCMpm.414165$Ta5.233803@newsfe15.iad...
> Szczepan Biaďż˝ek wrote:
>> In nature not separate transverse and longitudinal waves.
>
> Longitudinal waves require a medium. For many years,
> empty space was considered to be empty. We now know
> that "empty" space is not empty and has a structure
> that teems with quantum particles, i.e. the "aether"
> actually exists although not in the conventional
> matter form that was earlier assumed.

Sound waves propagate in conventionall matter form (gas, liquid, solid).
They always have the two components (transverse and longitudinal). In
practice is the full analogy acoustic waves - electric waves.
It is not easy to to describe the aether. But it exists in common term "eter
waves". The ether waves are artifically produced and for this reason we know
more about them. To produce them we do not need to know if they are electric
or EM.
After some time will be clear which vision (Ampere or Heaviside) is in
agreement with practice,
>
>> I wanted to know if radio people observe the frequency doubling when
>> receiving signals from a dipole.
>
> Frequency doubling can occur in non-linear systems.
> Every powered transistor stage has a certain degree
> of non-linearity. A passive antenna system is usually
> linear.

You are saying about frequency changing. Are many ways to decrease a
frequency and a few to increase. Doubling is a special case of increasing.
In the Luxembourg effect no frequency doubling in above sense. All antenas
radiate in complex way. It is also obvious that it radiate from different
parts. That radiation from different parts may be not in phase at the
receiver. They may be in the opposite phase (like for dipoles). Here is the
key. Opposite phase means also the two pulses in one cycle. Each receiver
has its own resonant frequency. In the result long waves were received as
medium waves with the twice more frequency. There were no doubling in your
understanding.
S*

1887. Re: Ordering Pre-Made Coax Assy's & Adapters ?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-09 18:06:37 UTC
From: Bruce in alaska <fast@btpost.net>
Message-ID: <fast-FACAA1.10063709092009@unknown.usenetserver.com>
Source record: 13249

In article <MhQpm.1829$tl3.1795@nwrddc01.gnilink.net>,
"Dale Parfitt" <parinc1@verizon.net> wrote:

> "Robert11" <rgsros@xnotme.invalid> wrote in message
> news:h8844t$7tg$1@news.eternal-september.org...
> > Hi,
> >
> > Was wondering where you folks order small quantities of made up coax
> > assemblies, adapters (such as SMA to BNC) and the like from ?
> >
> > Grove and Universal always seem to have only about 75% or so of what i
> > need in stock.
> > Deliveries from the Wireman the last time I ordered, about a year ago,
> > were pretty long.
> >
> > Any good source(s) for these kind of things that usually have them in
> > stock ?
> >
> > There are zillions of sources, apparently, if you do a Google, but i was
> > wondering if there are any you guys use that you know are really good and
> > stock a large and divergent supply of these types of things ?
> >
> > Thanks,
> > Bob
> Give Joel a call at The RF C0nnection in Gaithersburg, MD.
> www.therfc.com
> great service and product.
>
> Dale W4OP

I use RF Connectors <www.rfindustries.com> They have a bunch of pre-made
assemblies that are very reasonable, and can custom build what ever you
need. They also can supply Part 15 Reverse Thread, and Reverse Gender
Connectors, Adapters, and assemblies. I have used them for years and they
have ALWAYS shipped on-time, and never a failure, or quality concern.
I am just a very satisfied customer.

Bruce (AL7AQ) in Alaska

--
Bruce in alaska
add <path> after <fast> to reply

1888. Re: Corriolis force

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-09 18:31:32 UTC
From: joe <none@invalid.com>
Message-ID: <KZWpm.145434$sC1.86333@newsfe17.iad>
Source record: 13253

Szczepan Białek wrote:

>
> "Cecil Moore" <nospam@w5dxp.com> wrote
> news:yCMpm.414165$Ta5.233803@newsfe15.iad...
>> Szczepan Białek wrote:
>>> In nature not separate transverse and longitudinal waves.
>>
>> Longitudinal waves require a medium. For many years,
>> empty space was considered to be empty. We now know
>> that "empty" space is not empty and has a structure
>> that teems with quantum particles, i.e. the "aether"
>> actually exists although not in the conventional
>> matter form that was earlier assumed.
>
> Sound waves propagate in conventionall matter form (gas, liquid, solid).
> They always have the two components (transverse and longitudinal). In
> practice is the full analogy acoustic waves - electric waves.

If you are saying that propagation of sound and radio are the same, you'll
have a lot of work to make me believe that.

> It is not easy to to describe the aether. But it exists in common term
> "eter waves". The ether waves are artifically produced and for this reason
> we know more about them. To produce them we do not need to know if they
> are electric or EM.
> After some time will be clear which vision (Ampere or Heaviside) is in
> agreement with practice,
>>
>>> I wanted to know if radio people observe the frequency doubling when
>>> receiving signals from a dipole.
>>
>> Frequency doubling can occur in non-linear systems.
>> Every powered transistor stage has a certain degree
>> of non-linearity. A passive antenna system is usually
>> linear.
>
> You are saying about frequency changing. Are many ways to decrease a
> frequency and a few to increase. Doubling is a special case of increasing.
> In the Luxembourg effect no frequency doubling in above sense. All antenas
> radiate in complex way. It is also obvious that it radiate from different
> parts. That radiation from different parts may be not in phase at the
> receiver. They may be in the opposite phase (like for dipoles). Here is
> the key. Opposite phase means also the two pulses in one cycle.

You have no understanding about how two signals combine at an antenna.

> Each
> receiver has its own resonant frequency. In the result long waves were
> received as medium waves with the twice more frequency. There were no
> doubling in your understanding.

You really need to understand the difference between linear systems
and non-linear systems. Do some reading to understand how two signals
interact in each type of system.

Once you understand the math (yes, it IS important), you may see how cross
modulation occurs.

> S*

1889. Re: Corriolis force

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-09 22:38:26 UTC
From: Dave <noone@nowhere.com>
Message-ID: <C7Wpm.1675$Jd7.873@nwrddc02.gnilink.net>
Source record: 13250

"Szczepan Bialek" <sz.bialek@wp.pl> wrote in message
news:h87cb1$1m0$1@node1.news.atman.pl...
>
> "Dave" <noone@nowhere.com> wrote
> news:57Bpm.1565$Jd7.495@nwrddc02.gnilink.net...
>>
>> "Szczepan Bialek" <sz.bialek@wp.pl> wrote in message
>> news:h84oge$jn4$1@node1.news.atman.pl...
>>>
>>> "tom" <news4792@taring.org> wrote
>>> news:4aa5922e$0$28112$8046368a@newsreader.iphouse.net...
>>>> Szczepan Biaï¿½ek wrote:
>>>>>
>>>>> For practical engineers the math theory is useless.
>>>>
>>>> But for real engineers math is everything. If you can't back it up
>>>> with figures, you're only guessing.
>>>
>>> The figures are also in empiric equations. Engineers use only such.
>>> S*
>>>
>> you have obviously never been an engineer... except maybe the type that
>> drives a train.
>
> In this book:
> http://books.google.pl/books?id=f3asJreno0YC&pg=PA220&lpg=PA220&dq=long-wire+traveling-w
ave+antennas.&source=bl&ots=06br76iFKO&sig=ckX_KlwUcZtJrINE73VACALqw-E&hl=pl&ei=wKKmSqHvM8
eK-Qa7_8TGCA&sa=X&oi=book_result&ct=result&resnum=1#v=onepage&q=&f=false
>
> no equations, no terms like transversal and so on. Sometimes the Authors
> include a math theory. Each math theory has some simplifications. In
> nature not separate transverse and longitudinal waves. The math is
> separate. Maxwell was the genius. He made the ether model as a solid
> body. For Him it was very easy. He also wrote 60 pages of equations for
> the Saturn rings. He was also able to write a math for liquid or gas
> ether. But he lived too short.

obviously that isn't an engineering text, that is a handbook similar to the
arrl antenna book, it looks like it presents very basic theory and practical
design equations. go read kraus or jackson for real engineering education
texts on electromagnetic stuff.

>
> I wanted to know if radio people observe the frequency doubling when
> receiving signals from a dipole. It should be easy to check it.

> For me is enough to know (from this Group) that such was observed and is
> known as the Luxembourg effect.
> S*
>
>

no we don't. and yet, it would be painfully obvious here running
multi-operator in contests with harmonically related bands. it just doesn't
happen the way you are dreaming.

1890. Re: The ultimate tilted monopole

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-09 22:46:19 UTC
From: Dave <noone@nowhere.com>
Message-ID: <%eWpm.1676$Jd7.735@nwrddc02.gnilink.net>
Source record: 13251

"Richard Fry" <rfry@adams.net> wrote in message
news:413d0d62-bd58-41fa-9519-d31e4224ad80@e12g2000yqi.googlegroups.com...
On Sep 7, 6:44 pm, "christofire" <christof...@btinternet.com> wrote:
>> ... and if that isn't enough, how about the Racal Antennas at
>> >http://www.racalantennas.com/products/ground/omnidirectional/hf/difan-antennas-16-30mhz--45-30mhz.aspx?
>
>I just now looked at this link, and see that it states that this
>radiator configuration is horizontally polarized.
>
>That polarization appears to be "implausible" for this configuration.
>

from the description and that line drawing i would guess that it is a
combination of delta loops, maybe looped around twice, and probably fed at
the connection point at the bottom of the mast. that would make them
horizontally polarized.

1891. Re: The ultimate tilted monopole

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-09 23:24:49 UTC
From: Richard Fry <rfry@adams.net>
Message-ID: <73287d0d-b5d7-4864-9f9b-23e6a0fe8437@g31g2000yqc.googlegroups.com>
Source record: 13252

On Sep 9, 5:46 pm, "Dave" <no...@nowhere.com> wrote:
> from the description and that line drawing i would guess that it is a
> combination of delta loops, maybe looped around twice, and probably fed at
> the connection point at the bottom of the mast. that would make them
> horizontally polarized.

Thanks for your opinions, "Dave."

But as per my first post about this physical configuration, does any scientific documentation exist, or do any measured, real-world performance results prove that this configuration truly is horizontally polarized?

RF

1892. Re: Corriolis force

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-10 09:56:54 UTC
From: Szczepan Białek <sz.bialek@wp.pl>
Message-ID: <h8a7gr$g84$1@node1.news.atman.pl>
Source record: 13254

"joe" <none@invalid.com> news:KZWpm.145434$sC1.86333@newsfe17.iad...
> Szczepan BiaĹ□ek wrote:
>
>>
>> "Cecil Moore" <nospam@w5dxp.com> wrote
>> news:yCMpm.414165$Ta5.233803@newsfe15.iad...
>>> Szczepan BiaĹ□ek wrote:
>>>> In nature not separate transverse and longitudinal waves.
>>>
>>> Longitudinal waves require a medium. For many years,
>>> empty space was considered to be empty. We now know
>>> that "empty" space is not empty and has a structure
>>> that teems with quantum particles, i.e. the "aether"
>>> actually exists although not in the conventional
>>> matter form that was earlier assumed.
>>
>> Sound waves propagate in conventionall matter form (gas, liquid, solid).
>> They always have the two components (transverse and longitudinal). In
>> practice is the full analogy acoustic waves - electric waves.
>
> If you are saying that propagation of sound and radio are the same, you'll
> have a lot of work to make me believe that.

Let us start then. Do you know a phenomenon which is not common?
>
>> It is not easy to to describe the aether. But it exists in common term
>> "eter waves". The ether waves are artifically produced and for this
>> reason
>> we know more about them. To produce them we do not need to know if they
>> are electric or EM.
>> After some time will be clear which vision (Ampere or Heaviside) is in
>> agreement with practice,
>>>
>>>> I wanted to know if radio people observe the frequency doubling when
>>>> receiving signals from a dipole.
>>>
>>> Frequency doubling can occur in non-linear systems.
>>> Every powered transistor stage has a certain degree
>>> of non-linearity. A passive antenna system is usually
>>> linear.
>>
>> You are saying about frequency changing. Are many ways to decrease a
>> frequency and a few to increase. Doubling is a special case of
>> increasing.

>> In the Luxembourg effect no frequency doubling in above sense. All
>> antenas
>> radiate in complex way. It is also obvious that it radiate from different
>> parts. That radiation from different parts may be not in phase at the
>> receiver. They may be in the opposite phase (like for dipoles). Here is
>> the key. Opposite phase means also the two pulses in one cycle.
>
> You have no understanding about how two signals combine at an antenna.
>
>> Each
>> receiver has its own resonant frequency. In the result long waves were
>> received as medium waves with the twice more frequency. There were no
>> doubling in your understanding.
>
> You really need to understand the difference between linear systems
> and non-linear systems. Do some reading to understand how two signals
> interact in each type of system.
>
> Once you understand the math (yes, it IS important), you may see how cross
> modulation occurs.

Now no math for electrons. All is for incompressible massless fluid.
S*
>
>
>> S*
>
>

1893. Re: Corriolis force

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-10 10:07:09 UTC
From: christofire <christofire@btinternet.com>
Message-ID: <CK6dnXrAA_dMUjXXnZ2dnUVZ8kadnZ2d@bt.com>
Source record: 13255

"Szczepan Bia&#65533;ek" <sz.bialek@wp.pl> wrote in message
news:h8a7gr$g84$1@node1.news.atman.pl...
>
> "joe" <none@invalid.com> news:KZWpm.145434$sC1.86333@newsfe17.iad...
>> Szczepan Białek wrote:
>>
>>>
>>> "Cecil Moore" <nospam@w5dxp.com> wrote
>>> news:yCMpm.414165$Ta5.233803@newsfe15.iad...
>>>> Szczepan Białek wrote:
>>>>> In nature not separate transverse and longitudinal waves.
>>>>
>>>> Longitudinal waves require a medium. For many years,
>>>> empty space was considered to be empty. We now know
>>>> that "empty" space is not empty and has a structure
>>>> that teems with quantum particles, i.e. the "aether"
>>>> actually exists although not in the conventional
>>>> matter form that was earlier assumed.
>>>
>>> Sound waves propagate in conventionall matter form (gas, liquid, solid).
>>> They always have the two components (transverse and longitudinal). In
>>> practice is the full analogy acoustic waves - electric waves.
>>
>> If you are saying that propagation of sound and radio are the same,
>> you'll
>> have a lot of work to make me believe that.
>
> Let us start then. Do you know a phenomenon which is not common?

* Polarisation, of course!

I suppose you're going to tell us now that sound waves are polarised!

Chris

1894. Re: Corriolis force

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-10 10:11:02 UTC
From: Szczepan Białek <sz.bialek@wp.pl>
Message-ID: <h8a8bbgdk1@node1.news.atman.pl>
Source record: 13256

"Dave" <noone@nowhere.com> wrote
news:C7Wpm.1675$Jd7.873@nwrddc02.gnilink.net...
>
> "Szczepan Bialek" <sz.bialek@wp.pl> wrote in message
> news:h87cb1$1m0$1@node1.news.atman.pl...
>>
>>>>
>>>> The figures are also in empiric equations. Engineers use only such.
>>>> S*
>>>>
>>> you have obviously never been an engineer... except maybe the type that
>>> drives a train.
>>
>> In this book:
>> http://books.google.pl/books?id=f3asJreno0YC&pg=PA220&lpg=PA220&dq=long-wire+traveling-wave+antennas.&source=bl&ots=06br76iFKO&sig=ckX_KlwUcZtJrINE73VACALqw-E&hl=pl&ei=wKKmSqHvM8eK-Qa7_8TGCA&sa=X&oi=book_result&ct=result&resnum=1#v=onepage&q=&f=false
>>
>> no equations, no terms like transversal and so on. Sometimes the Authors
>> include a math theory. Each math theory has some simplifications. In
>> nature not separate transverse and longitudinal waves. The math is
>> separate. Maxwell was the genius. He made the ether model as a solid
>> body. For Him it was very easy. He also wrote 60 pages of equations for
>> the Saturn rings. He was also able to write a math for liquid or gas
>> ether. But he lived too short.
>
> obviously that isn't an engineering text, that is a handbook similar to
> the arrl antenna book, it looks like it presents very basic theory and
> practical design equations. go read kraus or jackson for real engineering
> education texts on electromagnetic stuff.

Maxwell PROPOSED the EM model of aether. All teachers use it to teach the
math.
The "very basic theory and practical design equations" are based on the
electron behaviour.
In EM no electrons which are compressible and have the inertia.
Do you belive that the "displacement current" exist?.
It is the result of ASSUMPTION that electricity is a incompressible massless
fluid.
>>
>> I wanted to know if radio people observe the frequency doubling when
>> receiving signals from a dipole. It should be easy to check it.
>> For me is enough to know (from this Group) that such was observed and is
>> known as the Luxembourg effect.

> no we don't.

We now. But in 1930 they did.
S*

1895. Re: Corriolis force

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-10 10:35:23 UTC
From: Szczepan Białek <sz.bialek@wp.pl>
Message-ID: <h8a9p0gin1@node1.news.atman.pl>
Source record: 13257

"christofire" <christofire@btinternet.com> wrote
news:CK6dnXrAA_dMUjXXnZ2dnUVZ8kadnZ2d@bt.com...
>
> "Szczepan Biaďż˝ek" <sz.bialek@wp.pl> wrote in message
> news:h8a7gr$g84$1@node1.news.atman.pl...
>>
>>>>
>>>> Sound waves propagate in conventionall matter form (gas, liquid,
>>>> solid).
>>>> They always have the two components (transverse and longitudinal). In
>>>> practice is the full analogy acoustic waves - electric waves.
>>>
>>> If you are saying that propagation of sound and radio are the same,
>>> you'll
>>> have a lot of work to make me believe that.
>>
>> Let us start then. Do you know a phenomenon which is not common?
>
>
> * Polarisation, of course!
>
> I suppose you're going to tell us now that sound waves are polarised!

And you tell us that radiation from monopoles antennas is polarised.
There was a topic polarisation. In wave area is term alignment when we have
the two sources. Aligment of "dipoles" not means that waves are
"transverse".
In the reality no transverse waves. Waves appear in compressible medium. All
waves are the "pressure" waves. In math you can assume incompressibility.
But we here NO.
S*

>
> Chris
>

1896. Re: Corriolis force

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-10 15:22:28 UTC
From: Michael Coslo <mjc5@psu.edu>
Message-ID: <h8b5js$8832$1@tr22n12.aset.psu.edu>
Source record: 13258

joe wrote:
>
>
> If you are saying that propagation of sound and radio are the same, you'll
> have a lot of work to make me believe that.

Yeah, you beat me to the punch........

Now if i might digress a moment, with a situation that is a little similar. I had a colleague who had some odd ideas about other things propagating.

bodily function alert!

His idea was that farts were little bits, particles if you will, of fecal matter that propagated out of one's posterior and transported themselves to other people's noses. Dunno if those particles had any spin tho'. I will allow other readers to determine if any similarities exist here.

- 73 de Mike N3LI -

1897. Re: Corriolis force

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-10 20:54:55 UTC
From: Dave Holford <holford@cogeco.ca>
Message-ID: <BIdqm.156791$8B7.18688@newsfe20.iad>
Source record: 13259

"Szczepan Bia&#65533;ek" <sz.bialek@wp.pl> wrote in message
news:h8a9p0gin1@node1.news.atman.pl...
>
> "christofire" <christofire@btinternet.com> wrote
> news:CK6dnXrAA_dMUjXXnZ2dnUVZ8kadnZ2d@bt.com...
>>
>> "Szczepan Bia&#65533;ek" <sz.bialek@wp.pl> wrote in message
>> news:h8a7gr$g84$1@node1.news.atman.pl...
>>>
>>>>>
>>>>> Sound waves propagate in conventionall matter form (gas, liquid,
>>>>> solid).
>>>>> They always have the two components (transverse and longitudinal). In
>>>>> practice is the full analogy acoustic waves - electric waves.
>>>>
>>>> If you are saying that propagation of sound and radio are the same,
>>>> you'll
>>>> have a lot of work to make me believe that.
>>>
>>> Let us start then. Do you know a phenomenon which is not common?
>>
>>
>> * Polarisation, of course!
>>
>> I suppose you're going to tell us now that sound waves are polarised!
>
> And you tell us that radiation from monopoles antennas is polarised.
> There was a topic polarisation. In wave area is term alignment when we
> have the two sources. Aligment of "dipoles" not means that waves are
> "transverse".
> In the reality no transverse waves. Waves appear in compressible medium.
> All waves are the "pressure" waves. In math you can assume
> incompressibility. But we here NO.
> S*
>
>>
>> Chris
>>
>

Google turns up 44,200 hits for monopole antenna polarization - I was pretty sure my monopole radiated polarized 'waves'.

Dave

1898. criminal N8WWM Douglas W Adair the full monty

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-10 21:35:44 UTC
From: George Orwell <nobody@mixmaster.it>
Message-ID: <cefab9f812ab5f2b3131a25eac62c4ae@mixmaster.it>
Source record: 13261

http://tinyurl.com/l9s3jn <--- n8wwm (foreskin neck)

Doug Adair cross dresser -

peppers his posts with references of men having sex
mentally unsound
court-ordered mental health counseling
schizophrenic
ignored court order to pay child support
slapped by the FCC (after slapped by 1mangang and Frank Gilliland)
works at Petro
bipolar
extensive arrest record
obsessed with Moparholic
keyboard commando and internet sissy
court-ordered medication for mental deficit
self-declared indigent
gum disease caused by rotting teeth
chronic halitosis (see above)
abuses women (record indicates he assaulted his sister)
Receives disability for diminished mental capacity
obsessed with men, preference for men (prefers truckers)
delusional
displays detached persona
unable to grasp reality
suffers distorted sense of time along with occasional dementia
experiences radical shifts from depressive and manic states
suffers from delusion of control originating from lack of same
anger induced by Somatic delusion (blames chatters/posters)
personality disorder
prone to nightmares, sleeplessness
suffers from high blood pressure
cardiac and vascular concerns
ongoing toe fungus (untreated)
depression (of which he blames his legal issues) meds taken eratically

fellates kc8ldo every sunday

You ask w

Il mittente di questo messaggio|The sender address of this
non corrisponde ad un utente |message is not related to a real
reale ma all'indirizzo fittizio|person but to a fake address of an
di un sistema anonimizzatore |anonymous system
Per maggiori informazioni |For more info
https://www.mixmaster.it

1899. criminal N8WWM Douglas W Adair the full monty

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-10 21:35:51 UTC
From: noauth <anon@remailer.gabrix.ath.cx>
Message-ID: <41e0beece7449c863eb8f03625ab3dca@remailer.gabrix.ath.cx>
Source record: 13260

http://tinyurl.com/l9s3jn <--- n8wwm (foreskin neck)

Doug Adair cross dresser -

peppers his posts with references of men having sex
mentally unsound
court-ordered mental health counseling
schizophrenic
ignored court order to pay child support
slapped by the FCC (after slapped by 1mangang and Frank Gilliland)
works at Petro
bipolar
extensive arrest record
obsessed with Moparholic
keyboard commando and internet sissy
court-ordered medication for mental deficit
self-declared indigent
gum disease caused by rotting teeth
chronic halitosis (see above)
abuses women (record indicates he assaulted his sister)
Receives disability for diminished mental capacity
obsessed with men, preference for men (prefers truckers)
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displays detached persona
unable to grasp reality
suffers distorted sense of time along with occasional dementia
experiences radical shifts from depressive and manic states
suffers from delusion of control originating from lack of same
anger induced by Somatic delusion (blames chatters/posters)
personality disorder
prone to nightmares, sleeplessness
suffers from high blood pressure
cardiac and vascular concerns
ongoing toe fungus (untreated)
depression (of which he blames his legal issues) meds taken eratically

fellates kc8ldo every sunday

You ask w

1900. Re: Corriolis force

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-11 01:08:02 UTC
From: tom <news4792@taring.org>
Message-ID: <4aa9a331$0$42842$8046368a@newsreader.iphouse.net>
Source record: 13262

Szczepan Biaďż˝ek wrote:
>
> And you tell us that radiation from monopoles antennas is polarised.
> There was a topic polarisation. In wave area is term alignment when we
> have the two sources. Aligment of "dipoles" not means that waves are
> "transverse".
> In the reality no transverse waves. Waves appear in compressible medium.
> All waves are the "pressure" waves. In math you can assume
> incompressibility. But we here NO.
> S*

So, pray tell, explain the physics of a vertically polarized pressure wave.

You obviously know what's going on here, and I do not. Please educate me.

tom
K0TAR

1901. Re: Corriolis force

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-11 01:44:52 UTC
From: Richard Fry <rfry@adams.net>
Message-ID: <f18d0e77-eb61-429b-8dcb-b0735179d329@w10g2000yqf.googlegroups.com>
Source record: 13263

On Sep 10, 5:35 am, Szczepan Białek <sz.bia...@wp.pl> wrote:
> And you tell us that radiation from monopoles antennas is polarised.

S*, you might want to conduct a simple and practical test of your belief for yourself, to learn whether or not it is true.

A great many/almost all MW, AM broadcast stations use an antenna system comprised of one or more vertical monopoles. Such vertical-only polarisation greatly reduces the propagation loss for the ground wave, and so increases the ground wave coverage area -- whether or not a MW station has a directional radiation pattern in the horizontal plane.

Such was scientifically investigated and scientifically proven many decades ago. This reality is _very_ important to the commercial success of AM broadcast stations.

Most compact, and inexpensive MW AM broadcast receivers use an integrated, ferrite core "loopstick" receive antenna.

When such receivers are oriented with their control legends and displays aligned in the horizontal plane, as when the bottom/back of the receiver is sitting on a table, they respond most efficiently to vertically-polarised electromagnetic waves.

THE TEST:

Using such an AM receiver and physical setup, tune to a moderately-powered, omnidirectional MW broadcast station located at least 20 km away from your receive location. Then rotate the receiver 360 degrees around its vertical axis.

With no co-channel signals, you will find that the received signal-to-noise ratio for that station goes through two, distinct nulls corresponding to the physical orientations of its receive antenna that are 180 degrees apart, and along a line of sight from your receive location to the location of the transmit antenna.

This result demonstrates that such radiation is (vertically) polarised.

RF

1902. Re: Corriolis force

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-11 02:13:02 UTC
From: Mike Coslo <mjc5@psu.edu>
Message-ID: <h8cbnb$8812$1@tr22n12.aset.psu.edu>
Source record: 13264

tom wrote:

> So, pray tell, explain the physics of a vertically polarized pressure wave.
>
> You obviously know what's going on here, and I do not. Please educate me.

Sigh - Tom, there is not often the need to be sarcastic when you are correct! 8^)

- 73 de Mike N3LI -

1903. Download Free Software

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-11 04:59:04 UTC
From: Awais Khan <awaiskhan119@gmail.com>
Message-ID: <eb63258f-5875-4c86-9e12-394d08db9634@g1g2000pra.googlegroups.com>
Source record: 13265

Find the software you're looking for at softwarehouse-free.blogspot.com, the most comprehensive source for free software downloads on the Web. Includes audio programs, utilities, Internet and desktop software, applications for developers, downloads for small business users, and more..

1904. Re: Corriolis force

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-11 07:39:03 UTC
From: Szczepan Białek <sz.bialek@wp.pl>
Message-ID: <h8cjpr$v6a$1@node1.news.atman.pl>
Source record: 13266

"Richard Fry" <rfry@adams.net>wrote
news:f18d0e77-eb61-429b-8dcb-b0735179d329@w10g2000yqf.googlegroups.com...
On Sep 10, 5:35 am, Szczepan Biaďż˝ek <sz.bia...@wp.pl> wrote:
>> And you tell us that radiation from monopoles antennas is polarised.

>S*, you might want to conduct a simple and practical test of your
belief for yourself, to learn whether or not it is true.

>A great many/almost all MW, AM broadcast stations use an antenna
system comprised of one or more vertical monopoles.

So you know what is the directivity and phasing.

> Such vertical-only polarisation greatly reduces the propagation loss for
> the ground
wave, and so increases the ground wave coverage area -- whether or not
a MW station has a directional radiation pattern in the horizontal
plane.

Two vertical monopoles not in phase are like one horizontal dipole. In phase
are like two sources.

>Such was scientifically investigated and scientifically proven many
decades ago. This reality is _very_ important to the commercial
success of AM broadcast stations.

>Most compact, and inexpensive MW AM broadcast receivers use an
integrated, ferrite core "loopstick" receive antenna.

>When such receivers are oriented with their control legends and
displays aligned in the horizontal plane, as when the bottom/back of
the receiver is sitting on a table, they respond most efficiently to
vertically-polarised electromagnetic waves.

When the two sources work the receiver must be propery "algned" (physically
oriented).

>THE TEST:

>Using such an AM receiver and physical setup, tune to a moderately-
powered, omnidirectional MW broadcast station located at least 20 km
away from your receive location. Then rotate the receiver 360 degrees
around its vertical axis.

>With no co-channel signals, you will find that the received signal-to-
noise ratio for that station goes through two, distinct nulls
corresponding to the physical orientations of its receive antenna that

are 180 degrees apart, and along a line of sight from your receive
location to the location of the transmit antenna.

>This result demonstrates that such radiation is (vertically)
polarised.

If two sources work, interference take place. Equipments are "polarised" not
waves.

I have not possibility to "conduct any simple and practical test". In the
other topic you wrote: "Only thing is that my plots are based on 1/2-wave
antennas." If it means that you have possbilities to measure a directional
radiation pattern then do such:

The TEST:
1. Measure the pattern for a declared frequency,
2. Measure the pattern for the doubled frequency,

Tell us the findings.
Already I have proposed it to Wim. Now I am proposed it to all of You.
S*

RF

1905. Re: Corriolis force

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-11 07:47:49 UTC
From: Szczepan Białek <sz.bialek@wp.pl>
Message-ID: <h8ckab$v97$1@node1.news.atman.pl>
Source record: 13267

"Dave Holford" <holford@cogeco.ca> wrote
news:BIdqm.156791$8B7.18688@newsfe20.iad...
>
>>
> Google turns up 44,200 hits for monopole antenna polarization - I was
> pretty sure my monopole radiated polarized 'waves'.

If monopole radiate from wire (many sources in line) without tipping there
is a pseudo-polarization.
For this reason tipping is sometimes used.
S*

1906. Re: Corriolis force

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-11 08:08:47 UTC
From: Szczepan Białek <sz.bialek@wp.pl>
Message-ID: <h8clhjvdg1@node1.news.atman.pl>
Source record: 13268

"tom" <news4792@taring.org> wrote
news:4aa9a331$0$42842$8046368a@newsreader.iphouse.net...
> Szczepan Biaďż˝ek wrote:
>>
>> And you tell us that radiation from monopoles antennas is polarised.
>> There was a topic polarisation. In wave area is term alignment when we
>> have the two sources. Aligment of "dipoles" not means that waves are
>> "transverse".
>> In the reality no transverse waves. Waves appear in compressible medium.
>> All waves are the "pressure" waves. In math you can assume
>> incompressibility. But we here NO.
>> S*
>
> So, pray tell, explain the physics of a vertically polarized pressure
> wave.

One wave is not polarised. The two pressure waves from the two sources
interfere. See "Directivity and phasing".
>
> You obviously know what's going on here, and I do not. Please educate me.

"This fourth edition blends, in Joseph J. Carr's words, "the theoretical
concepts that the engineers and others need to design practical antennas,
and the hard-learned practical lessons derived from actually building and
using antennas -real antennas, and the hard-earned practical lessons derived
from actually building and using antennas - real antennas made of real
metal - not merely theoretical constructs on a blackboard."

Now is the electronic era. Electronic is from electrons. They are
compressible and have the inertia. You all construct antennas where
electrons build up voltage. But on the blackboard are math for
incompressible fluid. Look at the famous equations - there no voltage at all
(only current).
If somebody do math for electrons then such math will be on the blackboards.
But it is not necessary. The beautifull EM equations are the same like for
fluid mechanics. They will be saved. Radio engineers do not use them and can
wait for the proper ones the next centuries.
S*

1907. Re: Corriolis force

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-11 11:50:51 UTC
From: Dave <noone@nowhere.com>
Message-ID: <vQqqm.2101$tl3.1063@nwrddc01.gnilink.net>
Source record: 13269

"Szczepan Bialek" <sz.bialek@wp.pl> wrote in message
news:h8clhjvdg1@node1.news.atman.pl...
>
> "tom" <news4792@taring.org> wrote
> news:4aa9a331$0$42842$8046368a@newsreader.iphouse.net...
>> Szczepan Biaï¿½ek wrote:
>>>
>>> And you tell us that radiation from monopoles antennas is polarised.
>>> There was a topic polarisation. In wave area is term alignment when we
>>> have the two sources. Aligment of "dipoles" not means that waves are
>>> "transverse".
>>> In the reality no transverse waves. Waves appear in compressible medium.
>>> All waves are the "pressure" waves. In math you can assume
>>> incompressibility. But we here NO.
>>> S*
>>
>> So, pray tell, explain the physics of a vertically polarized pressure
>> wave.
>
> One wave is not polarised. The two pressure waves from the two sources
> interfere. See "Directivity and phasing".
>>
>> You obviously know what's going on here, and I do not. Please educate
>> me.
>
> "This fourth edition blends, in Joseph J. Carr's words, "the theoretical
> concepts that the engineers and others need to design practical antennas,
> and the hard-learned practical lessons derived from actually building and
> using antennas -real antennas, and the hard-earned practical lessons
> derived from actually building and using antennas - real antennas made of
> real metal - not merely theoretical constructs on a blackboard."
>
> Now is the electronic era. Electronic is from electrons. They are
> compressible and have the inertia. You all construct antennas where
> electrons build up voltage. But on the blackboard are math for
> incompressible fluid.

no it isn't. you are obviously way out of date. stop looking way in the
past for theories that were obviously disproven decades ago and look at
modern texts to see which ones have survived 100+ years of experimental
evidence.

>Look at the famous equations - there no voltage at all (only current).

in any electronic system you really only need voltage OR current, they are always related by the impedance. So if you read modern texts you will often see that they derive equations in either voltage or current form then show the other form for reference, or sometimes leave it as an excercise for the student.

> If somebody do math for electrons then such math will be on the
> blackboards.
> But it is not necessary. The beautifull EM equations are the same like for
> fluid mechanics. They will be saved. Radio engineers do not use them and
> can wait for the proper ones the next centuries.

no, real engineers are trying to educate people like you who are stuck in the past with outdated theories and simplified misconceptions... or we could just ignore you and hope you go away quickly. personally i think it is more fun to watch what comes out of the mouths of babes when you tickle their feet.

1908. Re: Corriolis force

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-11 13:00:29 UTC
From: Richard Fry <rfry@adams.net>
Message-ID: <6775965c-2949-46da-848b-6476cfab4f77@k19g2000yqc.googlegroups.com>
Source record: 13270

On Sep 11, 2:39 am, Szczepan Białek <sz.bia...@wp.pl> wrote:
> If two sources work, interference take place. Equipments
> are "polarised" not waves.

The net, far-field radiation of two vertical monopoles in a directional array driven by one transmitter using a power dividing network is vertically polarised -- because both monopole sources are vertically polarised.

This type of array is commonly used in commercial AM broadcasting, and its characteristics (including its polarisation) have been accurately known for many decades.

RF

1909. need help ID'ing CushCraft 10-15-20 beam

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-11 14:40:53 UTC
From: Steve <zarco@sonic.net>
Message-ID: <4aaa6177$0$1612$742ec2ed@news.sonic.net>
Source record: 13271

Just picked up a disassembled 3 element CushCraft beam.
I think its a 10-15-20 meter beam, but not certain. There are
traps (TB-1) on all 3 elements (6 total). The boom was
missing.

Hoping to identify the model so I can get assembly instructions
and length of the boom. No luck with a net search.
Steve W6SSP

1910. Re: need help ID'ing CushCraft 10-15-20 beam

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-11 14:46:55 UTC
From: Bert Hyman <bert@iphouse.com>
Message-ID: <Xns9C8363823B0FDVeebleFetzer@216.250.184.7>
Source record: 13272

In news:4aaa6177$0$1612$742ec2ed@news.sonic.net "Steve"
<zarco@sonic.net> wrote:

> Hoping to identify the model so I can get assembly instructions
> and length of the boom. No luck with a net search.

Since MFJ bought Cushcraft, the new (mostly empty) Web site is

http://www.cushcraftamateur.com/

with the manuals at

http://www.cushcraftamateur.com/manuals.htm

Maybe you can go through the manuals for the tri-banders 'til you find
something that looks familiar.

--
Bert Hyman St. Paul, MN bert@iphouse.com

1911. Question on re-radiated field

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-11 15:41:00 UTC
From: Antonio Vernucci <vernucci@tin.it>
Message-ID: <4aaa6f8d$0$822$4fafbaef@reader5.news.tin.it>
Source record: 13273

Can someone please confirm or deny the following arguments.

Let us have:

- a transmitting system operating at any given frequency
- and a metal bar, located far away from the transmitter, whose electrical length is exactly half wavelength at the operating frequency.

An induced RF current will flow in the bar. Such RF current causes a re-radiated field which adds up to the field generated by the trasmitter.

Two questions:

- which are the amplitude and phase shift of the re-radiated field with respect to those of the field generated by the trasmitter? My instinctive answer would be same amplitude (in absence of ohmic losses) and 180 degrees. The total field (transmitted + re-radiated) at the metal bar would so be zero.

- how does the total field change moving away from the bar? I would say that while the field generated by the transmitter varies very slowly with the distance from the bar (the transmitter is assumed to be very far away), the re-radiated field varies fast (also because one would initially be in the near field). In conclusion, the more we move away from the bar, the lower is the contribution of the re-radiated field to the total field. That should be the reason why, in a Yagi antenna, a parasitic element cannot be put too far away from the driven element.

Thanks and 73

Tony I0JX

1912. Re: Corriolis force

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-11 15:45:02 UTC
From: jimp@specsol.spam.sux.com
Message-ID: <4a7qn6-4p3.ln1@mail.specsol.com>
Source record: 13274

Szczepan Białek <sz.bialek@wp.pl> wrote:
>
> "Dave Holford" <holford@cogeco.ca> wrote
> news:BIdqm.156791$8B7.18688@newsfe20.iad...
>>
>>>
>> Google turns up 44,200 hits for monopole antenna polarization - I was
>> pretty sure my monopole radiated polarized 'waves'.
>
> If monopole radiate from wire (many sources in line) without tipping there
> is a pseudo-polarization.
> For this reason tipping is sometimes used.
> S*

Gibberish.

--
Jim Pennino

Remove .spam.sux to reply.

1913. MFJ-1775 dipole installation and care?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-11 16:16:09 UTC
From: TF3KX <kristinn1@gmail.com>
Message-ID: <2107df9a-11ed-42c1-b07d-0f9187496c64@l9g2000yqi.googlegroups.com>
Source record: 13275

I am in the process of adjusting and installing an MFJ-1775 multiband dipole. I would appreciate any comments or useful advice from other users before I proceed to the installation. Some of the concerns I have are:

- Should I cover the inductors to protect from the weather (rain, ice)? If so, how?
- Should I take any other precautions to strengthen the antenna or protect from corrosion?
- I have heard some users have burned up the inductors with only a few hundred watts. Comments?
- Any other...?

73 - Kris, TF3KX

1914. Spherical radiation pattern

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-11 16:47:00 UTC
From: Art Unwin <arthurunwin@gmail.com>
Message-ID: <6dd848d7-9fe4-461c-bf4f-ade1f9c8daf0@h13g2000yqk.googlegroups.com>
Source record: 13276

There has been some "talk" that the spherical radiation pattern shown via Poynting's vector is impossible or just a theoretical thing. There are many things that point to this such as point radiatiion as well as not being a realistic concept. I offer the following as an opposite aproach for the news group.

First, I rely on the basic radiator as being in equilibrium which naturally points to a full wave length or reference to one period. Secondly, I point to a radiator as being the circuit of a tank circuit which is essentially perpetual motion if one removes the frictional aspect.
Thus the approach by Maxwell is the ultimate point of maximum efficiency where all forces are accounted for and ALL contribute to radiation.
From the above it is natural that a radiator is tipped to equal the outside vectors of the arbitrary boundary which are gravity and the Coriolis effect.
We then have to allow the radiator to have near zero resistiveness such that all input power is used solely for radiation (super cooled I suppose)
From this approach we can state that, in the limit of zero resistance all power is converted into radiation! Thus if we have a radiator of one WL
that is tipped in space and of near zero resistance in the impedance metric we will then attain a spherical radiation pattern as with Poynting's vector and thus a demonstration of point radiation together with further evidence that radiation is of a particle and not one of waves.
By the way, since the phenomina of radiation is created solely by the electo-magnetic and electro-static fields per the tank circuit it becomes very clear that radiation is not continuous but in "packets or "pulses" because of the momentary stop as shown at the center of a sine wave.
When I get back I look forward with interest how the group tries to counter above with presently known facts or the common retreat to insults or just rest comfortably assured that the prior postings explain all.
See you all later and have a great week end

1915. Re: Question on re-radiated field

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-11 17:56:55 UTC
From: christofire <christofire@btinternet.com>
Message-ID: <afWdnUumcpfwEjfXnZ2dnUVZ8kydnZ2d@bt.com>
Source record: 13277

"Antonio Vernucci" <vernucci@tin.it> wrote in message
news:4aaa6f8d$0$822$4fafbaef@reader5.news.tin.it...
> Can someone please confirm or deny the following arguments.
>
> Let us have:
>
> - a transmitting system operating at any given frequency
> - and a metal bar, located far away from the transmitter, whose electrical
> length is exactly half wavelength at the operating frequency.
>
> An induced RF current will flow in the bar. Such RF current causes a
> re-radiated field which adds up to the field generated by the trasmitter.
>
> Two questions:
>
> - which are the amplitude and phase shift of the re-radiated field with
> respect to those of the field generated by the trasmitter? My instinctive
> answer would be same amplitude (in absence of ohmic losses) and 180
> degrees. The total field (transmitted + re-radiated) at the metal bar
> would so be zero.
>
> - how does the total field change moving away from the bar? I would say
> that while the field generated by the transmitter varies very slowly with
> the distance from the bar (the transmitter is assumed to be very far
> away), the re-radiated field varies fast (also because one would initially
> be in the near field). In conclusion, the more we move away from the bar,
> the lower is the contribution of the re-radiated field to the total field.
> That should be the reason why, in a Yagi antenna, a parasitic element
> cannot be put too far away from the driven element.
>
> Thanks and 73
>
> Tony I0JX

Sounds about right. The electric field tangential to (i.e. parallel and
close to) the surface of a good conductor must be small, otherwise a current
would flow in the conductor which would tend to 'short out' the E-field, but
an electric field normal to a conducting surface can have any value ... of
course. A short conducting bar, rotating about an axis normal to its
length, can be used to measure the radiation pattern of a large antenna by
transmitting through the antenna and inspecting the signal reflected back
down its feeder.

Interestingly, even a matched dipole antenna re-radiates a signal - the
amount of power 'dissipated' in its radiation resistance. This is mentioned

in Kraus 'Antennas'.

Chris

1916. Re: Spherical radiation pattern

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-11 18:03:43 UTC
From: Richard Fry <rfry@adams.net>
Message-ID: <c1f996b6-ff58-4bf0-aca0-891ee1a6bb2e@j19g2000yqk.googlegroups.com>
Source record: 13278

On Sep 11, 11:47 am, Art Unwin <arthurun...@gmail.com> wrote:
> There has been some "talk" that the spherical radiation pattern shown
> via Poynting's vector is impossible or just a theoretical thing. etc etc

Quoting from John Kraus' well-respected textbook "Antennas For All Applications," 3rd edition, page 74: "Although the isotropic source is convenient in theory, it is not a physically realizable type. Even the simplest antennas have directional properties, i.e., they radiate more energy is some directions than in others."

The Poynting vector does not apply only to isotropic sources. Here is a link to a simple definition: http://www.britannica.com/EBchecked/topic/473461/Poynting-vector . It doesn't have to describe a perfect sphere. And in fact for practical, physical antennas it never does so.

FYI, Art, nowhere in that textbook does Kraus write anything about your equilibrium, tipping, Coriolis effect, or tank circuits, or their being germane to the proper understanding and/or functioning of antennas.

RF

1917. Re: Spherical radiation pattern

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-11 18:04:15 UTC
From: Dave <noone@nowhere.com>
Message-ID: <ziwqm.1956$Jd7.870@nwrddc02.gnilink.net>
Source record: 13279

"Art Unwin" <arthurunwin@gmail.com> wrote in message
news:6dd848d7-9fe4-461c-bf4f-ade1f9c8daf0@h13g2000yqk.googlegroups.com...
> There has been some "talk" that the spherical radiation pattern shown
> via Poynting's vector is impossible or just a theoretical thing. There
> are many things that point to this such as point radiatiion as well as
> not being a realistic concept. I offer the following as an opposite
> aproach for the news group.

of course you will... that doesn't make it right, or even logical.

>
> First, I rely on the basic radiator as being in equilibrium which
> naturally points to a full wave length or reference to one period.

only in your brain since none of us understand your constantly changing
explanation of what equilibrium is.

> Secondly, I point to a radiator as being the circuit of a tank circuit
> which is essentially perpetual motion if one removes the frictional
> aspect.

ah, perpetual motion, now we are getting somewhere!

> Thus the approach by Maxwell is the ultimate point of maximum
> efficiency where all forces are accounted for and ALL contribute to
> radiation.

maxwell's equations have nothing about gravity, the weak force, or the
strong force, or efficiency included in them...

> From the above it is natural that a radiator is tipped to equal the
> outside vectors of the arbitrary boundary which are gravity and the
> Coriolis effect.

the Coriolis effect is not a vector nor a force, it is a method of
explaining what someone on a rotating sphere thinks they see... purely a
figment of your imagination.

> We then have to allow the radiator to have near zero resistiveness
> such that all input power is used solely for radiation (super cooled
> I suppose)
> From this approach we can state that, in the limit of zero resistance
> all power is converted into radiation!

this one statement may contain some small smidgen of reality... you are
slipping art!

> Thus if we have a radiator of one WL
> that is tipped in space and of near zero resistance in the impedance
> metric we will then attain a spherical radiation pattern as with
> Poynting's vector and thus a demonstration of point radiation together
> with further evidence that radiation is of a particle and not one of
> waves.

nope, sorry, still won't work. it will still have the distorted doughnut
pattern.

> By the way, since the phenomina of radiation is created solely by the
> electo-magnetic and electro-static fields per the tank circuit it
> becomes very clear that radiation is not continuous but in "packets or
> "pulses" because of the momentary stop as shown at the center of a
> sine wave.

you have been listening to that other kook too much and have picked up his
signature pulses... next you'll be talking about speakers and pressure wave
interference to explain your equilibrium.

> When I get back I look forward with interest how the group tries to
> counter above with presently known facts or the common retreat to
> insults or just rest comfortably assured that the prior postings
> explain all.
> See you all later and have a great week end

insults are so much more fun than trying to educate the insane!

1918. Re: Question on re-radiated field

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-11 18:07:00 UTC
From: Dave <noone@nowhere.com>
Message-ID: <8lwqm.1957$Jd7.691@nwrddc02.gnilink.net>
Source record: 13280

"Antonio Vernucci" <vernucci@tin.it> wrote in message
news:4aaa6f8d$0$822$4fafbaef@reader5.news.tin.it...
> Can someone please confirm or deny the following arguments.
>
> Let us have:
>
> - a transmitting system operating at any given frequency
> - and a metal bar, located far away from the transmitter, whose electrical
> length is exactly half wavelength at the operating frequency.
>
> An induced RF current will flow in the bar. Such RF current causes a
> re-radiated field which adds up to the field generated by the trasmitter.
>
> Two questions:
>
> - which are the amplitude and phase shift of the re-radiated field with
> respect to those of the field generated by the trasmitter? My instinctive
> answer would be same amplitude (in absence of ohmic losses) and 180
> degrees. The total field (transmitted + re-radiated) at the metal bar
> would so be zero.
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> - how does the total field change moving away from the bar? I would say
> that while the field generated by the transmitter varies very slowly with
> the distance from the bar (the transmitter is assumed to be very far
> away), the re-radiated field varies fast (also because one would initially
> be in the near field). In conclusion, the more we move away from the bar,
> the lower is the contribution of the re-radiated field to the total field.
> That should be the reason why, in a Yagi antenna, a parasitic element
> cannot be put too far away from the driven element.
>
> Thanks and 73
>
> Tony I0JX
>

sounds like you have the right instincts to me.

1919. Re: Corriolis force

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-11 18:45:22 UTC
From: Szczepan Białek <sz.bialek@wp.pl>
Message-ID: <h8dqqu$51o$1@node1.news.atman.pl>
Source record: 13281

Uďż˝ytkownik "Richard Fry" <rfry@adams.net> napisaďż˝ w wiadomoďż˝ci
news:6775965c-2949-46da-848b-6476cfab4f77@k19g2000yqc.googlegroups.com...
On Sep 11, 2:39 am, Szczepan Biaďż˝ek <sz.bia...@wp.pl> wrote:
>> If two sources work, interference take place. Equipments
> are "polarised" not waves.

>The net, far-field radiation of two vertical monopoles in a
directional array driven by one transmitter using a power dividing
network is vertically polarised -- because both monopole sources are
vertically polarised.

>This type of array is commonly used in commercial AM broadcasting, and
its characteristics (including its polarisation) have been accurately
known for many decades.

Most hams know that a vertical antenna creates a radio wave with vertical
polarization and a horizontal antenna creates a horizontally.

The both antennas (transmitter and receiver) should be aligned. You wrote:
"Most compact, and inexpensive MW AM broadcast receivers use an integrated,
ferrite core "loopstick" receive antenna.

When such receivers are oriented with their control legends and
displays aligned in the horizontal plane, as when the bottom/back of
the receiver is sitting on a table, "

It means that the waves are horizontaly polarized. Next you wrote"

"they respond most efficiently to vertically-polarised electromagnetic
waves." I assume that it is a small mistake.
The following is known for many decades:

One mast is omnidirectional. The two are directional like a horizontal
dipole. For this reason "This type of array is commonly used in commercial
AM broadcasting".

I wrote: "The TEST:
1. Measure the pattern for a declared frequency,
2. Measure the pattern for the doubled frequency.

Some clarification is necessary. The doubled frequency should be set on a
receiving/measuring device.
Each mast radiate omidirectionally. The radiation of the array of the two
interfere. Also in some places it may be received as the doubled frequency.
S*

1920. Re: Spherical radiation pattern

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-11 18:55:30 UTC
From: Art Unwin <arthurunwin@gmail.com>
Message-ID: <3a6a365e-38fe-436e-95db-a7f048423abd@r39g2000yqm.googlegroups.com>
Source record: 13282

On Sep 11, 1:04 pm, "Dave" <no...@nowhere.com> wrote:
> "Art Unwin" <arthurun...@gmail.com> wrote in message
>
> news:6dd848d7-9fe4-461c-bf4f-ade1f9c8daf0@h13g2000yqk.googlegroups.com...
>
> > There has been some "talk" that the spherical radiation pattern shown
> > via Poynting's vector is impossible or just a theoretical thing. There
> > are many things that point to this such as point radiatiion as well as
> > not being a realistic concept. I offer the following as an opposite
> > aproach for the news group.
>
> of course you will... that doesn't make it right, or even logical.
>
>
>
> > First, I rely on the basic radiator as being in equilibrium which
> > naturally points to a full wave length or reference to one period.
>
> only in your brain since none of us understand your constantly changing
> explanation of what equilibrium is.
>
> > Secondly, I point to a radiator as being the circuit of a tank circuit
> > which is essentially perpetual motion if one removes the frictional
> > aspect.
>
> ah, perpetual motion, now we are getting somewhere!
>
> > Thus the approach by Maxwell is the ultimate point of maximum
> > efficiency where all forces are accounted for and ALL contribute to
> > radiation.
>
> maxwell's equations have nothing about gravity, the weak force, or the
> strong force, or efficiency included in them...
>
> > From the above it is natural that a radiator is tipped to equal the
> > outside vectors of the arbitrary boundary which are gravity and the
> > Coriolis effect.
>
> the Coriolis effect is not a vector nor a force, it is a method of
> explaining what someone on a rotating sphere thinks they see... purely a
> figment of your imagination.
>
> > We then have to allow the radiator to have near zero resistiveness
> > such that all input power is used solely for radiation (super cooled

> > I suppose)
> > From this approach we can state that, in the limit of zero resistance
> > all power is converted into radiation!
>
> this one statement may contain some small smidgen of reality... you are
> slipping art!
>
> > Thus if we have a radiator of one WL
> > that is tipped in space and of near zero resistance in the impedance
> > metric we will then attain a spherical radiation pattern as with
> > Poynting's vector and thus a demonstration of point radiation together
> > with further evidence that radiation is of a particle and not one of
> > waves.
>
> nope, sorry, still won't work. it will still have the distorted doughnut
> pattern.
>
> > By the way, since the phenomina of radiation is created solely by the
> > electo-magnetic and electro-static fields per the tank circuit it
> > becomes very clear that radiation is not continuous but in "packets or
> > "pulses" because of the momentary stop as shown at the center of a
> > sine wave.
>
> you have been listening to that other kook too much and have picked up his
> signature pulses... next you'll be talking about speakers and pressure wave
> interference to explain your equilibrium.
>
> > When I get back I look forward with interest how the group tries to
> > counter above with presently known facts or the common retreat to
> > insults or just rest comfortably assured that the prior postings
> > explain all.
> > See you all later and have a great week end
>
> insults are so much more fun than trying to educate the insane!

David
The idea is accountability for all forces. If you model for 100%
radiation without losses you get a spherical pattern, no doubt about
it. With respect to the choice of a WL radiator this is because it
represents a period which classical physics demand.
If one chooses 1/2 WL then you are using a fudge factor since one
cannot avoid overshoot or the use of time just to obtain an impedance
that mankind feel is better.
Overshoot is a matter of correction by a circuit with the correction
getting smaller and smaller but always with the inevitable corrections
This then allows the cross over point of a sine wave to aproach, but
never arrive, at the center representing a 1/2 WL.
Now I have modeled the above aiming for zero for a resistive value in
the impedance
because that is the way programs are set up ,which is fine by me, as

it supplies a truly spherical pattern just prior to the pattern moving away from a transmit to a recieve function
On a separate note. Just because something is not mentioned in a book does not provide mention of such points to be false, only to the fact that the author has not fully completed his studies. There is no such thing of a book that explains all in it entirety, only different versions of plaguerisation,
Failing that it shows that the ham fraternity considers "all is known" about radiation and complely discardes the notion of current possibly being ABOVE the surface of a radiator
when the environment allows it to happen or even the presence of negative impedance with respect to a element with a time varying field e.t.c. otherwise it would be mentioned in a book Ofcourse there will be protests that
certain things such as zero resistance cannot be otherwise electrical laws will have to be modified! Well that has proved to be normal when looking at history so shall we suppres it?

1921. Re: Corriolis force

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-11 19:10:50 UTC
From: Richard Fry <rfry@adams.net>
Message-ID: <81aa5cc9-850e-4817-af6a-d679f5afdc3a@c37g2000yqi.googlegroups.com>
Source record: 13283

On Sep 11, 1:45 pm, Szczepan Białek <sz.bia...@wp.pl> wrote:
> The both antennas (transmitter and receiver) should be aligned. You wrote:
> "Most compact, and inexpensive MW AM broadcast receivers use an integrated,
> ferrite core "loopstick" receive antenna.
>
> When such receivers are oriented with their control legends and
> displays aligned in the horizontal plane, as when the bottom/back of
> the receiver is sitting on a table, "

S* then wrote:

> It means that the waves are horizontaly polarized.

Not so. The receive antenna I described responds to the magnetic field, not the electric field. In an EM wave these two fields are at right angles to each other, and to the direction of travel.

The polarisation of a wave is given by the physical orientation of its electric field. If that field is vertically polarised then the receive antenna I described will receive maximum (magnetic) field, and my experiment will prove that the incoming EM wave is vertically polarised.

> One mast is omnidirectional. The two are directional like a horizontal
> dipole.

However a horizontal dipole radiates horizontally polarised waves. A directional MW array radiates vertically polarized waves, regardless of the shape of its azimuth pattern.

RF

1922. Re: Spherical radiation pattern

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-11 19:37:20 UTC
From: Art Unwin <arthurunwin@gmail.com>
Message-ID: <d5811234-609f-4159-ad44-026dc26b8247@x37g2000yqj.googlegroups.com>
Source record: 13284

On Sep 11, 1:04 pm, "Dave" <no...@nowhere.com> wrote:
> "Art Unwin" <arthurun...@gmail.com> wrote in message
>
> news:6dd848d7-9fe4-461c-bf4f-ade1f9c8daf0@h13g2000yqk.googlegroups.com...
>
> > There has been some "talk" that the spherical radiation pattern shown
> > via Poynting's vector is impossible or just a theoretical thing. There
> > are many things that point to this such as point radiatiion as well as
> > not being a realistic concept. I offer the following as an opposite
> > aproach for the news group.
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> of course you will... that doesn't make it right, or even logical.
>
>
>
> > First, I rely on the basic radiator as being in equilibrium which
> > naturally points to a full wave length or reference to one period.
>
> only in your brain since none of us understand your constantly changing
> explanation of what equilibrium is.
>
> > Secondly, I point to a radiator as being the circuit of a tank circuit
> > which is essentially perpetual motion if one removes the frictional
> > aspect.
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> ah, perpetual motion, now we are getting somewhere!
>
> > Thus the approach by Maxwell is the ultimate point of maximum
> > efficiency where all forces are accounted for and ALL contribute to
> > radiation.
>
> maxwell's equations have nothing about gravity, the weak force, or the
> strong force, or efficiency included in them...
>
> > From the above it is natural that a radiator is tipped to equal the
> > outside vectors of the arbitrary boundary which are gravity and the
> > Coriolis effect.
>
> the Coriolis effect is not a vector nor a force, it is a method of
> explaining what someone on a rotating sphere thinks they see... purely a
> figment of your imagination.
>
> > We then have to allow the radiator to have near zero resistiveness
> > such that all input power is used solely for radiation (super cooled

> > I suppose)
> > From this approach we can state that, in the limit of zero resistance
> > all power is converted into radiation!
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> this one statement may contain some small smidgen of reality... you are
> slipping art!
>
> > Thus if we have a radiator of one WL
> > that is tipped in space and of near zero resistance in the impedance
> > metric we will then attain a spherical radiation pattern as with
> > Poynting's vector and thus a demonstration of point radiation together
> > with further evidence that radiation is of a particle and not one of
> > waves.
>
> nope, sorry, still won't work. it will still have the distorted doughnut
> pattern.
>
> > By the way, since the phenomina of radiation is created solely by the
> > electo-magnetic and electro-static fields per the tank circuit it
> > becomes very clear that radiation is not continuous but in "packets or
> > "pulses" because of the momentary stop as shown at the center of a
> > sine wave.
>
> you have been listening to that other kook too much and have picked up his
> signature pulses... next you'll be talking about speakers and pressure wave
> interference to explain your equilibrium.
>
> > When I get back I look forward with interest how the group tries to
> > counter above with presently known facts or the common retreat to
> > insults or just rest comfortably assured that the prior postings
> > explain all.
> > See you all later and have a great week end
>
> insults are so much more fun than trying to educate the insane!

That appears to be true. However I have always used Bernollis
experiments with liquid as being synonamous with current flow. So to
mention Bernolles findings to the question of Eddy flow appears to me
to have some merit., Introduction of pressure in both liquids,
current flow and air flow I would consider having some merit.
I once mentioned the similarity of a mechanical pump which is designed
around Bernollies experiments producing the same deflections that we
see with changing cross sections
of electrical conductors, which then must produce cavitation and thus
eddy curwrents.
Roy instantly pushed me aside on that one saying the functions are
different which immediately declares the Standard forces theory as
nonsense. (Sorry about that Einstein)
Gotta go. Excuse me plse

1923. Re: Spherical radiation pattern

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-11 19:39:43 UTC
From: Richard Fry <rfry@adams.net>
Message-ID: <615bd672-baf4-4a58-b8de-10d978973df6@q7g2000yqi.googlegroups.com>
Source record: 13285

On Sep 11, 1:55 pm, Art Unwin <arthurun...@gmail.com> wrote:
> The idea is accountability for all forces. If you model for 100%
> radiation without losses you get a spherical pattern, no doubt
> about it. With respect to the choice of a WL radiator this is
> because it represents a period which classical physics demand.

I did, see the link below.

The pattern of a full-wave antenna is far from being spherical.

http://i62.photobucket.com/albums/h85/rfry-100/DipoleCompareArt.jpg

RF

1924. Re: Spherical radiation pattern

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-11 20:16:29 UTC
From: Michael Coslo <mjc5@psu.edu>
Message-ID: <h8eb6t$s84a$1@tr22n12.aset.psu.edu>
Source record: 13286

Have a good vacation Art!

- 73 de Mike N3LI -

1925. Re: Spherical radiation pattern

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-11 21:04:06 UTC
From: christofire <christofire@btinternet.com>
Message-ID: <M96dnRR8bejRJjfXnZ2dnUVZ8m6dnZ2d@bt.com>
Source record: 13287

"Michael Coslo" <mjc5@psu.edu> wrote in message
news:h8eb6t$s84a$1@tr22n12.aset.psu.edu...
> Have a good vacation Art!
>
> - 73 de Mike N3LI -

... and when you get back, let's see some proof that all this wacky
'new-age' theory is of any practical use to mankind.

I'd be willing to bet, say, 100 UK pounds that Professor Unwin can't create
an antenna in hardware that radiates isotropically, that is, over a whole
sphere within, let's say +/-1 dB with respect to any chosen (but constant)
polarisation. Anyone wish to up the ante?

Chris

PS: for those who may not be aware, there used to be someone else known as
'Professor Unwin' who was famed for talking in gobbledygook
http://www.stanleyunwin.com/audio.htm

1926. Re: Corriolis force

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-11 21:43:57 UTC
From: Dave <noone@nowhere.com>
Message-ID: <xwzqm.1972$Jd7.1660@nwrddc02.gnilink.net>
Source record: 13288

"Szczepan Bialek" <sz.bialek@wp.pl> wrote in message
news:h8dqqu$51o$1@node1.news.atman.pl...
>
> Uï¿½ytkownik "Richard Fry" <rfry@adams.net> napisaï¿½ w wiadomoï¿½ci
> news:6775965c-2949-46da-848b-6476cfab4f77@k19g2000yqc.googlegroups.com...
> On Sep 11, 2:39 am, Szczepan Biaï¿½ek <sz.bia...@wp.pl> wrote:
>>> If two sources work, interference take place. Equipments
>> are "polarised" not waves.
> ------------------
>
>>The net, far-field radiation of two vertical monopoles in a
> directional array driven by one transmitter using a power dividing
> network is vertically polarised -- because both monopole sources are
> vertically polarised.
>
>>This type of array is commonly used in commercial AM broadcasting, and
> its characteristics (including its polarisation) have been accurately
> known for many decades.
>
> Most hams know that a vertical antenna creates a radio wave with vertical
> polarization and a horizontal antenna creates a horizontally.
>
> The both antennas (transmitter and receiver) should be aligned. You wrote:
> "Most compact, and inexpensive MW AM broadcast receivers use an
> integrated, ferrite core "loopstick" receive antenna.
>
> When such receivers are oriented with their control legends and
> displays aligned in the horizontal plane, as when the bottom/back of
> the receiver is sitting on a table, "
>
> It means that the waves are horizontaly polarized. Next you wrote"
>
> "they respond most efficiently to vertically-polarised electromagnetic
> waves." I assume that it is a small mistake.
> The following is known for many decades:
>
> One mast is omnidirectional. The two are directional like a horizontal
> dipole. For this reason "This type of array is commonly used in commercial
> AM broadcasting".
>
> I wrote: "The TEST:
> 1. Measure the pattern for a declared frequency,
> 2. Measure the pattern for the doubled frequency.
>

> Some clarification is necessary. The doubled frequency should be set on a
> receiving/measuring device.
> Each mast radiate omidirectionally. The radiation of the array of the two
> interfere. Also in some places it may be received as the doubled
> frequency.
> S*

no, it won't.

1927. Re: Spherical radiation pattern

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-11 21:47:49 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <youdnWYXl4QUWDfXnZ2dnUVZ_tmdnZ2d@giganews.com>
Source record: 13289

christofire wrote:
>
> ... and when you get back, let's see some proof that all this wacky
> 'new-age' theory is of any practical use to mankind.
>
> I'd be willing to bet, say, 100 UK pounds that Professor Unwin can't create
> an antenna in hardware that radiates isotropically, that is, over a whole
> sphere within, let's say +/-1 dB with respect to any chosen (but constant)
> polarisation. Anyone wish to up the ante?
>
> Chris

I'd be glad to, but there's no way to prove it. Measurement accuracy and repeatability just aren't that good, especially if you're trying to do a full 3D measurement. The closest I've seen to a 3D measurement system actually measured just one hemisphere. It was at what used to be NRAD (Naval Research and Development center) and before that NOSC in San Diego, consisting of a large (100 foot diameter if I recall correctly) rotating circular platform with a semicircular arch overhead. By rotating the platform and moving the detector along the arch, a full hemispherical measurement could be made. The models were physical scale models of Navy ships having appropriately scaled antennas. Even then, though, engineers there told me that when the measured results differed from NEC computer model results, they tended to believe the computer results. It's extremely difficult to make highly, or even moderately, accurate field strength measurements.

A while back I designed an antenna for a consulting job which was simply a two-sloping-radial ground plane made with fairly wide traces on a low-loss PC board. George Brown, the inventor of the ground plane antenna, had observed an omnidirectional pattern in the horizontal plane with only two radials, but the marketing department at RCA insisted on adding two more to make it look symmetrical before selling them. Hence the ubiquitous 4-radial design. (The pattern of the 4 radial version is more circular above and below the horizontal plane, but not by a whole lot.) Anyway, I was concerned that maybe the PCB or the relatively wide, flat conductors might have a detrimental impact on the pattern circularity, so I took it to a local lab that has a high quality anechoic chamber and ran the pattern. When the plot was finished, the lab technician muttered "Holy $/!%", hit the print button, grabbed a camera, and ran into the chamber to take a picture of the antenna. Then he went around to the other folks at the lab with the picture and plot. Seems that it was circular within about a dB, better than their $10k reference antenna. The prototype, by the way, was made with adhesive copper tape and an X-Acto knife and looked as crude as it was. I can't

claim that the pattern was really better than their reference antenna because small differences in positioning of the feedline (even though decoupled), the antenna, and anything else in the chamber can easily cause a couple of dB of pattern deviation.

Roy Lewallen, W7EL

1928. Re: Corriolis force

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-11 21:51:26 UTC
From: Richard Fry <rfry@adams.net>
Message-ID: <980a2718-3273-4fe0-9742-26427d3fc590@z24g2000yqb.googlegroups.com>
Source record: 13290

On Sep 11, 4:43 pm, "Dave" <no...@nowhere.com> wrote:
> no, it won't.

What scientific analysis/proof will provide to support your point of view?

RF

1929. Re: Corriolis force

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-11 21:58:20 UTC
From: Richard Fry <rfry@adams.net>
Message-ID: <b5670677-d013-42fc-b727-1671adfccbb8@g31g2000yqc.googlegroups.com>
Source record: 13291

On Sep 11, 4:51 pm, Richard Fry <r...@adams.net> wrote:
> On Sep 11, 4:43 pm, "Dave" <no...@nowhere.com> wrote:> no, it won't.
>
> What scientific analysis/proof will provide to support your point of
> view?

Cancel my above challenge -- and sorry, Dave.

RF

1930. Re: Corriolis force

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-11 22:12:32 UTC
From: Dave <noone@nowhere.com>
Message-ID: <kXzqm.1980$Jd7.25@nwrddc02.gnilink.net>
Source record: 13292

"Richard Fry" <rfry@adams.net> wrote in message
news:b5670677-d013-42fc-b727-1671adfccbb8@g31g2000yqc.googlegroups.com...
On Sep 11, 4:51 pm, Richard Fry <r...@adams.net> wrote:
>> On Sep 11, 4:43 pm, "Dave" <no...@nowhere.com> wrote:> no, it won't.
>>
>> What scientific analysis/proof will provide to support your point of
>> view?
>
>Cancel my above challenge -- and sorry, Dave.

i'm glad you came around and saw it my way. i was thinking of qualifying it with something like 'in the absense of external non-linear media or junctions...' but decided it was easier to not muddy the water... he's not going to learn anyway.

1931. Re: Spherical radiation pattern

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-11 22:19:58 UTC
From: Art Unwin <arthurunwin@gmail.com>
Message-ID: <68903947-0109-4020-b4e5-69fb80d9e07f@a7g2000yqo.googlegroups.com>
Source record: 13293

On Sep 11, 2:37 pm, Art Unwin <arthurun...@gmail.com> wrote:
> On Sep 11, 1:04 pm, "Dave" <no...@nowhere.com> wrote:
>
>
>
> > "Art Unwin" <arthurun...@gmail.com> wrote in message
>
> >news:6dd848d7-9fe4-461c-bf4f-ade1f9c8daf0@h13g2000yqk.googlegroups.com...
>
> > > There has been some "talk" that the spherical radiation pattern shown
> > > via Poynting's vector is impossible or just a theoretical thing. There
> > > are many things that point to this such as point radiatiion as well as
> > > not being a realistic concept. I offer the following as an opposite
> > > aproach for the news group.
>
> > of course you will... that doesn't make it right, or even logical.
>
> > > First, I rely on the basic radiator as being in equilibrium which
> > > naturally points to a full wave length or reference to one period.
>
> > only in your brain since none of us understand your constantly changing
> > explanation of what equilibrium is.
>
> > > Secondly, I point to a radiator as being the circuit of a tank circuit
> > > which is essentially perpetual motion if one removes the frictional
> > > aspect.
>
> > ah, perpetual motion, now we are getting somewhere!
>
> > > Thus the approach by Maxwell is the ultimate point of maximum
> > > efficiency where all forces are accounted for and ALL contribute to
> > > radiation.
>
> > maxwell's equations have nothing about gravity, the weak force, or the
> > strong force, or efficiency included in them...
>
> > > From the above it is natural that a radiator is tipped to equal the
> > > outside vectors of the arbitrary boundary which are gravity and the
> > > Coriolis effect.
>
> > the Coriolis effect is not a vector nor a force, it is a method of
> > explaining what someone on a rotating sphere thinks they see... purely a
> > figment of your imagination.
>

> > > We then have to allow the radiator to have near zero resistiveness
> > > such that all input power is used solely for radiation (super cooled
> > > I suppose)
> > > From this approach we can state that, in the limit of zero resistance
> > > all power is converted into radiation!
>
> > this one statement may contain some small smidgen of reality... you are
> > slipping art!
>
> > > Thus if we have a radiator of one WL
> > > that is tipped in space and of near zero resistance in the impedance
> > > metric we will then attain a spherical radiation pattern as with
> > > Poynting's vector and thus a demonstration of point radiation together
> > > with further evidence that radiation is of a particle and not one of
> > > waves.
>
> > nope, sorry, still won't work. it will still have the distorted doughnut
> > pattern.
>
> > > By the way, since the phenomina of radiation is created solely by the
> > > electo-magnetic and electro-static fields per the tank circuit it
> > > becomes very clear that radiation is not continuous but in "packets or
> > > "pulses" because of the momentary stop as shown at the center of a
> > > sine wave.
>
> > you have been listening to that other kook too much and have picked up his
> > signature pulses... next you'll be talking about speakers and pressure wave
> > interference to explain your equilibrium.
>
> > > When I get back I look forward with interest how the group tries to
> > > counter above with presently known facts or the common retreat to
> > > insults or just rest comfortably assured that the prior postings
> > > explain all.
> > > See you all later and have a great week end
>
> > insults are so much more fun than trying to educate the insane!
>
> That appears to be true. However I have always used Bernollis
> experiments with liquid as being synonamous with current flow. So to
> mention Bernolles findings to the question of Eddy flow appears to me
> to have some merit., Introduction of pressure in both liquids,
> current flow and air flow I would consider having some merit.
> I once mentioned the similarity of a mechanical pump which is designed
> around Bernollies experiments producing the same deflections that we
> see with changing cross sections
> of electrical conductors, which then must produce cavitation and thus
> eddy curwrents.
> Roy instantly pushed me aside on that one saying the functions are
> different which immediately declares the Standard forces theory as
> nonsense. (Sorry about that Einstein)

> Gotta go. Excuse me plse
David
Forgot to mention.
Current would not be applied to the radiator itself but only to the sheathing
of homogenous particles at rest.(ie neutrinos who are part of the family of Leptons but still remain as particles) This way with opposing forces in shear which includes the bending moment or twist of the Standard Force, the chemical adhesion is broken and the particle is elevated to achieve a straight line projection with spin. In this event all electrical laws lie
intact and where the resistance is solely of that of radiation to which current is applied.

1932. Re: Spherical radiation pattern

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-11 22:32:39 UTC
From: christofire <christofire@btinternet.com>
Message-ID: <sOGdnZgKcKORTTfXnZ2dnUVZ8vOdnZ2d@bt.com>
Source record: 13294

"Roy Lewallen" <w7el@eznec.com> wrote in message
news:youdnWYXl4QUWDfXnZ2dnUVZ_tmdnZ2d@giganews.com...
> christofire wrote:
>>
>> ... and when you get back, let's see some proof that all this wacky
>> 'new-age' theory is of any practical use to mankind.
>>
>> I'd be willing to bet, say, 100 UK pounds that Professor Unwin can't
>> create an antenna in hardware that radiates isotropically, that is, over
>> a whole sphere within, let's say +/-1 dB with respect to any chosen (but
>> constant) polarisation. Anyone wish to up the ante?
>>
>> Chris
>
> I'd be glad to, but there's no way to prove it. Measurement accuracy and
> repeatability just aren't that good, especially if you're trying to do a
> full 3D measurement. The closest I've seen to a 3D measurement system
> actually measured just one hemisphere. It was at what used to be NRAD
> (Naval Research and Development center) and before that NOSC in San Diego,
> consisting of a large (100 foot diameter if I recall correctly) rotating
> circular platform with a semicircular arch overhead. By rotating the
> platform and moving the detector along the arch, a full hemispherical
> measurement could be made. The models were physical scale models of Navy
> ships having appropriately scaled antennas. Even then, though, engineers
> there told me that when the measured results differed from NEC computer
> model results, they tended to believe the computer results. It's extremely
> difficult to make highly, or even moderately, accurate field strength
> measurements.
>
> A while back I designed an antenna for a consulting job which was simply a
> two-sloping-radial ground plane made with fairly wide traces on a low-loss
> PC board. George Brown, the inventor of the ground plane antenna, had
> observed an omnidirectional pattern in the horizontal plane with only two
> radials, but the marketing department at RCA insisted on adding two more
> to make it look symmetrical before selling them. Hence the ubiquitous
> 4-radial design. (The pattern of the 4 radial version is more circular
> above and below the horizontal plane, but not by a whole lot.) Anyway, I
> was concerned that maybe the PCB or the relatively wide, flat conductors
> might have a detrimental impact on the pattern circularity, so I took it
> to a local lab that has a high quality anechoic chamber and ran the
> pattern. When the plot was finished, the lab technician muttered "Holy
> $/!%", hit the print button, grabbed a camera, and ran into the chamber to
> take a picture of the antenna. Then he went around to the other folks at
> the lab with the picture and plot. Seems that it was circular within about

> a dB, better than their $10k reference antenna. The prototype, by the way,
> was made with adhesive copper tape and an X-Acto knife and looked as crude
> as it was. I can't claim that the pattern was really better than their
> reference antenna because small differences in positioning of the feedline
> (even though decoupled), the antenna, and anything else in the chamber can
> easily cause a couple of dB of pattern deviation.
>
> Roy Lewallen, W7EL

Interesting stuff. I think one can get a good idea what's going on by measuring in the cardinal planes and some 45 degree cuts. It would soon become apparent whether the antenna warrants closer inspection.

I recall seeing what you describe at NRAA and NOSC also at ASWE in Funtington, near Portsmouth GB. There they also had an aluminium 'sea' and copper scale models of most of the British fleet for checking the ELF to HF patterns (scaled conductivities). For the case in hand, though, there's no requirement for a ground plane (viz. 'spherical' in the title) so the resulting hardware antenna could be oriented in a number of different ways and rotated about a single axis for measurement. I've had experience of doing this with a Lindenblad array, and measuring axial ratio at the same time. I've also been aware of someone else's model, made using flexible PCB material formed into a cylinder, which outperformed the brass-tube-and-rod one we were working on!

Feed-line radiation can easily be overcome by using a small oscillator and battery: tiny, stable ones are available nowadays. I'd be convinced if the protagonist managed a truly isotropic pattern at just one frequency.

Chris

1933. Re: Corriolis force

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-11 22:48:14 UTC
From: Richard Fry <rfry@adams.net>
Message-ID: <f10476b4-dc50-4cc2-a0d8-9f59972eb968@w10g2000yqf.googlegroups.com>
Source record: 13295

On Sep 11, 5:12 pm, "Dave" <no...@nowhere.com> wrote:
> i'm glad you came around and saw it my way.

What I saw was that I had mistakenly attributed your comment "no, it won't," to S*.

That was the error leading to the retraction of my post assuming so.

RF

1934. Re: Corriolis force

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-11 22:52:47 UTC
From: christofire <christofire@btinternet.com>
Message-ID: <OOmdnQgOgqVZSTfXnZ2dnUVZ8nCdnZ2d@bt.com>
Source record: 13296

"Richard Fry" <rfry@adams.net> wrote in message
news:f10476b4-dc50-4cc2-a0d8-9f59972eb968@w10g2000yqf.googlegroups.com...
> On Sep 11, 5:12 pm, "Dave" <no...@nowhere.com> wrote:
>> i'm glad you came around and saw it my way.
>
> What I saw was that I had mistakenly attributed your comment "no, it
> won't," to S*.
>
> That was the error leading to the retraction of my post assuming so.
>
> RF

Now I'm getting really confused!

Chris

1935. Re: need help ID'ing CushCraft 10-15-20 beam

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-11 22:56:06 UTC
From: Ken <grimm@sbc.edu>
Message-ID: <93d8a59d-a23f-4191-89f9-6d047c8c032c@38g2000yqr.googlegroups.com>
Source record: 13297

On Sep 11, 10:40 am, "Steve" <za...@sonic.net> wrote:
> Just picked up a disassembled 3 element CushCraft beam.
> I think its a 10-15-20 meter beam, but not certain. There are
> traps (TB-1) on all 3 elements (6 total). The boom was
> missing.
>
> Hoping to identify the model so I can get assembly instructions
> and length of the boom. No luck with a net search.
> Steve W6SSP

Hi Steve,

I'm no expert on Cushcraft, but a quick look at the few manuals that I
have on BAMA turns up only one beam that uses the identifier "TB-1"
and that is the three element A3WS duo-bander for 12 and 17 meters.
You are welcome to download the manual from either the main BAMA site
at http://bama.sbc.edu or from the mirror site at http://bama.edebris.com
The other Cushcraft beams that I looked at had two traps on each
element half if they were the 10-15-20 mx variety. Hope this helps.

73,
Ken - K4XL
BAMA

1936. Re: Spherical radiation pattern

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-11 23:36:44 UTC
From: Dave <noone@nowhere.com>
Message-ID: <gaBqm.2174$tl3.1584@nwrddc01.gnilink.net>
Source record: 13298

"Art Unwin" <arthurunwin@gmail.com> wrote in message
news:68903947-0109-4020-b4e5-69fb80d9e07f@a7g2000yqo.googlegroups.com...
On Sep 11, 2:37 pm, Art Unwin <arthurun...@gmail.com> wrote:
> On Sep 11, 1:04 pm, "Dave" <no...@nowhere.com> wrote:
>
>David
>Forgot to mention.
>Current would not be applied to the radiator itself but only to the
>sheathing of homogenous particles at rest.(ie neutrinos who are part of
>the
>family of Leptons but still remain as particles) This way with
>opposing forces in shear which includes the bending moment or twist
>of the Standard Force, the chemical adhesion is broken and the
>particle is elevated to achieve a straight line projection with spin.
>In this event all electrical laws lie
> intact and where the resistance is solely of that of radiation to
>which current is applied.

ahhhh, thank you for a good laugh art... now you can go enjoy your vacation.
i couldn't see you go without mentioning your magical levitating diamagnetic
neutrinos just one more time. while you are gone try to figure out how my
ferromagnetic antennas happen to work so well without your diamagnetic
neutrinos to do their magical levitating and twisting for me.

1937. Re: Spherical radiation pattern

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-12 00:31:11 UTC
From: Art Unwin <arthurunwin@gmail.com>
Message-ID: <9d1dbeaf-3c32-46f3-8bc4-5443621340a8@y21g2000yqn.googlegroups.com>
Source record: 13299

On Sep 11, 6:36 pm, "Dave" <no...@nowhere.com> wrote:
> "Art Unwin" <arthurun...@gmail.com> wrote in message
>
> news:68903947-0109-4020-b4e5-69fb80d9e07f@a7g2000yqo.googlegroups.com...
> On Sep 11, 2:37 pm, Art Unwin <arthurun...@gmail.com> wrote:
>
> > On Sep 11, 1:04 pm, "Dave" <no...@nowhere.com> wrote:
>
> >David
> >Forgot to mention.
> >Current would not be applied to the radiator itself but only to the
> >sheathing of homogenous particles at rest.(ie neutrinos who are part of
> >the
> >family of Leptons but still remain as particles) This way with
> >opposing forces in shear which includes the bending moment or twist
> >of the Standard Force, the chemical adhesion is broken and the
> >particle is elevated to achieve a straight line projection with spin.
> >In this event all electrical laws lie
> > intact and where the resistance is solely of that of radiation to
> >which current is applied.
>
> ahhhh, thank you for a good laugh art... now you can go enjoy your vacation.
> i couldn't see you go without mentioning your magical levitating diamagnetic
> neutrinos just one more time. while you are gone try to figure out how my
> ferromagnetic antennas happen to work so well without your diamagnetic
> neutrinos to do their magical levitating and twisting for me.

Maxwells laws are all about accountability for ALL forces involved. In
non diamagnetic materials one cannot account for energy that provides
hysteresis losses.
Thus equilibrium cannot be quantisized.ie balance of vectors. If the
energy movement or decay per unit of time can be resolved then
Maxwell's laws can be modified to include losses, such that all
forces are accounted for. Until then Maxwells laws are governed by
diamagnetic materials used as radiators as they do not retain
hysteresis energy. As for "magic" one only has to play with magnets to
see evidence of elevation together with the undeniability of twist. I
welcome from you an alternative action that arises with a different
application that deviates from The Standard Model per classical
physics. As for Neutrinos,
I prefer to allude to them as particles and not Leptons which
describes particles emitted from the Sun. Unlike Cecil I cannot
explain any properties that they gain or lose or what ever on their
journey from the Sun.(Protons) Thus I am comfortable with the term

"particles" which do not suggest that "neutrinos" cannot and do not change properties during their journey.
Especially in the light of present thinking at CERN that such particles can penetrate to the other side of Earth when they cannot even break the glass of a CRT which they impinge upon.

1938. Re: Spherical radiation pattern

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-12 00:46:32 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <o5rla5h4p0boc2ksoa39nf65burfjnt2ms@4ax.com>
Source record: 13300

On Fri, 11 Sep 2009 23:32:39 +0100, "christofire"
<christofire@btinternet.com> wrote:

>I'd be convinced if the
>protagonist managed a truly isotropic pattern at just one frequency.

Hi Chris,

Half-Isotropic (if you allow for total field - you didn't specify and
any protoplasm could game that loose specification) at:
http://www.qsl.net/kb7qhc/antenna/Inverted%20F/Sheet-1%20Field.gif

The design has been kicking around for 10+ years now at that link, and
not even original when I posted it.

As for gaming the lack of polarization spec, I might simply offer that
it doesn't matter - if you use an isotropic detecting antenna to
measure the field of this antenna model in the link. For that
isotropic detecting antenna, I would offer a golf-ball lump of coal
and a thermistor.

73's
Richard Clark, KB7QHC

1939. Re: need help ID'ing CushCraft 10-15-20 beam

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-12 01:35:49 UTC
From: Steve <zarco@sonic.net>
Message-ID: <4aaafaf7$0$2022$742ec2ed@news.sonic.net>
Source record: 13151

Thanks guys!!!! It is the A3WS and I was able to download
the manual. Was hoping it would do 20 meters.
Steve
"Steve" <zarco@sonic.net> wrote in message
news:4aaa6177$0$1612$742ec2ed@news.sonic.net...
> Just picked up a disassembled 3 element CushCraft beam.
> I think its a 10-15-20 meter beam, but not certain. There are
> traps (TB-1) on all 3 elements (6 total). The boom was
> missing.
>
> Hoping to identify the model so I can get assembly instructions
> and length of the boom. No luck with a net search.
> Steve W6SSP
>

1940. Re: Art's "Tipping" Belief Explained?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-12 02:14:44 UTC
From: Art Unwin <arthurunwin@gmail.com>
Message-ID: <0b6a0936-1723-45a9-8eb8-ac704a56efee@v36g2000yqv.googlegroups.com>
Source record: 13152

On Sep 6, 7:02 am, Richard Fry <r...@adams.net> wrote:
> The link below leads to a composite NEC plot comparing the elevation
> patterns of a vertical dipole with one that is "tipped."
>
> Sure enough, the tipped antenna has slightly more peak gain, and the
> elevation null at the zenith above the vertical version is filled --
> just as Art has posted.
>
> However the reason for that is NOT that the antenna itself radiates
> better when tipped. It is the result of directing more of the peak
> gain of the radiation pattern launched by the antenna (which is a
> constant regardless of its physical orientation) toward the earth near
> the antenna. This increases the earth reflection in that direction/
> sector.
>
> Those considering only the net, far-field radiation as calculated by
> NEC may think that the antenna itself radiates better when tipped.
> But it is only the contribution of the earth reflection that makes it
> appear so.
>
> The radiation pattern of the antenna itself remains the same,
> regardless of its physical orientation.
>
> http://i62.photobucket.com/albums/h85/rfry-100/Tipped_Vertical_Dipole...
>
> RF

You are so dumb that you need help!
If you are going to change the orientation you must change the length
of the radiator
so that is still resonant. ala a state of equilibrium
You did not do that!.
You are proposing that a resonant full wave dipole does not change
its characteristics
even if it falls over. I assure you that you are wrong
Think and think and think about it during my absence and then do your
work over again. Do this before I return so that you may measure the
reactions of your counter parts.
And remember, the tilt and length of the radiator is proportional to
that of the Coriolis vector. No more and no less, if you are going to
abide by the laws of Newton.
I may take my laptop with me as you are not alone with your dumbness
and neglect of the laws of physics. If you are going to suggest some
thing new it must correlate with existing laws of physics. If not you

must prove why such law should not be considered valid Nothing that I have stated with respect to radiation does not violate any existing laws of physics otherwise all would be typing in unison in response. To make believe such a trail that agreed with all laws is no more than a fairy tale is certainly beyond my capability. Only a trail that extends along the line of known laws could have such durability that has lasted and continues, for so long. Again, for every degree of tilt you must correct the length of your full wave dipole or retake your novice examination.

1941. Re: need help ID'ing CushCraft 10-15-20 beam

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-12 02:49:51 UTC
From: Ken <grimm@sbc.edu>
Message-ID: <9eca6abc-7fac-49a6-bf19-6824338dfcb9@w10g2000yqf.googlegroups.com>
Source record: 13153

Great, Steve! I'm glad that you were able to identify the beam and
download the manual.
Twenty meters is a blast, but 17 isn't far behind. I think you will
enjoy it very much.
73,
Ken - K4XL

On Sep 11, 9:35 pm, "Steve" <za...@sonic.net> wrote:
> Thanks guys!!!! It is the A3WS and I was able to download
> the manual. Was hoping it would do 20 meters.
>   Steve"Steve" <za...@sonic.net> wrote in message
>
> news:4aaa6177$0$1612$742ec2ed@news.sonic.net...
>
> > Just picked up a disassembled 3 element CushCraft beam.
> > I think its a 10-15-20 meter beam, but not certain. There are
> > traps (TB-1) on all 3 elements (6 total). The boom was
> > missing.
>
> > Hoping to identify the model so I can get assembly instructions
> > and length of the boom. No luck with a net search.
> >   Steve W6SSP

1942. Re: Art's "Tipping" Belief Explained?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-12 03:52:22 UTC
From: tom <news4792@taring.org>
Message-ID: <4aab1b5a$0$42844$8046368a@newsreader.iphouse.net>
Source record: 13154

Art Unwin wrote:
> On Sep 6, 7:02 am, Richard Fry <r...@adams.net> wrote:
>> The link below leads to a composite NEC plot comparing the elevation
>> patterns of a vertical dipole with one that is "tipped."
>>
>> Sure enough, the tipped antenna has slightly more peak gain, and the
>> elevation null at the zenith above the vertical version is filled --
>> just as Art has posted.
>>
>> However the reason for that is NOT that the antenna itself radiates
>> better when tipped. It is the result of directing more of the peak
>> gain of the radiation pattern launched by the antenna (which is a
>> constant regardless of its physical orientation) toward the earth near
>> the antenna. This increases the earth reflection in that direction/
>> sector.
>>
>> Those considering only the net, far-field radiation as calculated by
>> NEC may think that the antenna itself radiates better when tipped.
>> But it is only the contribution of the earth reflection that makes it
>> appear so.
>>
>> The radiation pattern of the antenna itself remains the same,
>> regardless of its physical orientation.
>>
>> http://i62.photobucket.com/albums/h85/rfry-100/Tipped_Vertical_Dipole...
>>
>> RF
>
> You are so dumb that you need help!
> If you are going to change the orientation you must change the length
> of the radiator
> so that is still resonant. ala a state of equilibrium
> You did not do that!.
> You are proposing that a resonant full wave dipole does not change
> its characteristics
> even if it falls over. I assure you that you are wrong
> Think and think and think about it during my absence and then do your
> work over again. Do this before I return so that you may measure the
> reactions of your counter parts.
> And remember, the tilt and length of the radiator is proportional to
> that of the Coriolis vector. No more and no less, if you are going to
> abide by the laws of Newton.
> I may take my laptop with me as you are not alone with your dumbness
> and neglect of the laws of physics. If you are going to suggest some

> thing new it must correlate with existing laws of physics. If not you
> must prove why such law should not be considered valid Nothing that I
> have stated with respect to radiation does not violate any existing
> laws of physics otherwise all would be typing in unison in response.
> To make believe such a trail that agreed with all laws is no more than
> a fairy tale is certainly beyond my capability. Only a trail that
> extends along the line of known laws could have such durability that
> has lasted and continues, for so long. Again, for every degree of tilt
> you must correct the length of your full wave dipole or retake your
> novice examination.

Art

You are lecturing someone that has maybe 1000 times the actual knowledge
that you do, and none of the fantasies. You really need to get a grip
on reality.

I'm not joking.

You are a very poor mechanical engineer who thinks he knows more than
excellent electrical engineers.

Give it up. You're a failure.

tom
K0TAR

1943. MW polarization

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-12 07:40:52 UTC
From: Szczepan Białek <sz.bialek@wp.pl>
Message-ID: <h8f88pasu1@node1.news.atman.pl>
Source record: 13155

"A great many/almost all MW, AM broadcast stations use an antenna
system comprised of one or more vertical monopoles"

Is such radiation (from the two vertical masts) polarized horizontally or
vertically?
S*

1944. Re: Corriolis force

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-12 07:59:08 UTC
From: Szczepan Białek <sz.bialek@wp.pl>
Message-ID: <h8f9avavl1@node1.news.atman.pl>
Source record: 13156

"Dave" <noone@nowhere.com> wrote
news:vQqqm.2101$tl3.1063@nwrddc01.gnilink.net...
>
> "Szczepan Bialek" <sz.bialek@wp.pl> wrote in message
> news:h8clhjvdg1@node1.news.atman.pl...
>>
>>
>> Now is the electronic era. Electronic is from electrons. They are
>> compressible and have the inertia. You all construct antennas where
>> electrons build up voltage. But on the blackboard are math for
>> incompressible fluid.
>
> no it isn't. you are obviously way out of date. stop looking way in the
> past for theories that were obviously disproven decades ago and look at
> modern texts to see which ones have survived 100+ years of experimental
> evidence.

Which one "survived 100+ years of experimental evidence." The
incompressible fluid or the elcctrons. The both have 100+ years.
At first were the two fluids (positive and negative). Poisson made the
beautiful math for them.
Next Aepinus and Franklin propose the one fluid (negative). Maxwell made the
Math for it. Fluid was incompressible and massless.
Next electron were discowered. Charges witch mass and inertia.
>
>>Look at the famous equations - there no voltage at all (only current).
>
> in any electronic system you really only need voltage OR current, they are
> always related by the impedance.

They are related when current flow. The voltage is supply dependent.

> So if you read modern texts you will often see that they derive equations
> in either voltage or current form then show the other form for reference,
> or sometimes leave it as an excercise for the student.
>
>> If somebody do math for electrons then such math will be on the
>> blackboards.
>> But it is not necessary. The beautifull EM equations are the same like
>> for fluid mechanics. They will be saved. Radio engineers do not use them
>> and can wait for the proper ones the next centuries.
>
> no, real engineers are trying to educate people like you who are stuck in
> the past with outdated theories and simplified misconceptions.

Engineers use electrons. Teach me about them.

>.. or we could just ignore you and hope you go away quickly. personally i
>think it is more fun to watch what comes out of the mouths of babes when
>you tickle their feet.

So i go to another topic.
S*
>

1945. Re: Corriolis force

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-12 08:53:05 UTC
From: Szczepan Białek <sz.bialek@wp.pl>
Message-ID: <h8fcg3$b91$1@node1.news.atman.pl>
Source record: 13157

"Richard Fry" <rfry@adams.net> wrote
news:81aa5cc9-850e-4817-af6a-d679f5afdc3a@c37g2000yqi.googlegroups.com...
On Sep 11, 1:45 pm, Szczepan Biaďż˝ek <sz.bia...@wp.pl> wrote:
>> The both antennas (transmitter and receiver) should be aligned. You
>> wrote:
> "Most compact, and inexpensive MW AM broadcast receivers use an
> integrated,
> ferrite core "loopstick" receive antenna.
>
>> When such receivers are oriented with their control legends and
> displays aligned in the horizontal plane, as when the bottom/back of
> the receiver is sitting on a table, "

>S* then wrote:

>> It means that the waves are horizontaly polarized.

>Not so. The receive antenna I described responds to the magnetic
field, not the electric field.

MW has about hundred meters. Is impossible to place normal dipole. The
helical wound antenna is used. The rules are the same like for normal
dipole.

> In an EM wave these two fields are at right angles to each other, and to
> the direction of travel.

>The polarisation of a wave is given by the physical orientation of its
electric field. If that field is vertically polarised then the
receive antenna I described will receive maximum (magnetic) field, and
my experiment will prove that the incoming EM wave is vertically
polarised.

Fields are the math. I am writing about real observations.

> One mast is omnidirectional. The two are directional like a horizontal
> dipole.

>However a horizontal dipole radiates horizontally polarised waves. A
directional MW array radiates vertically polarized waves, regardless
of the shape of its azimuth pattern.

Look at the loop antennas. The polarization depends from feeding place.
The two masts is like "special" tipped dipole. The masts are 1/2 wave lenght
apart.
S*

1946. Re: Art's "Tipping" Belief Explained?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-12 10:32:18 UTC
From: Richard Fry <rfry@adams.net>
Message-ID: <aaf8e908-4e5d-4746-b999-5a55934e202f@o41g2000yqb.googlegroups.com>
Source record: 13158

On Sep 11, 9:14 pm, Art Unwin <arthurun...@gmail.com> wrote:

> You are proposing that a resonant full wave dipole does not
> change its characteristics even if it falls over.

1. A full-wave dipole is not self-resonant. Its center-fed impedance in free space is about 2,000 -j600 ohms.

2. None of the equations for the free-space radiation pattern of a full-wave, or any length dipole include terms for its physical orientation.

3. In free space there IS no up, no down and no tilt.

> If you are going to suggest something new it must correlate
> with existing laws of physics.

Should you not follow your own advice? You are the one suggesting "something new," and you offer it with only your opinions to support it. No scientific proof, whatsoever.

> Nothing that I have stated with respect to radiation does not
> violate any existing laws of physics...

And with that statement I totally agree.

RF

1947. Re: MW polarization

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-12 10:44:16 UTC
From: christofire <christofire@btinternet.com>
Message-ID: <X6idnWlNf7Ab5jbXnZ2dnUVZ8nWdnZ2d@bt.com>
Source record: 13159

"Szczepan Bia&#65533;ek" <sz.bialek@wp.pl> wrote in message
news:h8f88pasu1@node1.news.atman.pl...
> "A great many/almost all MW, AM broadcast stations use an antenna
> system comprised of one or more vertical monopoles"
>
> Is such radiation (from the two vertical masts) polarized horizontally or
> vertically?
> S*

Why are you asking the group? ... when you are the one who has been telling
us that conventional EM wave theory is wrong.

You have already been told the correct answer but you chose to rebut it with
a heap of 'longitudinal wave' nonsense.

Chris

1948. Re: Spherical radiation pattern

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-12 10:56:26 UTC
From: christofire <christofire@btinternet.com>
Message-ID: <_MGdnblyBOPC4zbXnZ2dnUVZ8q6dnZ2d@bt.com>
Source record: 13160

"Richard Clark" <kb7qhc@comcast.net> wrote in message
news:o5rla5h4p0boc2ksoa39nf65burfjnt2ms@4ax.com...
> On Fri, 11 Sep 2009 23:32:39 +0100, "christofire"
> <christofire@btinternet.com> wrote:
>
>>I'd be convinced if the
>>protagonist managed a truly isotropic pattern at just one frequency.
>
> Hi Chris,
>
> Half-Isotropic (if you allow for total field - you didn't specify and
> any protoplasm could game that loose specification) at:
> http://www.qsl.net/kb7qhc/antenna/Inverted%20F/Sheet-1%20Field.gif
>
> The design has been kicking around for 10+ years now at that link, and
> not even original when I posted it.
>
> As for gaming the lack of polarization spec, I might simply offer that
> it doesn't matter - if you use an isotropic detecting antenna to
> measure the field of this antenna model in the link. For that
> isotropic detecting antenna, I would offer a golf-ball lump of coal
> and a thermistor.
>
> 73's
> Richard Clark, KB7QHC

Well the title of the thread is 'Spherical radiation pattern' and I interpret that as meaning a far-field pattern that is uniform (within the 2 dB margin I offered) in respect of the transverse electric, or transverse magnetic, field strength, or the resulting power-flux density, over a whole sphere.

I'm not sure what you mean by 'total field' in respect of a far-field pattern - all induction components should be insignificant including any 'cross-field' longitudinal ones. Also, my wager is in respect of a hardware antenna being built, not an NEC model.

Regarding your lump of coal and a thermistor - how would you connect the thermistor? Surely that would impose some kind of polarisation however it was done ...?

Chris

1949. Re: Corriolis force

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-12 11:00:08 UTC
From: christofire <christofire@btinternet.com>
Message-ID: <cPKdndLLiLCg4jbXnZ2dnUVZ8jednZ2d@bt.com>
Source record: 13161

"Szczepan Bia&#65533;ek" <sz.bialek@wp.pl> wrote in message
news:h8f9avavl1@node1.news.atman.pl...
>
-- snip --

> Engineers use electrons. Teach me about them.

Whenever anyone offers you the correct version of anything you argue against
it and claim to know better, so there's no evidence at all that you are here
to learn.

>>.. or we could just ignore you and hope you go away quickly. personally
>>i think it is more fun to watch what comes out of the mouths of babes when
>>you tickle their feet.
>
> So i go to another topic.
> S*

Oh yes, please, go away and bother a different news group. You've wasted
enough time here.

Chris

1950. Re: Corriolis force

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-12 11:35:07 UTC
From: Richard Fry <rfry@adams.net>
Message-ID: <97b2842d-8b70-4dba-a013-43abf9f9a1b4@a21g2000yqc.googlegroups.com>
Source record: 13162

On Sep 12, 3:53 am, Szczepan Białek <sz.bia...@wp.pl> wrote:
S* wrote about ferrite loopstick antennas:
> MW has about hundred meters. Is impossible to place normal dipole.
> The helical wound antenna is used. The rules are the same like
> for normal dipole.

Untrue. Please read the description linked below, which states that these antennas respond to the magnetic field of an EM wave. Dipoles respond to the electric field.

As the magnetic field of a vertically-polarised wave lies in the horizontal plane, loopstick antennas in AM broadcast receivers are positioned horizontally.

http://www.radio-electronics.com/info/antennas/ferrite_rod_antenna/ferrite_rod_antenna.php

S* wrote about directional MW arrays...

> The masts are 1/2 wave lenght apart.

Their spacing can vary depending on the directional pattern needed by the station.

RF

1951. Re: Spherical radiation pattern

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-12 11:45:28 UTC
From: christofire <christofire@btinternet.com>
Message-ID: <n_6dnUVECr9DFDbXnZ2dnUVZ8uadnZ2d@bt.com>
Source record: 13163

"christofire" <christofire@btinternet.com> wrote in message
news:_MGdnbIyBOPC4zbXnZ2dnUVZ8q6dnZ2d@bt.com...
>
> "Richard Clark" <kb7qhc@comcast.net> wrote in message
> news:o5rla5h4p0boc2ksoa39nf65burfjnt2ms@4ax.com...
>> On Fri, 11 Sep 2009 23:32:39 +0100, "christofire"
>> <christofire@btinternet.com> wrote:
>>
>>>I'd be convinced if the
>>>protagonist managed a truly isotropic pattern at just one frequency.
>>
>> Hi Chris,
>>
>> Half-Isotropic (if you allow for total field - you didn't specify and
>> any protoplasm could game that loose specification) at:
>> http://www.qsl.net/kb7qhc/antenna/Inverted%20F/Sheet-1%20Field.gif
>>
>> The design has been kicking around for 10+ years now at that link, and
>> not even original when I posted it.
>>
>> As for gaming the lack of polarization spec, I might simply offer that
>> it doesn't matter - if you use an isotropic detecting antenna to
>> measure the field of this antenna model in the link. For that
>> isotropic detecting antenna, I would offer a golf-ball lump of coal
>> and a thermistor.
>>
>> 73's
>> Richard Clark, KB7QHC
>
>
> Well the title of the thread is 'Spherical radiation pattern' and I
> interpret that as meaning a far-field pattern that is uniform (within the
> 2 dB margin I offered) in respect of the transverse electric, or
> transverse magnetic, field strength, or the resulting power-flux density,
> over a whole sphere.
>
> I'm not sure what you mean by 'total field' in respect of a far-field
> pattern - all induction components should be insignificant including any
> 'cross-field' longitudinal ones. Also, my wager is in respect of a
> hardware antenna being built, not an NEC model.
>
> Regarding your lump of coal and a thermistor - how would you connect the
> thermistor? Surely that would impose some kind of polarisation however it
> was done ...?

>
> Chris

... Oops, scratch that last bit - my mind must have been elsewhere! Of course you'd just drill a hole in it.

Thinking about your lump of coal reminded me about the kinds of antenna used in radiation hazard meters, often three short dipoles mounted mutually perpendicularly, each with some kind of bolometer element at its centre. If one didn't care about polarisation then perhaps a similar arrangement could be used to transmit with a near-isotropic pattern, but that wouldn't be an efficient solution for communication. No, the challenge for Art Unwin, should he wish to put his money where his mouth (keyboard) is, is create and demonstrate a hardware antenna that exhibits a spherical radiation pattern in respect of a single polarisation. That would be useful.

What is the red line in the pattern to which you gave the link?

Chris

1952. Re: Corriolis force

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-12 12:18:18 UTC
From: Dave <noone@nowhere.com>
Message-ID: <ekMqm.2013$Jd7.936@nwrddc02.gnilink.net>
Source record: 13164

"Szczepan Bialek" <sz.bialek@wp.pl> wrote in message
news:h8f9avavl1@node1.news.atman.pl...
>
> "Dave" <noone@nowhere.com> wrote
> news:vQqqm.2101$tl3.1063@nwrddc01.gnilink.net...
>>
>> "Szczepan Bialek" <sz.bialek@wp.pl> wrote in message
>> news:h8clhjvdg1@node1.news.atman.pl...
>>>
>>>
>>> Now is the electronic era. Electronic is from electrons. They are
>>> compressible and have the inertia. You all construct antennas where
>>> electrons build up voltage. But on the blackboard are math for
>>> incompressible fluid.
>>
>> no it isn't. you are obviously way out of date. stop looking way in the
>> past for theories that were obviously disproven decades ago and look at
>> modern texts to see which ones have survived 100+ years of experimental
>> evidence.
>
> Which one "survived 100+ years of experimental evidence." The
> incompressible fluid or the elcctrons. The both have 100+ years.
> At first were the two fluids (positive and negative). Poisson made the
> beautiful math for them.
> Next Aepinus and Franklin propose the one fluid (negative). Maxwell made
> the Math for it. Fluid was incompressible and massless.
> Next electron were discowered. Charges witch mass and inertia.
>>
>>>Look at the famous equations - there no voltage at all (only current).
>>
>> in any electronic system you really only need voltage OR current, they
>> are always related by the impedance.
>
> They are related when current flow. The voltage is supply dependent.
>
>> So if you read modern texts you will often see that they derive equations
>> in either voltage or current form then show the other form for reference,
>> or sometimes leave it as an excercise for the student.
>>
>>> If somebody do math for electrons then such math will be on the
>>> blackboards.
>>> But it is not necessary. The beautifull EM equations are the same like
>>> for fluid mechanics. They will be saved. Radio engineers do not use them
>>> and can wait for the proper ones the next centuries.

>>
>> no, real engineers are trying to educate people like you who are stuck in
>> the past with outdated theories and simplified misconceptions.
>
> Engineers use electrons. Teach me about them.

real engineers use positive current, physicists use electron flow, as do
some technicians.

>
>>.. or we could just ignore you and hope you go away quickly. personally
>>i think it is more fun to watch what comes out of the mouths of babes when
>>you tickle their feet.
>
> So i go to another topic.
> S*
>>
>
great, just what we need, you spreading your ancient misconceptions around.

1953. Re: MW polarization

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-12 12:19:18 UTC
From: Dave <noone@nowhere.com>
Message-ID: <alMqm.2015$Jd7.548@nwrddc02.gnilink.net>
Source record: 13165

"Szczepan Bialek" <sz.bialek@wp.pl> wrote in message
news:h8f88pasu1@node1.news.atman.pl...
> "A great many/almost all MW, AM broadcast stations use an antenna
> system comprised of one or more vertical monopoles"
>
> Is such radiation (from the two vertical masts) polarized horizontally or
> vertically?
> S*

vertical

1954. Re: Art's "Tipping" Belief Explained?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-12 12:22:32 UTC
From: Dave <noone@nowhere.com>
Message-ID: <coMqm.2016$Jd7.898@nwrddc02.gnilink.net>
Source record: 13166

"Richard Fry" <rfry@adams.net> wrote in message
news:aaf8e908-4e5d-4746-b999-5a55934e202f@o41g2000yqb.googlegroups.com...
On Sep 11, 9:14 pm, Art Unwin <arthurun...@gmail.com> wrote:
>> Nothing that I have stated with respect to radiation does not
>> violate any existing laws of physics...
>
>And with that statement I totally agree.
>
>RF

amen on that! he finally said it the right way.

1955. Re: Spherical radiation pattern

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-12 12:51:45 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <CPMqm.425981$Ta5.40987@newsfe15.iad>
Source record: 13167

christofire wrote:
> I'd be willing to bet, say, 100 UK pounds that Professor Unwin can't create
> an antenna in hardware that radiates isotropically, ...

For those types of proof, it is impossible to prove a
negative. It would be akin to the police knocking
on your door and demanding that you prove that you
are not a terrorist. The onus of logical proof is
upon the one who makes the positive assertion.
--
73, Cecil, IEEE, OOTC, http://www.w5dxp.com

1956. Re: Contructing a balun for receiving antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-12 12:58:51 UTC
From: Ian Jackson <ianREMOVETHISBITjackson@g3ohx.demon.co.uk>
Message-ID: <bfc8536b-48e0-47ab-9cd8-55c4e32ce38e@38g2000yqr.googlegroups.com>
Source record: 13168

On 6 Sep, 15:09, Cecil Moore <nos...@w5dxp.com> wrote:
> skk203 wrote:
> > Could anybody let me know how to contruct a bulun to match a longwire
> > antenna to a receiver. A step by step guide would be appreciated as I
> > am a non technical person.
>
> The design impedance of a balun is determined by
> taking the square root of (the input impedance
> multiplied by the output impedance). Do you know
> the output impedance?
> --
I think that the OP is not referring to a balun, but instead to an 'un-
un'. This is, in this application, a
9:1 impedance transformer used to 'match' a long(ish) wire to 50 or
75
ohms. A typical use is with an inverted-L antenna, where the feedpoint
is
remote from the house, and coax is used to bring the signal back to
the
shack. The advantage of this arrangement is that the antenna usually
picks
up much less interference from domestic electrical sources. It's
essentially a receive-only device, but can be used for low power
transmit (so I'm told).

The transformer is usually wound with a 3:1 turns ratio, on a ferrite
ring or
rod and, using the correct grade of ferrite and actual number of
turns, it is
possible to obtain a frequency range of 1 to 30MHz (ie the whole of MW
and
SW spectrum).

Of course, the 'matching' is only approximate. It's just that, at
most
frequencies, the insertion of the transformer provides a better match
between the coax and the antenna than you would have if there was
simply
a direct connection. It makes no attempt to be an antenna tuner. For
some
information, may I direct the OP to a recent thread in this newsgroup
(1
August), the subject of which was "UNUN Cores?How To Wind?". The OP
was "Greg <bluehyhena@hotmail.com>".

And then there's Google. There are a few useful links here:
<http://groups.google.com/group/rec.radio.shortwave/msg/
1abc6a2bf8acc12d>

1957. Re: Corriolis force

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-12 12:59:56 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <gXMqm.425982$Ta5.270995@newsfe15.iad>
Source record: 13169

Szczepan Białˇżˇek wrote:
> Engineers use electrons. Teach me about them.

http://en.wikipedia.org/wiki/Electron

http://en.wikipedia.org/wiki/Free_electrons
--
73, Cecil, IEEE, OOTC, http://www.w5dxp.com

1958. Re: Spherical radiation pattern

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-12 13:25:14 UTC
From: christofire <christofire@btinternet.com>
Message-ID: <g9CdnbSNap6iPDbXnZ2dnUVZ8hGdnZ2d@bt.com>
Source record: 13170

"Cecil Moore" <nospam@w5dxp.com> wrote in message
news:CPMqm.425981$Ta5.40987@newsfe15.iad...
> christofire wrote:
>> I'd be willing to bet, say, 100 UK pounds that Professor Unwin can't
>> create an antenna in hardware that radiates isotropically, ...
>
> For those types of proof, it is impossible to prove a
> negative. It would be akin to the police knocking
> on your door and demanding that you prove that you
> are not a terrorist. The onus of logical proof is
> upon the one who makes the positive assertion.
> --
> 73, Cecil, IEEE, OOTC, http://www.w5dxp.com

The one who has made the positive assertion is the one who has claimed that by his new theory an antenna can be made that has a spherical radiation pattern. I don't believe in the theory as he has laid out and I don't believe that such an antenna can be built and demonstrated. My wager is in respect of whether or not the protagonist can build and demonstrate such an antenna to back up his own positive assertion.

It is in the nature of a challenge for him to take up if he wishes, and if he does then his bet will be in respect of his positive assertion, but, of course, he hasn't taken it up yet. If he doesn't take up the challenge then nothing new is proved - whichever way you care to interpret that.

Chris

1959. Re: Corriolis force

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-12 15:17:10 UTC
From: Registered User <n4jvp@ix.netcom.com>
Message-ID: <rbcna513vhlv63u563aum7dsabgu07uhln@4ax.com>
Source record: 13171

On Sat, 12 Sep 2009 10:53:05 +0200, Szczepan Bia?ek <sz.bialek@wp.pl>
wrote:
>
>Look at the loop antennas. The polarization depends from feeding place.
>
This statement is flawed because it makes the assumption what is
sometimes true is always true. The feed point's location may or may
not impact a loop's polarization.

1960. Re: Spherical radiation pattern

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-12 15:23:17 UTC
From: Art Unwin <arthurunwin@gmail.com>
Message-ID: <0c8a0906-ccf7-4a6d-9570-d739964b6657@l9g2000yqi.googlegroups.com>
Source record: 13172

On Sep 12, 8:25 am, "christofire" <christof...@btinternet.com> wrote:
> "Cecil Moore" <nos...@w5dxp.com> wrote in message
>
> news:CPMqm.425981$Ta5.40987@newsfe15.iad...
>
> > christofire wrote:
> >> I'd be willing to bet, say, 100 UK pounds that Professor Unwin can't
> >> create an antenna in hardware that radiates isotropically, ...
>
> > For those types of proof, it is impossible to prove a
> > negative. It would be akin to the police knocking
> > on your door and demanding that you prove that you
> > are not a terrorist. The onus of logical proof is
> > upon the one who makes the positive assertion.
> > --
> > 73, Cecil, IEEE, OOTC, http://www.w5dxp.com
>
> The one who has made the positive assertion is the one who has claimed that
> by his new theory an antenna can be made that has a spherical radiation
> pattern. I don't believe in the theory as he has laid out and I don't
> believe that such an antenna can be built and demonstrated. My wager is in
> respect of whether or not the protagonist can build and demonstrate such an
> antenna to back up his own positive assertion.
>
> It is in the nature of a challenge for him to take up if he wishes, and if
> he does then his bet will be in respect of his positive assertion, but, of
> course, he hasn't taken it up yet. If he doesn't take up the challenge then
> nothing new is proved - whichever way you care to interpret that.
>
> Chris

Google... small efficient antenna steven best

1961. Re: Spherical radiation pattern

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-12 16:14:39 UTC
From: Dave <noone@nowhere.com>
Message-ID: <PNPqm.2031$Jd7.1632@nwrddc02.gnilink.net>
Source record: 13173

"Art Unwin" <arthurunwin@gmail.com> wrote in message
news:0c8a0906-ccf7-4a6d-9570-d739964b6657@l9g2000yqi.googlegroups.com...

>Google... small efficient antenna steven best

and just what are we supposed to get out of all the links that it returns?
that someone else built some other kinds of antennas that actually work? or
that Dr Best knows more than you do?

1962. Re: Spherical radiation pattern

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-12 16:28:15 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <99ina5to8trv2e6b4s4t3etvr1us2v9ptd@4ax.com>
Source record: 13174

On Sat, 12 Sep 2009 12:45:28 +0100, "christofire"
<christofire@btinternet.com> wrote:

>>
>> Well the title of the thread is 'Spherical radiation pattern' and I
>> interpret that as meaning a far-field pattern that is uniform (within the
>> 2 dB margin I offered) in respect of the transverse electric, or
>> transverse magnetic, field strength, or the resulting power-flux density,
>> over a whole sphere.

Hi Chris,

Well, simply put this antenna with its mirror image elements into free
space and it accomplishes that quite easily.

>What is the red line in the pattern to which you gave the link?

XYZ Axis.

73's
Richard Clark, KB7QHC

1963. Re: Spherical radiation pattern

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-12 16:40:26 UTC
From: Jeff Liebermann <jeffl@cruzio.com>
Message-ID: <85jna5l2h5bqhelmliomj31j9ckuj38v3g@4ax.com>
Source record: 13175

On Sat, 12 Sep 2009 08:23:17 -0700 (PDT), Art Unwin
<arthurunwin@gmail.com> wrote:

>Google... small efficient antenna steven best

<http://www.cst.com/Content/Applications/Article/A+Small,+Efficient,+Linear-polarized+Omni
-directional+Antenna>
The antenna fits inside a sphere of radius 0.0415 wavelengths.
However, the antenna pattern is not spherical and more closely
resembles the torus produced by a dipole than of an isotropic antenna.
<http://www.cst.com/CMS/images/article105/CPU05_047_600_481.jpg>

An isotropic approximation, which doesn't really qualify for the prize
because the pattern is not polarization and phase insensitive.
<http://802.11junk.com/jeffl/antennas/isotropic/index.html>

--
Jeff Liebermann jeffl@cruzio.com
150 Felker St #D http://www.LearnByDestroying.com
Santa Cruz CA 95060 http://802.11junk.com
Skype: JeffLiebermann AE6KS 831-336-2558

1964. Re: Spherical radiation pattern

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-12 16:50:52 UTC
From: christofire <christofire@btinternet.com>
Message-ID: <a6OdnT5B_JXvTDbXnZ2dnUVZ8k2dnZ2d@bt.com>
Source record: 13176

"Richard Clark" <kb7qhc@comcast.net> wrote in message
news:99ina5to8trv2e6b4s4t3etvr1us2v9ptd@4ax.com...
> On Sat, 12 Sep 2009 12:45:28 +0100, "christofire"
> <christofire@btinternet.com> wrote:
>
>>>
>>> Well the title of the thread is 'Spherical radiation pattern' and I
>>> interpret that as meaning a far-field pattern that is uniform (within
>>> the
>>> 2 dB margin I offered) in respect of the transverse electric, or
>>> transverse magnetic, field strength, or the resulting power-flux
>>> density,
>>> over a whole sphere.
>
> Hi Chris,
>
> Well, simply put this antenna with its mirror image elements into free
> space and it accomplishes that quite easily.
>

Have you ever built one and measured its radiation pattern?

Chris

1965. Re: Spherical radiation pattern

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-12 17:11:09 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <7rkna59orlfce37plgj1v9nbklvv9ihkrj@4ax.com>
Source record: 13177

On Sat, 12 Sep 2009 17:50:52 +0100, "christofire"
<christofire@btinternet.com> wrote:

>Have you ever built one and measured its radiation pattern?

Hi Chris,

Others have - the design is not unique to me and has been around for years. I modeled it to merely confirm those reports and that was rather simply accomplished. I have reported these results to interested parties here for the last 10 to 15 years. I am under no illusion that Art has ever used that data as a resource, otherwise it would undercut his claim of novelty.

I've no doubt that other designs meeting your terse requirements could be rummaged up. I have no presumption that NEC fails for this one specific design that is ordinary in every regard to conventional modeling. At a minimum this is only 4 wires. As such, I am satisfied.

73's
Richard Clark, KB7QHC

1966. Re: Spherical radiation pattern

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-12 18:25:16 UTC
From: christofire <christofire@btinternet.com>
Message-ID: <ppqdnTh4q9YPejbXnZ2dnUVZ8l2dnZ2d@bt.com>
Source record: 13178

"Richard Clark" <kb7qhc@comcast.net> wrote in message
news:7rkna59orlfce37plgj1v9nbklvv9ihkrj@4ax.com...
> On Sat, 12 Sep 2009 17:50:52 +0100, "christofire"
> <christofire@btinternet.com> wrote:
>
>>Have you ever built one and measured its radiation pattern?
>
> Hi Chris,
>
> Others have - the design is not unique to me and has been around for
> years. I modeled it to merely confirm those reports and that was
> rather simply accomplished. I have reported these results to
> interested parties here for the last 10 to 15 years. I am under no
> illusion that Art has ever used that data as a resource, otherwise it
> would undercut his claim of novelty.
>
> I've no doubt that other designs meeting your terse requirements could
> be rummaged up. I have no presumption that NEC fails for this one
> specific design that is ordinary in every regard to conventional
> modeling. At a minimum this is only 4 wires. As such, I am
> satisfied.
>
> 73's
> Richard Clark, KB7QHC

Good. Maybe this will encourage Art to have a go at my challenge by
applying his own theories then.

I had seen papers about inverted F antennas before (at an IEE or IET
symposium some ten years ago), and I vaguely recall hearing that some
manufacturers use them in mobile phones, but I'd never seen a pattern as
uniform as the result of your simulation.

Chris

1967. Re: Spherical radiation pattern

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-12 18:37:34 UTC
From: Dave <noone@nowhere.com>
Message-ID: <OTRqm.2046$Jd7.945@nwrddc02.gnilink.net>
Source record: 13179

"christofire" <christofire@btinternet.com> wrote in message
news:ppqdnTh4q9YPejbXnZ2dnUVZ8l2dnZ2d@bt.com...
>
> "Richard Clark" <kb7qhc@comcast.net> wrote in message
> news:7rkna59orlfce37plgj1v9nbklvv9ihkrj@4ax.com...
>> On Sat, 12 Sep 2009 17:50:52 +0100, "christofire"
>> <christofire@btinternet.com> wrote:
>>
>>>Have you ever built one and measured its radiation pattern?
>>
>> Hi Chris,
>>
>> Others have - the design is not unique to me and has been around for
>> years. I modeled it to merely confirm those reports and that was
>> rather simply accomplished. I have reported these results to
>> interested parties here for the last 10 to 15 years. I am under no
>> illusion that Art has ever used that data as a resource, otherwise it
>> would undercut his claim of novelty.
>>
>> I've no doubt that other designs meeting your terse requirements could
>> be rummaged up. I have no presumption that NEC fails for this one
>> specific design that is ordinary in every regard to conventional
>> modeling. At a minimum this is only 4 wires. As such, I am
>> satisfied.
>>
>> 73's
>> Richard Clark, KB7QHC
>
>
> Good. Maybe this will encourage Art to have a go at my challenge by
> applying his own theories then.
>
> I had seen papers about inverted F antennas before (at an IEE or IET
> symposium some ten years ago), and I vaguely recall hearing that some
> manufacturers use them in mobile phones, but I'd never seen a pattern as
> uniform as the result of your simulation.
>
> Chris
>
art will never accept your challenge. its up to you to prove that his
assertions are incorrect... and then get ignored as he continues to state
the same things in many different forms. unless you can capture one of his
diamagnetic levitating solar neutrinos and show that it doesn't sit on the
antenna element and jump off when a pulse of current hits it you will never

be believed... and even if you did capture one he would tell you it changed in flight from the sun.

1968. Re: Spherical radiation pattern

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-12 19:13:51 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <l3rna5plmubi69th53fjmkp4qp857jhrrc@4ax.com>
Source record: 13180

On Sat, 12 Sep 2009 19:25:16 +0100, "christofire"
<christofire@btinternet.com> wrote:

>I had seen papers about inverted F antennas before (at an IEE or IET
>symposium some ten years ago), and I vaguely recall hearing that some
>manufacturers use them in mobile phones, but I'd never seen a pattern as
>uniform as the result of your simulation.

Hi Chris,

For a more academic treatment, the antenna is also known as the
"U-Shaped Antenna of Shtrikman." His has three wires, my fourth wire
is much like the J-Pole feed point attachment.

Now, one proviso: this is not an isotropic in the sense of providing
equal polarization at any angle. Nothing can accomplish that due to
that requirement being impossible to meet (the so-called "hairy ball"
problem). So, I simply resolved that with my carbon golf ball with
its thermistor for detecting the Inverted F's total field to within
the degree of less than 2dB variation over the shell surrounding the
antenna.

>Good. Maybe this will encourage Art to have a go at my challenge by
>applying his own theories then.

As I've shown, they are not his theories. Art doesn't have theories,
they are illusions. Shtrikman's antenna has a model and a practical,
real example that agree with one another in performance. The design
is revealed and can be reproduced by anyone. No advanced math is
demanded to perfect the results. No allusion to nuclear forces is
required to explain any principle. Anyone can, and HAS built an
antenna that Art can only mumble about. Perhaps I am mislead about
this mumble, having kill-filed him, as I see his contribution (sic)
only through other's quotes; few of which are full quotes (I can
understand why).

This last week in my driving through rain city, I've seen a street
corner beggar who has worked one particular intersection for a couple
of years now. He has a weather protected laminated board describing
his plea, and he wears goretex weather gear that I couldn't afford. He
does have this hang-dog appearance and shambling shuffle tho'. What is
one to believe when it comes to claims? Clearly money talks. Who
knows? He may have a patented system and sells franchises.

73's
Richard Clark, KB7QHC

1969. Re: MFJ-1775 dipole installation and care?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-13 00:17:34 UTC
From: David Thompson <thompson@mindspring.com>
Message-ID: <W72dnYMuzNyCpzHXnZ2dnUVZ_t-dnZ2d@earthlink.com>
Source record: 13181

Kris,

The best protection against rust it something usually found near the shipping dock...lithium grease. The dipole looks strong. I have eliminated coils in all but my 40 meter beam and there I use high grade electrical black tape as do several manufacturers here in the USA.

I would be interested to find how the dipole works on 40 as its quite short there electrically and probably very narrow banded. I have a friend with the MFJ-1785 big brother and his works great on 40 but so far its down 2 S units to a normal Dipole on 80.

73 Dave K4JRB

"TF3KX" <kristinn1@gmail.com> wrote in message
news:2107df9a-11ed-42c1-b07d-0f9187496c64@l9g2000yqi.googlegroups.com...
>I am in the process of adjusting and installing an MFJ-1775 multiband
> dipole. I would appreciate any comments or useful advice from other
> users before I proceed to the installation. Some of the concerns I
> have are:
>
> - Should I cover the inductors to protect from the weather (rain,
> ice)? If so, how?
> - Should I take any other precautions to strengthen the antenna or
> protect from corrosion?
> - I have heard some users have burned up the inductors with only a few
> hundred watts. Comments?
> - Any other...?
>
> 73 - Kris, TF3KX

1970. Re: Spherical radiation pattern

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-13 01:08:20 UTC
From: christofire <christofire@btinternet.com>
Message-ID: <99udnSWI9feX2zHXnZ2dnUVZ8qadnZ2d@bt.com>
Source record: 13182

"Richard Clark" <kb7qhc@comcast.net> wrote in message
news:l3rna5plmubi69th53fjmkp4qp857jhrrc@4ax.com...
> On Sat, 12 Sep 2009 19:25:16 +0100, "christofire"
> <christofire@btinternet.com> wrote:
>
>>I had seen papers about inverted F antennas before (at an IEE or IET
>>symposium some ten years ago), and I vaguely recall hearing that some
>>manufacturers use them in mobile phones, but I'd never seen a pattern as
>>uniform as the result of your simulation.
>
> Hi Chris,
>
> For a more academic treatment, the antenna is also known as the
> "U-Shaped Antenna of Shtrikman." His has three wires, my fourth wire
> is much like the J-Pole feed point attachment.
>
> Now, one proviso: this is not an isotropic in the sense of providing
> equal polarization at any angle. Nothing can accomplish that due to
> that requirement being impossible to meet (the so-called "hairy ball"
> problem).

I had understood it to be impossible on the basis of normal physics but Art
Unwin's claim wasn't clear in respect of polarisation.

> So, I simply resolved that with my carbon golf ball with
> its thermistor for detecting the Inverted F's total field to within
> the degree of less than 2dB variation over the shell surrounding the
> antenna.

Now I understand what you meant by 'total field' - sum of powers of
components in all polarisations.

>>Good. Maybe this will encourage Art to have a go at my challenge by
>>applying his own theories then.
>
> As I've shown, they are not his theories. Art doesn't have theories,
> they are illusions. Shtrikman's antenna has a model and a practical,
> real example that agree with one another in performance. The design
> is revealed and can be reproduced by anyone. No advanced math is
> demanded to perfect the results. No allusion to nuclear forces is
> required to explain any principle. Anyone can, and HAS built an
> antenna that Art can only mumble about. Perhaps I am mislead about
> this mumble, having kill-filed him, as I see his contribution (sic)
> only through other's quotes; few of which are full quotes (I can
> understand why).

Shtrikman's antenna sounds interesting. I will look up references.

> This last week in my driving through rain city, I've seen a street
> corner beggar who has worked one particular intersection for a couple
> of years now. He has a weather protected laminated board describing
> his plea, and he wears goretex weather gear that I couldn't afford. He
> does have this hang-dog appearance and shambling shuffle tho'. What is
> one to believe when it comes to claims? Clearly money talks. Who
> knows? He may have a patented system and sells franchises.
>
> 73's
> Richard Clark, KB7QHC

Over here we've recently been subjected to the phenomenon of 'Seasick Steve' - who 'started out with nothing and still has most of it left' but also has a substantial recording contract. What is one to believe, as you so rightly say?

Chris

1971. Radio Items FA

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-13 02:54:09 UTC
From: Arky Bob <Arky_Bob_Rules@yahoo.com>
Message-ID: <1e1832d9-2c3f-4429-8821-54cdff62c495@j19g2000yqk.googlegroups.com>
Source record: 13183
Cross-posted to: rec.radio.cb,rec.radio.amateur.antenna,rec.radio.amateur.equipment,rec.radio.amateur.misc,rec.radio.amateur.dx

Like New Bencher black-base paddle with cable and connector.
http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=190334691470

Radio Shack SWR - Power Meter
http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=190334693430

New MFJ 2 position antenna switch
http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=190334698835

1972. Re: Spherical radiation pattern

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-13 06:20:25 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <b63pa595g60jboapl03u3fr04e3ef177ed@4ax.com>
Source record: 13184

On Sun, 13 Sep 2009 02:08:20 +0100, "christofire"
<christofire@btinternet.com> wrote:

>I had understood it to be impossible on the basis of normal physics but Art
>Unwin's claim wasn't clear in respect of polarisation.

Hi Chris,

Black body radiators do qualify as Isotropic; and as Art has claimed
high efficiencies for RF impracticalities, it must be for efficient
Infrared emission.

73's
Richard Clark, KB7QHC

1973. Re: Latest ICOM model, the IC-9100 all round transceiver.

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-13 08:46:31 UTC
From: Chuck Forsberg WA7KGX N2469R <caf@omen.com>
Message-ID: <-KCdnSv5I4r6LDHXnZ2dnUVZ_uSdnZ2d@giganews.com>
Source record: 13186

On Mon, 24 Aug 2009 22:09:48 +0200, RigReference.com wrote:

> Latest ICOM model, the IC-9100 all round transceiver. Images and
> specifications:
>
> http://rigreference.com/rigs/view/4519
>
>
> --------------= Posted using GrabIt =---------------- ------= Binary
> Usenet downloading made easy =--------- -= Get GrabIt for free from
> http://www.shemes.com/ =-

Too bad it doesn't have the 756 spectrum scope.
And there is no mention of the 706's SWR plot.

A me-too Kenwood ts-2000 when it should have been a
proper superset of the 706/7000 and 756. Yawn.

--
Chuck Forsberg caf@omen.com www.omen.com 503-614-0430
Developer of Industrial ZMODEM(Tm) for Embedded Applications
Omen Technology Inc "The High Reliability Software"
10255 NW Old Cornelius Pass Portland OR 97231 FAX 629-0665

1974. Re: Spherical radiation pattern

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-13 09:37:18 UTC
From: Szczepan Białek <sz.bialek@wp.pl>
Message-ID: <h8i3edlmg1@node1.news.atman.pl>
Source record: 13185

"christofire" <christofire@btinternet.com> wrote
news:99udnSWI9feX2zHXnZ2dnUVZ8qadnZ2d@bt.com...
>
>
> Now I understand what you meant by 'total field' - sum of powers of
> components in all polarisations.

Does one wave has many polarizations, or one antenna has many polarizations?
Which one: transmitter or receiver? Could you teach me?
A*

1975. Ringo Ranger ARX2 vs ARX2b

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-13 10:21:08 UTC
From: Chuck Forsberg WA7KGX N2469R <caf@omen.com>
Message-ID: <-KCdnSr5I4oJWjHXnZ2dnUVZ_uSdnZ2d@giganews.com>
Source record: 13187

The B version has a piece of mast below the main part of the
antenna. Is there much difference in performance between
the arx2b and the original arx2?

--
Chuck Forsberg caf@omen.com www.omen.com 503-614-0430
Developer of Industrial ZMODEM(Tm) for Embedded Applications
Omen Technology Inc "The High Reliability Software"
10255 NW Old Cornelius Pass Portland OR 97231 FAX 629-0665

1976. Re: Spherical radiation pattern

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-13 11:05:34 UTC
From: christofire <christofire@btinternet.com>
Message-ID: <MKSdnckGwpWZTzHXnZ2dnUVZ8rOdnZ2d@bt.com>
Source record: 13188

"Richard Clark" <kb7qhc@comcast.net> wrote in message
news:b63pa595g60jboapl03u3fr04e3ef177ed@4ax.com...
> On Sun, 13 Sep 2009 02:08:20 +0100, "christofire"
> <christofire@btinternet.com> wrote:
>
>>I had understood it to be impossible on the basis of normal physics but
>>Art
>>Unwin's claim wasn't clear in respect of polarisation.
>
> Hi Chris,
>
> Black body radiators do qualify as Isotropic; and as Art has claimed
> high efficiencies for RF impracticalities, it must be for efficient
> Infrared emission.
>
> 73's
> Richard Clark, KB7QHC

... but are randomly polarised, and I'd expect communication between a randomly-polarised antenna and either a normal, polarised antenna or another randomly polarised one to be lossy in comparison with the unusual case.

Nevertheless, the principle that heaters are highly efficient is an amusing, occasionally useful one - standby dissipation contributing to heating your house and all that.

Chris

1977. Re: Spherical radiation pattern

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-13 11:11:19 UTC
From: christofire <christofire@btinternet.com>
Message-ID: <ztqdnT-F6vPATjHXnZ2dnUVZ8iednZ2d@bt.com>
Source record: 13189

"christofire" <christofire@btinternet.com> wrote in message
news:MKSdnckGwpWZTzHXnZ2dnUVZ8rOdnZ2d@bt.com...
>
> "Richard Clark" <kb7qhc@comcast.net> wrote in message
> news:b63pa595g60jboapl03u3fr04e3ef177ed@4ax.com...
>> On Sun, 13 Sep 2009 02:08:20 +0100, "christofire"
>> <christofire@btinternet.com> wrote:
>>
>>>I had understood it to be impossible on the basis of normal physics but
>>>Art
>>>Unwin's claim wasn't clear in respect of polarisation.
>>
>> Hi Chris,
>>
>> Black body radiators do qualify as Isotropic; and as Art has claimed
>> high efficiencies for RF impracticalities, it must be for efficient
>> Infrared emission.
>>
>> 73's
>> Richard Clark, KB7QHC
>
>
> ... but are randomly polarised, and I'd expect communication between a
> randomly-polarised antenna and either a normal, polarised antenna or
> another randomly polarised one to be lossy in comparison with the unusual
> case.

* That was meant to be 'the usual case' - I let the spell checker have its
way without looking at the result!

> Nevertheless, the principle that heaters are highly efficient is an
> amusing, occasionally useful one - standby dissipation contributing to
> heating your house and all that.
>
> Chris

1978. Re: Spherical radiation pattern

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-13 11:46:30 UTC
From: christofire <christofire@btinternet.com>
Message-ID: <cfmdnWT4vfgBRjHXnZ2dnUVZ8rSdnZ2d@bt.com>
Source record: 13190

"Szczepan Bia&#65533;ek" <sz.bialek@wp.pl> wrote in message
news:h8i3edlmg1@node1.news.atman.pl...
>
> "christofire" <christofire@btinternet.com> wrote
> news:99udnSWI9feX2zHXnZ2dnUVZ8qadnZ2d@bt.com...
>>
>>
>> Now I understand what you meant by 'total field' - sum of powers of
>> components in all polarisations.
>
> Does one wave has many polarizations, or one antenna has many
> polarizations? Which one: transmitter or receiver? Could you teach me?
> A*

You appear to have changed your identity from S* to A* !

The answers according to the physics that real-life radio communication depends upon, and was designed by, are:

A single EM wave is plane polarised. It is composed of a magnetic field H that acts in a direction perpendicular to the direction of propagation, the magnitude and sign of this field varying as a travelling wave in the direction of propagation, and an attendant electric field E that also acts in a direction perpendicular to the direction of propagation. The magnitude and sign of the electric field varies as a travelling wave, coherent and in phase with the magnetic field and the magnetic field is a direct consequence of current flowing in the transmitting antenna. The directions in which the H and E fields act, in the plane transverse to the direction of propagation, are mutually perpendicular and the direction in which the E field acts, by convention, defines the polarisation.

Thus a single EM wave has a single, plane, polarisation. Different combinations of waves are possible such as circular polarisation and, more generally, elliptical polarisation, but these can always be resolved into orthogonal plane components.

Simple antennas like straight-wire dipoles and loops transmit and respond to plane polarised EM waves. More complicated antennas can be made to transmit and receive circular polarisation of one sense or the other, and generally an antenna will tend to transmit or be sensitive to some combination of different plane polarisations. In addition to radiated EM waves, there are also induction fields in a region close to the antenna.

In a system that contains no anisotropic material (e.g. magnetised ferrite), when the distance between transmitting and receiving antennas is at least tens of wavelengths, the principle of reciprocity applies. By this

principle the properties of an antenna when transmitting are the same as when it is receiving - the properties including the polarisation, radiation pattern and terminal impedance.

If you find any of this interesting, please don't believe what I've written here but go to a technical library (e.g. at a University) and look up the authoritative sources - books on antennas and propagation by Kraus, Jasik, Jordan and Balmain, Terman, etc.

Please _do not_ respond here telling me or the group that EM waves are longitudinal and are not polarised.

Chris

1979. Re: Spherical radiation pattern

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-13 12:06:14 UTC
From: christofire <christofire@btinternet.com>
Message-ID: <CJKdnaVDTp2gfTHXnZ2dnUVZ8radnZ2d@bt.com>
Source record: 13191

"christofire" <christofire@btinternet.com> wrote in message
news:cfmdnWT4vfgBRjHXnZ2dnUVZ8rSdnZ2d@bt.com...
>
> "Szczepan Bia�ek" <sz.bialek@wp.pl> wrote in message
> news:h8i3edlmg1@node1.news.atman.pl...
>>
>> "christofire" <christofire@btinternet.com> wrote
>> news:99udnSWI9feX2zHXnZ2dnUVZ8qadnZ2d@bt.com...
>>>
>>>
>>> Now I understand what you meant by 'total field' - sum of powers of
>>> components in all polarisations.
>>
>> Does one wave has many polarizations, or one antenna has many
>> polarizations? Which one: transmitter or receiver? Could you teach me?
>> A*
>
>
> You appear to have changed your identity from S* to A* !
>
> The answers according to the physics that real-life radio communication
> depends upon, and was designed by, are:
>
> A single EM wave is plane polarised. It is composed of a magnetic field H
> that acts in a direction perpendicular to the direction of propagation,
> the magnitude and sign of this field varying as a travelling wave in the
> direction of propagation, and an attendant electric field E that also acts
> in a direction perpendicular to the direction of propagation. The
> magnitude and sign of the electric field varies as a travelling wave,
> coherent and in phase with the magnetic field and the magnetic field is a
> direct consequence of current flowing in the transmitting antenna. The
> directions in which the H and E fields act, in the plane transverse to the
> direction of propagation, are mutually perpendicular and the direction in
> which the E field acts, by convention, defines the polarisation.
>
> Thus a single EM wave has a single, plane, polarisation. Different
> combinations of waves are possible such as circular polarisation and, more
> generally, elliptical polarisation, but these can always be resolved into
> orthogonal plane components.
>
> Simple antennas like straight-wire dipoles and loops transmit and respond
> to plane polarised EM waves. More complicated antennas can be made to
> transmit and receive circular polarisation of one sense or the other, and

> generally an antenna will tend to transmit or be sensitive to some
> combination of different plane polarisations. In addition to radiated EM
> waves, there are also induction fields in a region close to the antenna.
>
> In a system that contains no anisotropic material (e.g. magnetised
> ferrite), when the distance between transmitting and receiving antennas is
> at least tens of wavelengths, the principle of reciprocity applies. By
> this principle the properties of an antenna when transmitting are the same
> as when it is receiving - the properties including the polarisation,
> radiation pattern and terminal impedance.
>
> If you find any of this interesting, please don't believe what I've
> written here but go to a technical library (e.g. at a University) and look
> up the authoritative sources - books on antennas and propagation by Kraus,
> Jasik, Jordan and Balmain, Terman, etc.
>
> Please _do not_ respond here telling me or the group that EM waves are
> longitudinal and are not polarised.
>
> Chris

... but the libraries are probably closed today so, for an instant, online source you could do worse than visit http://www.globalsecurity.org/military/library/policy/navy/nrtc/, download the NEETS module 'ELECTRONICS TECHNICIAN, VOLUME 07--ANTENNAS AND WAVE PROPAGATION ' and read it. It's based on the same, real world physics.

Chris

1980. Re: Ringo Ranger ARX2 vs ARX2b

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-13 13:55:31 UTC
From: greenpjs@neo.rr.com
Message-ID: <baupa5prsr48gkjrcv9rmr41fjn5se2o7k@4ax.com>
Source record: 13192

On Sun, 13 Sep 2009 05:21:08 -0500, Chuck Forsberg WA7KGX N2469R
<caf@omen.com> wrote:

>The B version has a piece of mast below the main part of the
>antenna. Is there much difference in performance between
>the arx2b and the original arx2?

It's been a long time, but I think the non-b version was criticized
for having a lot of RF on the feedline. That would distort the
radiation pattern somewhat. The b version corrected that.

1981. 70s 2-way radio theme song classic?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-13 16:00:55 UTC
From: George Orwell <nobody@mixmaster.it>
Message-ID: <4538243fafd28b109d213ef1de4ee456@mixmaster.it>
Source record: 13194

Uh, Breaker One-Nine, this here's the owned N8
You got a copy on me Lelnad Scott? C'mon

Uh, yeah 10-4 N8, fer sure, fer sure
By golly it's clean clear to Fag-Town, C'mon

Uh, yeah, that's a big 10-4 Lelnad,
Yeah, we definitely got us the front door good buddy,
Mercy sakes alive, looks like we got us a convoy

Was the dark of the moon, on the sixth of June
and Doug was getting it on with hogs
Blowing Cabover Pete with a reefer on
And having sex with stray dogs
We was headin' fer bear on I-One-Oh
'Bout a mile outta Shaky-Town
I sez Lelnad, this here's the N8
And I'm about to put the hammer down

Cause we gotta little ol' convoy, rockin' through the night
Yeah we gotta little ol' convoy, ain't she a beautiful sight?
Come on an' join our convoy, ain't nothin' gonna git in our way
We're gonna roll this gay ass' convoy, cross the USA
Convoy... Convoy...

Uh, breaker Lelnad, this here's N8
Uh, you wanna back off them hogs
10-4, about five mile or so, 10-roger
Them hogs is gittin' in-tense up here

By the time we got into Tulsa-Town
We had eighty-five trucks in all
Pink ones up on the clover leaf
And I wanted to lick Mopar's balls

Yeah that sounded as good as bugs on a bumper
I even thought of Dave Hall losing his hair
I sez callin' all trucks, this here's N8
I really want to see you all bare

Cause we gotta great big convoy, rockin' through the night
Yeah we gotta great big convoy, ain't she a beautiful sight?
Come on an' join our convoy, ain't nothin' gonna git in our way
We're gonna roll this gay ass convoy, cross the USA
Convoy... Convoy...

Uh, you wanna give me a 10-9 on that Lelnad?
Uh, negatory Lelnad, yer still too close
Yeah, them hogs is startin' to seal up our anuses
Mercy sakes, you better back off another ten

Well we rolled up Interstate 44
Like a rocket sled on rails
I though of Twistedhed's radio
and how it almost landed me in jail

By the time we hit that Chi-Town
I was thinking about Tim Nebo's ass
and all the times he keyed on me
while chewing the rag with Brass

Don't forget Jay and Pain and Ice Cold, too
and Jim Hampton way up north
Yea them CBers do something to me
make me question my self worth

Well we hid like kids and squealed like girls
and pranced around in women's clothes
those bad men in rec.radio.cb
make us realize we're dirty ho's

Hey Landshark, listen
You wanna listen up for my weak radio?
Yeah, I just wanna be heard man
I needs all the help I can git

Well we laid a strip fer a Jersey man whore
Prepared to play with his behind

I was having nightmares about sideband mode
and freaking out over freeband time

I sez Lelnad, this here's the convicted N8
we just ain't a never gonna learn

So I clutched the mic
as I cried all through the night
I said I hope rec.radio burns

Cause we gotta gay ass convoy, rockin' through the night
Yeah we gotta gay ass convoy, ain't she a beautiful sight?
Come on an' join our convoy, ain't nothin' gonna git in our way
We're gonna roll this gay ass convoy, cross the USA
Convoy... Convoy...

Uh, 10-4 Lelnad, what's yer 20?
San Francisco?!
Well you oughta know what to do with them dogs out there fer sure
Well mercy sakes alive good butty
We gonna back on outta here
So keep the feds off yer ass

And the magistrate off yer... tail
We gonna catch ya on the flip-flop
This here's N8 on the side
We gone
Bye, Bye...

Il mittente di questo messaggio|The sender address of this
non corrisponde ad un utente |message is not related to a real
reale ma all'indirizzo fittizio|person but to a fake address of an
di un sistema anonimizzatore |anonymous system
Per maggiori informazioni |For more info
https://www.mixmaster.it

1982. Re: Spherical radiation pattern

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-13 16:29:34 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <v05qa5hufdabqmooaofu201l2qph590mdf@4ax.com>
Source record: 13193

On Sun, 13 Sep 2009 12:46:30 +0100, "christofire"
<christofire@btinternet.com> wrote:

>> Does one wave has many polarizations, or one antenna has many
>> polarizations? Which one: transmitter or receiver? Could you teach me?
>> A*
>
>
>You appear to have changed your identity from S* to A* !
>
>The answers according to the physics that real-life radio communication
>depends upon, and was designed by, are:
>

A much simpler, and compelling explanation:
what you see is what you get.

If it looks vertical, the polarization is vertical;
If it looks horizontal, the polarization is horizontal.

It thus stands to reason that if the radiator is U shaped you see both
horizontal and vertical - hence the full sphere filled with radiation.

This closes the simple answer, which of course drives a very lengthy
explanation - there is no such thing as a free lunch:

Now, I can well anticipate some wag pointing out that they are
standing, looking at these "goal posts" edge on and see only the
vertical supports. "There is no horizontal view - no horizontal
polarization. It can't be isotropic!"

Of course it can't; and yet the vertical radiation fills the null of
the horizontal (and likewise, the horizontal fills the null of the
vertical). Total field is spherical.

What does this make of a tilted radiator? What you see is what you
get. At some perspectives it looks goofy horizontal AND it looks
goofy vertical. In other perspectives it just looks vertical. As Art
might protest: "Never mind goofy, how much horizontal?" If we reduce
this to a number of goofiness, a trig function would serve quite well.
Most students who were trained in mechanics would recognize the method
to deconstruct an angle into its two, XY, components. If the tilt
were 45 degrees, in full view of that angle you must experience the
single antenna as having two equal vertical and horizontal
contributions to radiation. If it were tilted 30 degrees, obviously
one polarization would dominate over the other. Ground would compound
the issue, but would not negate the general principle.

This last part returns us to the discussion of isotropism which encompasses the topic of Lambert's Law which is generally confined to a black body radiator (or the sun from a great distance as it fails to be isotropic in the near view, such as we have here on earth). Few here need concern themselves with this unless they are making patch antennas. However, within the discussion above, the topic of view, angle, and radiation contribution are wrapped up in Lambert and cosine.

73's
Richard Clark, KB7QHC

1983. Re: Spherical radiation pattern

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-13 17:57:22 UTC
From: Szczepan Białek <sz.bialek@wp.pl>
Message-ID: <h8j0nspvg1@node1.news.atman.pl>
Source record: 13195

"christofire" <christofire@btinternet.com> wrote
news:cfmdnWT4vfgBRjHXnZ2dnUVZ8rSdnZ2d@bt.com...
>
> "Szczepan Biaďż˝ek" <sz.bialek@wp.pl> wrote in message
> news:h8i3edlmg1@node1.news.atman.pl...
>>
>
>
> You appear to have changed your identity from S* to A* !
Sorry. Mistake (A is adjacent to S).
>
> The answers according to the physics that real-life radio communication
> depends upon, and was designed by, are:
>
> A single EM wave is plane polarised. It is composed of a magnetic field H
> that acts in a direction perpendicular to the direction of propagation,
> the magnitude and sign of this field varying as a travelling wave in the
> direction of propagation, and an attendant electric field E that also acts
> in a direction perpendicular to the direction of propagation. The
> magnitude and sign of the electric field varies as a travelling wave,
> coherent and in phase with the magnetic field and the magnetic field is a
> direct consequence of current flowing in the transmitting antenna.

But there is the second direct consequence. If the current oscilate at the
ends is developed the very high voltage. The high voltage produce the
electric field. So you can wrote: "the electric field is a direct
consequence of voltage developed in the ends of the transmitting antenna".
This electric field generate the magnetic field and so on. So the Hertz'
dipole has the three sources of waves. The centre and the two ends.
It seams that waves from the centre are mainly transverse and that from the
ends mainly longitudinal.
Long wire antennas have many sources. Directional patern is number source
dependent.

You do not like the word voltage. May be the better is polarity.

R. Clark wrote: "Actually you have mixed up two different characteristics.
Polarity
and polarization are NOT the same thing. With RF radiation, the wave
is constantly changing polarity (that is why the source of RF is
called alternating current), but within the "line of sight" of the
antenna, the polarization for a dipole is defined by its angle to the
earth as viewed by the observer.

If you see an horizontal dipole, it produces alternating polarities of
waves with horizontal polarization. If you see a vertical dipole, it
produces alternating polarities of waves with vertical polarization."

>The directions in which the
> H and E fields act, in the plane transverse to the direction of
> propagation, are mutually perpendicular and the direction in which the E
> field acts, by convention, defines the polarisation.
>
> Thus a single EM wave has a single, plane, polarisation. Different
> combinations of waves are possible such as circular polarisation and, more
> generally, elliptical polarisation, but these can always be resolved into
> orthogonal plane components.
>
> Simple antennas like straight-wire dipoles and loops transmit and respond
> to plane polarised EM waves. More complicated antennas can be made to
> transmit and receive circular polarisation of one sense or the other, and
> generally an antenna will tend to transmit or be sensitive to some
> combination of different plane polarisations. In addition to radiated EM
> waves, there are also induction fields in a region close to the antenna.
>
> In a system that contains no anisotropic material (e.g. magnetised
> ferrite), when the distance between transmitting and receiving antennas is
> at least tens of wavelengths, the principle of reciprocity applies. By
> this principle the properties of an antenna when transmitting are the same
> as when it is receiving - the properties including the polarisation,
> radiation pattern and terminal impedance.
>
> If you find any of this interesting, please don't believe what I've
> written here but go to a technical library (e.g. at a University) and look
> up the authoritative sources - books on antennas and propagation by Kraus,
> Jasik, Jordan and Balmain, Terman, etc.

Do they use the vord voltage?
>
> Please _do not_ respond here telling me or the group that EM waves are
> longitudinal and are not polarised.

EM waves by Heaviside are transverse. Now we should check if he was right.
S*

1984. Re: Spherical radiation pattern

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-13 18:00:59 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <9ocqa5l6qcddd7tcrl1o4502e6s1rtq8mm@4ax.com>
Source record: 13196

On Sun, 13 Sep 2009 19:57:22 +0200, Szczepan Bia?ek <sz.bialek@wp.pl>
wrote:

>EM waves by Heaviside are transverse. Now we should check if he was right.

You have confused the telegrapher's equations with propagation.

Before you recite an authority, you really need to understand them.

73's
Richard Clark, KB7QHC

1985. Re: Ringo Ranger ARX2 vs ARX2b

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-13 18:22:06 UTC
From: dplatt@radagast.org
Message-ID: <erpvn6-3uj.ln1@radagast.org>
Source record: 13197

>The B version has a piece of mast below the main part of the
>antenna. Is there much difference in performance between
>the arx2b and the original arx2?

My understanding is that the lower section (with its radial stubs)
serves as a decoupling element, and greatly reduces the possibility of
RF current flow on the lower mast.

The original ARX2 seems to have a reputation for being somewhat
installation-sensitive. In some installations, enough RF can flow on
the mast and/or feedline to alter the antenna's radiation pattern...
the main lobe can "squint" away from the horizon and thus reduce the
useful gain of the antenna somewhat. In other installations (with
different mast and feedline lengths) this wasn't as much of a problem.

Adding the decoupling section to the design has (from what I've heard)
significantly reduced the problem, and allows the ARX2B to perform
more consistently than the ARX2 did.

Standard copper-pipe J-pole antennas (and similar designs) tend to
have the same issue - unless you decouple them from the mast and
feedline somehow (e.g. insulated mount, and a choke on the feedline)
their pattern can be installation-sensitive due to RF current flowing
where you don't want it.

--
Dave Platt <dplatt@radagast.org> AE6EO
Friends of Jade Warrior home page: http://www.radagast.org/jade-warrior
I do _not_ wish to receive unsolicited commercial email, and I will
boycott any company which has the gall to send me such ads!

1986. Re: Spherical radiation pattern

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-13 19:21:26 UTC
From: christofire <christofire@btinternet.com>
Message-ID: <dZudnb3xptag2zDXnZ2dnUVZ8r2dnZ2d@bt.com>
Source record: 13198

"Szczepan Bia&#65533;ek" <sz.bialek@wp.pl> wrote in message
news:h8j0nspvg1@node1.news.atman.pl...
>
> "christofire" <christofire@btinternet.com> wrote
> news:cfmdnWT4vfgBRjHXnZ2dnUVZ8rSdnZ2d@bt.com...
>>
>> "Szczepan Bia&#65533;ek" <sz.bialek@wp.pl> wrote in message
>> news:h8i3edlmg1@node1.news.atman.pl...
>>>
>>
>>
>> You appear to have changed your identity from S* to A* !
> Sorry. Mistake (A is adjacent to S).
>>
>> The answers according to the physics that real-life radio communication
>> depends upon, and was designed by, are:
>>
>> A single EM wave is plane polarised. It is composed of a magnetic field
>> H that acts in a direction perpendicular to the direction of propagation,
>> the magnitude and sign of this field varying as a travelling wave in the
>> direction of propagation, and an attendant electric field E that also
>> acts in a direction perpendicular to the direction of propagation. The
>> magnitude and sign of the electric field varies as a travelling wave,
>> coherent and in phase with the magnetic field and the magnetic field is a
>> direct consequence of current flowing in the transmitting antenna.
>
> But there is the second direct consequence. If the current oscilate at the
> ends is developed the very high voltage. The high voltage produce the
> electric field. So you can wrote: "the electric field is a direct
> consequence of voltage developed in the ends of the transmitting
> antenna". This electric field generate the magnetic field and so on. So
> the Hertz' dipole has the three sources of waves. The centre and the two
> ends.
> It seams that waves from the centre are mainly transverse and that from
> the ends mainly longitudinal.
> Long wire antennas have many sources. Directional patern is number source
> dependent.
>
> You do not like the word voltage. May be the better is polarity.
>
> R. Clark wrote: "Actually you have mixed up two different characteristics.
> Polarity
> and polarization are NOT the same thing. With RF radiation, the wave

> is constantly changing polarity (that is why the source of RF is
> called alternating current), but within the "line of sight" of the
> antenna, the polarization for a dipole is defined by its angle to the
> earth as viewed by the observer.
>
> If you see an horizontal dipole, it produces alternating polarities of
> waves with horizontal polarization. If you see a vertical dipole, it
> produces alternating polarities of waves with vertical polarization."
>
>
> >The directions in which the
>> H and E fields act, in the plane transverse to the direction of
>> propagation, are mutually perpendicular and the direction in which the E
>> field acts, by convention, defines the polarisation.
>>
>> Thus a single EM wave has a single, plane, polarisation. Different
>> combinations of waves are possible such as circular polarisation and,
>> more generally, elliptical polarisation, but these can always be resolved
>> into orthogonal plane components.
>>
>> Simple antennas like straight-wire dipoles and loops transmit and respond
>> to plane polarised EM waves. More complicated antennas can be made to
>> transmit and receive circular polarisation of one sense or the other, and
>> generally an antenna will tend to transmit or be sensitive to some
>> combination of different plane polarisations. In addition to radiated EM
>> waves, there are also induction fields in a region close to the antenna.
>>
>> In a system that contains no anisotropic material (e.g. magnetised
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>> is at least tens of wavelengths, the principle of reciprocity applies.
>> By this principle the properties of an antenna when transmitting are the
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>> If you find any of this interesting, please don't believe what I've
>> written here but go to a technical library (e.g. at a University) and
>> look up the authoritative sources - books on antennas and propagation by
>> Kraus, Jasik, Jordan and Balmain, Terman, etc.
>
> Do they use the vord voltage?
>>
>> Please _do not_ respond here telling me or the group that EM waves are
>> longitudinal and are not polarised.
>
> EM waves by Heaviside are transverse. Now we should check if he was right.
> S*

Evidently not from 'the physics that real-life radio communication depends upon, and was designed by'.

Who is A* ? ... the person who wrote:

Does one wave has many polarizations, or one antenna has many
polarizations?
Which one: transmitter or receiver? Could you teach me?
A*

Chris

1987. Re: Ringo Ranger ARX2 vs ARX2b

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-13 22:35:45 UTC
From: nm5k@wt.net
Message-ID: <7283245e-9def-43a2-a191-9ef281b2fe0e@t11g2000prh.googlegroups.com>
Source record: 13199

On Sep 13, 5:21 am, Chuck Forsberg WA7KGX N2469R <c...@omen.com>
wrote:
> The B version has a piece of mast below the main part of the
> antenna. Is there much difference in performance between
> the arx2b and the original arx2?
>
> --
> Chuck Forsberg   c...@omen.com www.omen.com 503-614-0430
> Developer of Industrial ZMODEM(Tm) for Embedded Applications
>   Omen Technology Inc   "The High Reliability Software"
> 10255 NW Old Cornelius Pass Portland OR 97231   FAX 629-0665

There is no extra mast. You are using the support mast
below the feed point. The extra parts are a 50 inch length
of coax, and a union to support a set of 20 inch long radials.
The radials are connected to the shield of the coax.
Years ago I converted an original Ringo Ranger to a
Ringo Ranger two using home brew parts.
I then did comparison tests with and without the radial
set. Made a huge difference in performance in my case.
Cushcraft seemed to consider it a third 5/8 WL element,
but I tend to consider it a decoupling section much
like the lower cone you see on an Isopole, or using
a 2nd set of radials or cones below a ground plane.
Yes, it is worth converting. The ARX2B is a pretty good
antenna. Not quite as good as the Isopole, but close.

1988. Re: Ringo Ranger ARX2 vs ARX2b

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-14 02:05:25 UTC
From: JIMMIE <JIMMIEDEE123@YAHOO.COM>
Message-ID: <0f730fd4-bfa4-475f-a30b-0aa2f712dcc2@a7g2000yqo.googlegroups.com>
Source record: 13200

On Sep 13, 6:35 pm, n...@wt.net wrote:
> On Sep 13, 5:21 am, Chuck Forsberg WA7KGX N2469R <c...@omen.com>
> wrote:
>
> > The B version has a piece of mast below the main part of the
> > antenna. Is there much difference in performance between
> > the arx2b and the original arx2?
>
> > --
> > Chuck Forsberg   c...@omen.com www.omen.com 503-614-0430
> > Developer of Industrial ZMODEM(Tm) for Embedded Applications
> >   Omen Technology Inc   "The High Reliability Software"
> > 10255 NW Old Cornelius Pass Portland OR 97231   FAX 629-0665
>
> There is no extra mast. You are using the support mast
> below the feed point. The extra parts are a 50 inch length
> of coax, and a union to support a set of 20 inch long radials.
> The radials are connected to the shield of the coax.
> Years ago I converted an original Ringo Ranger to a
> Ringo Ranger two using home brew parts.
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> set. Made a huge difference in performance in my case.
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> but I tend to consider it a decoupling section much
> like the lower cone you see on an Isopole, or using
> a 2nd set of radials or cones below a ground plane.
> Yes, it is worth converting. The ARX2B is a pretty good
> antenna. Not quite as good as the Isopole, but close.

I have seen people swear by and swear at Ringo Rangers. Is this
because of by chance some people get the right/wrong length mast and/
or coax length?

Jimmie

1989. Re: Spherical radiation pattern

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-14 04:24:27 UTC
From: richardharrison@webtv.net
Message-ID: <17628-4AADC57B-122@storefull-3171.bay.webtv.net>
Source record: 13101

Art wrote:
"Thus if we have a radiator of one WL that is tipped in space and near zero resistance in impedance metric we will then attain a spherical radiation pattern with Poynting`s vector and thus a demonsration of point radiation together with further evidence that radiation is of particle and not of waves."

No matter how Art`s words were combined, I don`t see in them any such evidence. Even Art agrees that Maxwell`s equations correctly produce answers to where the energy goes.

The 1955 edition of Terman`s "Electronic and Radio Engineering" shows the radiation pattern of one WL of wire in Fig. 23-4 (b) on page 867. It consists of four lobes each making an angle of 54 degrees with the axis of the wire. The pattern deviates from a spherical pattern by a lot. So much for "equilibrium"!

Cecil pointed out that in physics, electromagnetic radiation is treated with duality, using either particle theory or waves, whichever is more convenient for the problem at hand.

Maxwell solved the problems of radiation using wave equations which are said to be four of the most influential equations in science.

On page 864 of Terman`s 1955 opus he writes:
"The laws governing such radiation are obtained by using Maxwell`s equations to express the fields associated with the wire; when this is done there is found to be a component, termed the radiated field, having a strength that varies inversely with distance.

If Art would just absorb Terman`s chapter on "Antennas" I doubt he would write such nonsense.

Best regards, Richard Harrison, KB5WZI

1990. Re: Spherical radiation pattern

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-14 08:00:06 UTC
From: Szczepan Białek <sz.bialek@wp.pl>
Message-ID: <h8ki3l$l3$1@node1.news.atman.pl>
Source record: 13102

Uďż˝ytkownik "Richard Clark" <kb7qhc@comcast.net> napisaďż˝ w wiadomoďż˝ci
news:9ocqa5l6qcddd7tcrl1o4502e6s1rtq8mm@4ax.com...
> On Sun, 13 Sep 2009 19:57:22 +0200, Szczepan Bia?ek <sz.bialek@wp.pl>
> wrote:
>
>>EM waves by Heaviside are transverse. Now we should check if he was right.
>
> You have confused the telegrapher's equations with propagation.
>
> Before you recite an authority, you really need to understand them.

It is commonly known: "Heaviside said that mathematics was an experimental
science. He organised Maxwell's mathematical work into the four equations
which we now call "Maxwell's Equations".

Maxwell made the model of solid ether. The four equations by Heaviside is
rather "fluid analogy".

"Now Heaviside had the concept of the TEM Wave, which Kelvin and Preece did
not. With these two formulae, he could give a gloss of mathematical style to
his assertion that, properly treated, a slab of energy current could
propagate at the speed of light without distortion. This assertion had
massive practical implications, but Heaviside was obstructed for decades."
From: http://www.ivorcatt.com/2810.htm
S*

1991. Re: Spherical radiation pattern

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-14 08:10:20 UTC
From: Szczepan Białek <sz.bialek@wp.pl>
Message-ID: <h8kimrpb1@node1.news.atman.pl>
Source record: 13103

"Richard Harrison" <richardharrison@webtv.net> wrote
news:17628-4AADC57B-122@storefull-3171.bay.webtv.net...
> Art wrote:
> "Thus if we have a radiator of one WL that is tipped in space and near
> zero resistance in impedance metric we will then attain a spherical
> radiation pattern with Poynting`s vector and thus a demonsration of
> point radiation together with further evidence that radiation is of
> particle and not of waves."
>
> No matter how Art`s words were combined, I don`t see in them any such
> evidence. Even Art agrees that Maxwell`s equations correctly produce
> answers to where the energy goes.
>
> The 1955 edition of Terman`s "Electronic and Radio Engineering" shows
> the radiation pattern of one WL of wire in Fig. 23-4 (b) on page 867. It
> consists of four lobes each making an angle of 54 degrees with the axis
> of the wire. The pattern deviates from a spherical pattern by a lot. So
> much for "equilibrium"!
>
> Cecil pointed out that in physics, electromagnetic radiation is treated
> with duality, using either particle theory or waves, whichever is more
> convenient for the problem at hand.
>
> Maxwell solved the problems of radiation using wave equations which are
> said to be four of the most influential equations in science.

"Heaviside said that mathematics was an experimental
science. He organised Maxwell's mathematical work into the four equations
which we now call "Maxwell's Equations".

Maxwell made model of solid etherWhat is Heaviside's model like?
>
> On page 864 of Terman`s 1955 opus he writes:
> "The laws governing such radiation are obtained by using Maxwell`s
> equations to express the fields associated with the wire; when this is
> done there is found to be a component, termed the radiated field, having
> a strength that varies inversely with distance.
>
> If Art would just absorb Terman`s chapter on "Antennas" I doubt he would
> write such nonsense.
S*
>

1992. Re: Spherical radiation pattern

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-14 10:24:48 UTC
From: Richard Fry <rfry@adams.net>
Message-ID: <c9447e7c-460f-47ff-91e9-af4f168b07b1@p36g2000vbn.googlegroups.com>
Source record: 13104

On Sep 13, 12:57 pm, Szczepan Białek <sz.bia...@wp.pl> wrote:
> If the current oscilate at the
> ends is developed the very high voltage. The high voltage produce the
> electric field. So you can wrote: "the electric field is a direct
> consequence of voltage developed in the ends of the transmitting antenna".
> This electric field generate the magnetic field and so on. So the Hertz'
> dipole has the three sources of waves. The centre and the two ends.

Only the change in current and charge, over time, produces EM
radiation. That radiation includes both the magnetic and electric
fields, at right angles to each other and to the direction of travel.

In the case of a self-resonant, center-fed, 1/4-wave dipole, current
is maximum at the feedpoint and minimum at the ends of the dipole.
Therefore the ends radiate very little of the total applied power.

Below is what John Kraus writes about this in Antennas, 3rd edition,
page 12:

QUOTE
A radio antenna may be defined as the structure associated with the
region of transition between a guided wave and a free-space wave, or
vice-versa. Antennas convert electrons to photons, or vice-versa.

Regardless of antenna type, all involve the same basic principle that
radiation is produced by accelerated (or decelerated) charge. The
basic equation of radiation may be expressed simply as:

IL = Qv (A m s^-1)

where

I = time-changing current, A s^-1
L = length of current element, m
Q = charge, C
v = time change of velocity which equals the acceleration of the
charge, m s^-2

Thus, time-changing current radiates and accelerated charge radiates.

END QUOTE

RF

1993. Re: Spherical radiation pattern

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-14 10:30:50 UTC
From: Richard Fry <rfry@adams.net>
Message-ID: <72fab179-1564-4ab6-b38f-53cf17fb3eeb@v2g2000vbb.googlegroups.com>
Source record: 13105

On Sep 14, 5:24 am, Richard Fry <r...@adams.net> wrote:

> In the case of a self-resonant, center-fed, 1/4-wave dipole, current
> is maximum at the feedpoint and minimum at the ends of the dipole.
> Therefore the ends radiate very little of the total applied power.

Correcting myself, that dipole would need to be about 1/2-wave long
for first self-resonance. But neither form of this dipole radiates
very much from its ends.

RF

1994. Re: Ringo Ranger ARX2 vs ARX2b

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-14 10:53:48 UTC
From: nm5k@wt.net
Message-ID: <3a462461-61fb-4b75-8aff-f980383de3b6@g1g2000pra.googlegroups.com>
Source record: 13106

On Sep 13, 9:05 pm, JIMMIE <JIMMIEDEE...@YAHOO.COM> wrote:
> On Sep 13, 6:35 pm, n...@wt.net wrote:
>
>
>
> > On Sep 13, 5:21 am, Chuck Forsberg WA7KGX N2469R <c...@omen.com>
> > wrote:
>
> > > The B version has a piece of mast below the main part of the
> > > antenna. Is there much difference in performance between
> > > the arx2b and the original arx2?
>
> > > --
> > > Chuck Forsberg   c...@omen.com www.omen.com 503-614-0430
> > > Developer of Industrial ZMODEM(Tm) for Embedded Applications
> > >   Omen Technology Inc   "The High Reliability Software"
> > > 10255 NW Old Cornelius Pass Portland OR 97231   FAX 629-0665
>
> > There is no extra mast. You are using the support mast
> > below the feed point. The extra parts are a 50 inch length
> > of coax, and a union to support a set of 20 inch long radials.
> > The radials are connected to the shield of the coax.
> > Years ago I converted an original Ringo Ranger to a
> > Ringo Ranger two using home brew parts.
> > I then did comparison tests with and without the radial
> > set. Made a huge difference in performance in my case.
> > Cushcraft seemed to consider it a third 5/8 WL element,
> > but I tend to consider it a decoupling section much
> > like the lower cone you see on an Isopole, or using
> > a 2nd set of radials or cones below a ground plane.
> > Yes, it is worth converting. The ARX2B is a pretty good
> > antenna. Not quite as good as the Isopole, but close.
>
> I have seen people swear by and swear at Ringo Rangers. Is this
> because of by chance some people get the right/wrong length mast and/
> or coax length?
>
> Jimmie

That could be the case with the non decoupled version. :/
But the RR2 is a pretty good antenna. I used one for a long
time and never had any problems.
The mast and coax length could be fairly critical on the
non decoupled version.

Like I said, I converted an old ARX2 to a ARX2B and then
compared the two when receiving local signals.
The difference in my particular case was quite large.
I'm talking 2-3+ S units on the radio meter which
actually would be a huge difference. It was quite
apparent that the common mode currents were really
whacking the pattern on the one I tried without the
decoupling section. I assume most was from the feed line.

1995. Re: Spherical radiation pattern

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-14 15:33:16 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <kgosa59gauhg54vkei41t7nm34uckuec6b@4ax.com>
Source record: 13107

On Mon, 14 Sep 2009 10:00:06 +0200, Szczepan Bia?ek <sz.bialek@wp.pl>
wrote:

>> Before you recite an authority, you really need to understand them.
>
>It is commonly known

You don't show any evidence of being in that community. Leaning on
the Xerox copy button doesn't bring knowledge.

73's
Richard Clark, KB7QHC

1996. Re: Spherical radiation pattern

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-14 15:38:49 UTC
From: christofire <christofire@btinternet.com>
Message-ID: <avOdnWZBzcgR_jPXnZ2dnUVZ8iydnZ2d@bt.com>
Source record: 13108

"Dave" <noone@nowhere.com> wrote in message
news:OTRqm.2046$Jd7.945@nwrddc02.gnilink.net...
>
- - snippity - -

> art will never accept your challenge. its up to you to prove that his
> assertions are incorrect... and then get ignored as he continues to state
> the same things in many different forms. unless you can capture one of
> his diamagnetic levitating solar neutrinos and show that it doesn't sit on
> the antenna element and jump off when a pulse of current hits it you will
> never be believed... and even if you did capture one he would tell you it
> changed in flight from the sun.
>

He he, or HI, or ROTFLMAO as some put it.

Better get some more heavy water in for the winter then
http://www.physicscentral.com/explore/pictures/neutrinos.cfm

Chris

1997. Re: Spherical radiation pattern

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-14 16:15:05 UTC
From: Art Unwin <arthurunwin@gmail.com>
Message-ID: <f518ae30-6277-4445-8000-149694224cb3@h30g2000vbr.googlegroups.com>
Source record: 13109

On Sep 13, 11:29 am, Richard Clark <kb7...@comcast.net> wrote:
> On Sun, 13 Sep 2009 12:46:30 +0100, "christofire"
>
> <christof...@btinternet.com> wrote:
> >> Does one wave has many polarizations, or one antenna has many
> >> polarizations? Which one: transmitter or receiver? Could you teach me?
> >> A*
>
> >You appear to have changed your identity from S* to A* !
>
> >The answers according to the physics that real-life radio communication
> >depends upon, and was designed by, are:
>
> A much simpler, and compelling explanation:
>   what you see is what you get.
>
> If it looks vertical, the polarization is vertical;
> If it looks horizontal, the polarization is horizontal.
>
> It thus stands to reason that if the radiator is U shaped you see both
> horizontal and vertical - hence the full sphere filled with radiation.
>
> This closes the simple answer, which of course drives a very lengthy
> explanation - there is no such thing as a free lunch:
>
> Now, I can well anticipate some wag pointing out that they are
> standing, looking at these "goal posts" edge on and see only the
> vertical supports. "There is no horizontal view - no horizontal
> polarization. It can't be isotropic!"
>
> Of course it can't; and yet the vertical radiation fills the null of
> the horizontal (and likewise, the horizontal fills the null of the
> vertical). Total field is spherical.
>
> What does this make of a tilted radiator? What you see is what you
> get. At some perspectives it looks goofy horizontal AND it looks
> goofy vertical. In other perspectives it just looks vertical. As Art
> might protest: "Never mind goofy, how much horizontal?" If we reduce
> this to a number of goofiness, a trig function would serve quite well.
> Most students who were trained in mechanics would recognize the method
> to deconstruct an angle into its two, XY, components. If the tilt
> were 45 degrees, in full view of that angle you must experience the
> single antenna as having two equal vertical and horizontal
> contributions to radiation. If it were tilted 30 degrees, obviously

> one polarization would dominate over the other. Ground would compound
> the issue, but would not negate the general principle.
>
> This last part returns us to the discussion of isotropism which
> encompasses the topic of Lambert's Law which is generally confined to
> a black body radiator (or the sun from a great distance as it fails to
> be isotropic in the near view, such as we have here on earth). Few
> here need concern themselves with this unless they are making patch
> antennas. However, within the discussion above, the topic of view,
> angle, and radiation contribution are wrapped up in Lambert and
> cosine.
>
> 73's
> Richard Clark, KB7QHC

Richard cannot read this. However I find his posting to be rewarding .
The present aproach to radiation is that a free electron is torn away
from the nucleous of an atom which creates uncertaincy. Such an action
is that of the strong force which is akin the the splitting of an atom
where such an action would release electrons such that they would
bombard electrical networks such as in Hawaii. When one uses Maxwells
equations
it becomes very obvious that with decreasing impeadance radiation
increases until we get to the point of zero impedance where reality is
forced to be reviewed.
Since we now recognize that radiation is not created by the radiator
itself as it is only a carrier of a radiator, the model used must be
of cylinder type of homogeonos free electrons
where removal of the free electrons/particles is by a "weak force" and
not a strong force.
Thus in reality the model to be used is that of a cylinder where the
"stiction" of each electron,(I should really keep to the term particle
so one does not automatically insert neutrinos or a subset of
leptons) to a diamagnetic material is effectively replaced by a hoop
stress which first showed up in the boundary of the "Big Bang".
Now we have something that meets reality, where increase in current
applied creates an increase in radiation and where the model is seen
to be a boundary consisting of particles bound to each other! This is
basically implied by Maxwell's equations as illustrated by the
computer programs where radiation increase is proportional to the
decrease of impedance
of the energy robbing metallic radiator and where cylindrical boundary
model increases it's share of the current applied for continued
radiation and still is in concert with known laws
without resorting to extreme low temperature to attain "zero
impedance" which lacks reality.
As a side note. It is the arbitrary boundary in shear (spin) which
provides the Weak Force of the Standard Model as foreseen by Einstein
when he took on his fruitless search. And it would appear that the
reversal of the positive sign of the shown "Radio World" material is

somewhat supporting of this posting but that should be the subject of
a separate thread.
Art Unwin

1998. Re: Spherical radiation pattern

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-14 17:02:31 UTC
From: Art Unwin <arthurunwin@gmail.com>
Message-ID: <847fbb28-8501-4b33-b4a9-ff3fef387068@z34g2000vbl.googlegroups.com>
Source record: 13110

On Sep 14, 3:00 am, Szczepan Białek <sz.bia...@wp.pl> wrote:
> U¿ytkownik "Richard Clark" <kb7...@comcast.net> napisa³ w
wiadomo¶cinews:9ocqa5l6qcddd7tcrl1o4502e6s1rtq8mm@4ax.com...
>
> > On Sun, 13 Sep 2009 19:57:22 +0200, Szczepan Bia?ek <sz.bia...@wp.pl>
> > wrote:
>
> >>EM waves by Heaviside are transverse. Now we should check if he was right.
>
> > You have confused the telegrapher's equations with propagation.
>
> > Before you recite an authority, you really need to understand them.
>
> It is commonly known: "Heaviside said that mathematics was an experimental
> science. He organised Maxwell's mathematical work into the four equations
> which we now call "Maxwell's Equations".
>
> Maxwell made the model of solid ether. The four equations by Heaviside is
> rather "fluid analogy".
>
> "Now Heaviside had the concept of the TEM Wave, which Kelvin and Preece did
> not. With these two formulae, he could give a gloss of mathematical style to
> his assertion that, properly treated, a slab of energy current could
> propagate at the speed of light without distortion. This assertion had
> massive practical implications, but Heaviside was obstructed for decades."
> From:http://www.ivorcatt.com/2810.htm
> S*

If radiation occurs at the end of a dipole (which it does) it exists
only in the near field
because of its lack of spin. ie charge dissipation but without spin.

1999. Re: Spherical radiation pattern

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-14 17:03:28 UTC
From: Richard Fry <rfry@adams.net>
Message-ID: <a9d72ca3-f22f-4a7e-889d-2c9821416ef4@p36g2000vbn.googlegroups.com>
Source record: 13111

On Sep 14, 11:15 am, Art Unwin <arthurun...@gmail.com> wrote:
> Now we have something that meets reality, where increase in current
> applied creates an increase in radiation...

NOW ?? This has been true forever.

>... and where the model is seen
> to be a boundary consisting of particles bound to each other! This is
> basically implied by Maxwell's equations as illustrated by the
> computer programs where radiation increase is proportional to the
> decrease of impedance of the energy robbing metallic radiator etc

Decreasing the feedpoint impedance of an antenna to 0 +j0 ohms (if
that were possible) does not maximize radiation.

The first term in the antenna impedance specification in a practical
antenna consists mainly of radiation resistance -- which is required
in order for radiation to occur. Radiation resistance is a function
of the electrical length, diameter and form of the radiator exposed to
space. If it is zero then there is no radiation.

Higher radiation resistances lead to higher efficiencies for the
antenna SYSTEM, because then the power radiated can be much greater
than what is dissipated in the relatively smaller I^2R losses of the
system.

RF

2000. Re: Spherical radiation pattern

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-14 17:41:07 UTC
From: Szczepan Białek <sz.bialek@wp.pl>
Message-ID: <h8lk4r$58c$1@node1.news.atman.pl>
Source record: 13112

"Richard Fry" <rfry@adams.net> wrote
news:c9447e7c-460f-47ff-91e9-af4f168b07b1@p36g2000vbn.googlegroups.com...
On Sep 13, 12:57 pm, Szczepan Biaďż˝ek <sz.bia...@wp.pl> wrote:
>> If the current oscilate at the
> ends is developed the very high voltage. The high voltage produce the
> electric field. So you can wrote: "the electric field is a direct
> consequence of voltage developed in the ends of the transmitting antenna".
> This electric field generate the magnetic field and so on. So the Hertz'
> dipole has the three sources of waves. The centre and the two ends.

>Only the change in current and charge, over time, produces EM
radiation. That radiation includes both the magnetic and electric
fields, at right angles to each other and to the direction of travel.

>In the case of a self-resonant, center-fed, 1/4-wave dipole, current
is maximum at the feedpoint and minimum at the ends of the dipole.
Therefore the ends radiate very little of the total applied power.

>Below is what John Kraus writes about this in Antennas, 3rd edition,
page 12:

>QUOTE
>A radio antenna may be defined as the structure associated with the
region of transition between a guided wave and a free-space wave, or
vice-versa. Antennas convert electrons to photons, or vice-versa.

>Regardless of antenna type, all involve the same basic principle that
radiation is produced by accelerated (or decelerated) charge. The
basic equation of radiation may be expressed simply as:

>IL = Qv (A m s^-1)

>where

I = time-changing current, A s^-1
L = length of current element, m
Q = charge, C
v = time change of velocity which equals the acceleration of the
charge, m s^-2

>Thus, time-changing current radiates and accelerated charge radiates.

In which parts of antenna the charges acclerate?
S*

2001. Re: Spherical radiation pattern

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-14 17:52:51 UTC
From: Michael Coslo <mjc5@psu.edu>
Message-ID: <h8lvtj$s454$1@tr22n12.aset.psu.edu>
Source record: 13113

Roy Lewallen wrote:

> George Brown, the inventor of the ground plane
> antenna, had observed an omnidirectional pattern in the horizontal plane
> with only two radials, but the marketing department at RCA insisted on
> adding two more to make it look symmetrical before selling them.

Side note, Roy. I take a lot of Morotcycle rides to the north central part of PA, and being a remote area, that have a fair number of radio systems to tell them of the shape of the power lines in eh area.

They use a ground plane antenna that consists of a spring mounted vertical, and two horizontal radials. They are pretty homely.

- 73 de Mike N3LI -

2002. Re: Spherical radiation pattern

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-14 17:56:07 UTC
From: christofire <christofire@btinternet.com>
Message-ID: <MsqdnRF_140mHjPXnZ2dnUVZ8oKdnZ2d@bt.com>
Source record: 13114

"Szczepan Bia&#65533;ek" <sz.bialek@wp.pl> wrote in message
news:h8lk4r$58c$1@node1.news.atman.pl...
>
> "Richard Fry" <rfry@adams.net> wrote
> news:c9447e7c-460f-47ff-91e9-af4f168b07b1@p36g2000vbn.googlegroups.com...

- - small snip --

>>QUOTE
>>A radio antenna may be defined as the structure associated with the
> region of transition between a guided wave and a free-space wave, or
> vice-versa. Antennas convert electrons to photons, or vice-versa.
>
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> basic equation of radiation may be expressed simply as:
>
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>
>>where
>
> I = time-changing current, A s^-1
> L = length of current element, m
> Q = charge, C
> v = time change of velocity which equals the acceleration of the
> charge, m s^-2
>
>>Thus, time-changing current radiates and accelerated charge radiates.
>
> In which parts of antenna the charges acclerate?
> S*

In all the parts that carry current, of course. Isn't that obvious?

Incidentally, who is A* ? ... the person who wrote:

Does one wave has many polarizations, or one antenna has many
polarizations?
Which one: transmitter or receiver? Could you teach me?
A*

Chris

2003. Re: Spherical radiation pattern

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-14 18:00:00 UTC
From: jimp@specsol.spam.sux.com
Message-ID: <g6c2o6-2v7.ln1@mail.specsol.com>
Source record: 13115

Szczepan Białek <sz.bialek@wp.pl> wrote:
>
> "Richard Fry" <rfry@adams.net> wrote
> news:c9447e7c-460f-47ff-91e9-af4f168b07b1@p36g2000vbn.googlegroups.com...
> On Sep 13, 12:57 pm, Szczepan Białek <sz.bia...@wp.pl> wrote:
>>> If the current oscilate at the
>> ends is developed the very high voltage. The high voltage produce the
>> electric field. So you can wrote: "the electric field is a direct
>> consequence of voltage developed in the ends of the transmitting antenna".
>> This electric field generate the magnetic field and so on. So the Hertz'
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>
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> radiation. That radiation includes both the magnetic and electric
> fields, at right angles to each other and to the direction of travel.
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>>Below is what John Kraus writes about this in Antennas, 3rd edition,
> page 12:
>
>>QUOTE
>>A radio antenna may be defined as the structure associated with the
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> I = time-changing current, A s^-1
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> Q = charge, C
> v = time change of velocity which equals the acceleration of the
> charge, m s^-2
>
>>Thus, time-changing current radiates and accelerated charge radiates.
>

> In which parts of antenna the charges acclerate?
> S*

All of them.

--
Jim Pennino

Remove .spam.sux to reply.

2004. Re: Spherical radiation pattern

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-14 18:22:36 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <830ta5hk96s85uscd4b2b3p24iv6o18mtm@4ax.com>
Source record: 13116

On Sun, 13 Sep 2009 23:24:27 -0500, richardharrison@webtv.net (Richard Harrison) wrote:

>Art wrote:
>"Thus if we have a radiator of one WL that is tipped in space and near
>zero resistance in impedance metric we will then attain a spherical
>radiation pattern with Poynting`s vector and thus a demonsration of
>point radiation together with further evidence that radiation is of
>particle and not of waves."

Hi Richard,

Lot of contradiction in the short space of one sentence, isn't there?

Tipped in space? Who but an astronaut know this? Is an antenna tipped if he wasn't there? (The logical knot formerly known as "If a tree falls in the forest, does it make waves or particles?")

A vector creates a sphere? A vector with no tail, and all head? Must be a new science of mechanics there. If there is any lesson to be learned from the past, then Newton has been discarded for heresy.

Where "radiation is ... not of waves" invalidates every patent description Art has ever submitted - fortunately that doesn't have any impact on the legality of their issue.

Let's see, where one of Art's patents teaches that reflectors are shorter than the driven element, and the directors are longer, was this due to the newly revealed particle theory? Art has steadfastly refused to explain this novel design feature until - well certainly not now (or ever?) and I will never see his mea culpa. Such an admission would plunge the postings count into oblivion without that full quota of nonsense.

What happened to his other patent's teaching of "length efficiency?" Now that we have witnessed the dawn of the tilted equilibrated full wave radiator (TEFWR), it would seem that "length efficiency" (which formerly compressed the antenna by snipping off the ends that didn't radiate) has been sent to the neighborhood Re-education Kamp.

As I stand on the corner waving goodbye to that bus, I fondly recall how the logic stood that no current could be found on the tips of radiators, thus trim them off to no loss of radiation. It took very few decades before Art had then recognized that his new antenna's tips had no more current than the full-length one, and he trimmed that one once again! New and improved (as the saying goes). Another decade passed into the new millennium and he observed that he could extend

this logic once again to the point where his last design encompassed a 160M full sized antenna in the space of two shoe boxes. The TRIUMPH OF TITANIC PROPORTIONS.

Yes, I realize the irony in caps and terms chosen to illustrate this, the Ritual Art of Antenna Bris. The careful reader may wish to count the number of accumulated ironies, retorts, confutations, and quips; and submit them on a sheet of paper inclosed with $2 in postage stamps inside an envelope (send no coins), posted to me. Those who can show the correlation between each and the appropriate patent number will be awarded Mauve bonus points. Winners will be announced at a future date. [Offer void where permitted by law.]

>Cecil pointed out that in physics, electromagnetic radiation is treated
>with duality, using either particle theory or waves, whichever is more
>convenient for the problem at hand.

Well, there's the match for this pair of bookends. Cecil could have as easily contributed with an inventory of his left pocket's contents.

73's
Richard Clark, KB7QHC

2005. Re: Spherical radiation pattern

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-14 18:29:34 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <ek2ta55m8oemsebv7i6408ubf8mvkl2t6u@4ax.com>
Source record: 13117

On Mon, 14 Sep 2009 18:56:07 +0100, "christofire"
<christofire@btinternet.com> wrote:

>Incidentally, who is A* ?

He explained that he was typing one letter to the left. Doesn't the
content of his postings reveal that?

Retype one of his submissions by shifting your hands to the right one
key may reveal the contents to Dan Brown's newest book! It won't make
anymore sense, but Ron Howard may sign a deal to get Tom Hanks to post
here for him.

73's
Richard Clark, KB7QHC

2006. Did I make a mistake in connecting radials to...

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-14 18:32:35 UTC
From: mcalhoun@sdf.lNoOnSePsAtMar.org
Message-ID: <h8m283$m77$1@chessie.cirr.com>
Source record: 13118

I've read a lot about radials: elevated vs. gull-wings vs. underground, how many (120/64/31/16/4/2/0), etc. After reading the following, maybe someone will tell me if I did right or wrong. This is long, but the nitty-gritty details might be necessary for a good answer.

I recently erected a 20-meter vertical in my front yard with 16 equally-spaced, about-20-foot-long, UNinsulated radials (electric-fence wire) around its base starting at a metal plate and just laid on grass about 3 inches above the soil and "pinned" (with about 8-inch-long stiff-wire loops) to the soil at the ends to keep them taut/straight. The metal plate was "grounded" with a 2-feet-long metal rod driven into the soil.

The antenna worked acceptably well, so I decided to make it more permanent (and the radials less-likely to be tripped over!-) by mowing the grass REALLY short and resituating the radials such that they are now only about an inch above the soil (and will soon be hidden below 2 inches of grass). I also "pinned" the radials a little more tightly to the soil once or twice along their lengths.

While doing that, I realized that if I lengthened two of the radials by about 10 feet, I could connect them to 8-foot ground rods (at the bases of a tower and a flagpole) that were themselves connected (with thick, multi-strand, insulated copper wires that run from the tops of the ground rods horizontally about 10 feet and then 9 feet down) to a 75-foot-long Ufer ground that goes around about half of the foundation of my basement.

My worry revolves around the fact that, while my radials are NOT *IN* the soil, they are pretty-well connected TO the soil, and two of them are connected to the best ground I could buy when my house was being built. Have I done wrong by grounding them, or should I have used INSULATED radials and NOT "pinned" them to the soil and NOT connected them to my Ufer ground?

--W0PBV.
--
--Myron A. Calhoun.
Five boxes preserve our freedoms: soap, ballot, witness, jury, and cartridge
NRA Life Member & Certified Instructor for Rifle, Pistol, & Home Firearm Safety
Also Certified Instructor for the Kansas Concealed-Carry Handgun (CCH) license

2007. Re: Did I make a mistake in connecting radials to...

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-14 18:55:50 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <134ta518hmlofp6roh3d21j2bi9crlit31@4ax.com>
Source record: 13120

On Mon, 14 Sep 2009 18:32:35 +0000 (UTC),
mcalhoun@sdf.lNoOnSePsAtMar.org (Myron A. Calhoun) wrote:

>My worry revolves around the fact that, while my radials are NOT *IN*
>the soil, they are pretty-well connected TO the soil, and two of them
>are connected to the best ground I could buy when my house was being
>built. Have I done wrong by grounding them, or should I have used
>INSULATED radials and NOT "pinned" them to the soil and NOT connected
>them to my Ufer ground?

Hi Myron,

What you describe up to this "worry" sounded fine to the point of
being classic.

The radials are in very tight coupling with "ground" (earth, common,
...). As for the rest of it, the Ufer ground, the rods, and extra
accoutrements - they reduce shock and lightning hazard and are only
vaguely related to your RF needs.

As always, ensure that all grounds (including the point where all the
radials converge) are tied together according to code.

73's
Richard Clark, KB7QHC

2008. Re: Spherical radiation pattern

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-14 18:55:51 UTC
From: Richard Fry <rfry@adams.net>
Message-ID: <2432a1c8-9efc-4942-a757-8b77aac1e6ec@l35g2000vba.googlegroups.com>
Source record: 13119

On Sep 14, 12:41 pm, Szczepan Białek <sz.bia...@wp.pl> wrote:

> In which parts of antenna the charges acclerate?

Parts with r-f-current flow, the greatest radiation occurring from locations along the radiator where current is greatest.

Current flow is near zero at the ends of any unloaded dipole, and at the top of any unloaded vertical monopole (even those in directional arrays).

RF

2009. Re: Spherical radiation pattern

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-14 19:13:49 UTC
From: christofire <christofire@btinternet.com>
Message-ID: <8PydnbyoLKJtCDPXnZ2dnUVZ8qadnZ2d@bt.com>
Source record: 13121

"Richard Clark" <kb7qhc@comcast.net> wrote in message
news:ek2ta55m8oemsebv7i6408ubf8mvkl2t6u@4ax.com...
> On Mon, 14 Sep 2009 18:56:07 +0100, "christofire"
> <christofire@btinternet.com> wrote:
>
>>Incidentally, who is A* ?
>
> He explained that he was typing one letter to the left. Doesn't the
> content of his postings reveal that?
>
> Retype one of his submissions by shifting your hands to the right one
> key may reveal the contents to Dan Brown's newest book! It won't make
> anymore sense, but Ron Howard may sign a deal to get Tom Hanks to post
> here for him.
>
> 73's
> Richard Clark, KB7QHC

Didn't spot the explanation (have done now, thanks) and I did wonder if the issue was that he couldn't type his own initial correctly. For a moment I wondered if there were two alter egos: A* asks a question, apparently sincerely, then, when given the answer, S* responds with rebuttal of the correct answer and a lecture based on paraphysics and historical dead ends. However, that would be bonkers.

Chris

2010. Re: Spherical radiation pattern

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-14 19:22:24 UTC
From: Art Unwin <arthurunwin@gmail.com>
Message-ID: <e6bbc40e-9bf4-4c38-8f26-23aa42b6702e@m11g2000vbl.googlegroups.com>
Source record: 13122

On Sep 14, 11:15 am, Art Unwin <arthurun...@gmail.com> wrote:
> On Sep 13, 11:29 am, Richard Clark <kb7...@comcast.net> wrote:
>
>
>
> > On Sun, 13 Sep 2009 12:46:30 +0100, "christofire"
>
> > <christof...@btinternet.com> wrote:
> > >> Does one wave has many polarizations, or one antenna has many
> > >> polarizations? Which one: transmitter or receiver? Could you teach me?
> > >> A*
>
> > >You appear to have changed your identity from S* to A* !
>
> > >The answers according to the physics that real-life radio communication
> > >depends upon, and was designed by, are:
>
> > A much simpler, and compelling explanation:
> >   what you see is what you get.
>
> > If it looks vertical, the polarization is vertical;
> > If it looks horizontal, the polarization is horizontal.
>
> > It thus stands to reason that if the radiator is U shaped you see both
> > horizontal and vertical - hence the full sphere filled with radiation.
>
> > This closes the simple answer, which of course drives a very lengthy
> > explanation - there is no such thing as a free lunch:
>
> > Now, I can well anticipate some wag pointing out that they are
> > standing, looking at these "goal posts" edge on and see only the
> > vertical supports. "There is no horizontal view - no horizontal
> > polarization. It can't be isotropic!"
>
> > Of course it can't; and yet the vertical radiation fills the null of
> > the horizontal (and likewise, the horizontal fills the null of the
> > vertical). Total field is spherical.
>
> > What does this make of a tilted radiator? What you see is what you
> > get. At some perspectives it looks goofy horizontal AND it looks
> > goofy vertical. In other perspectives it just looks vertical. As Art
> > might protest: "Never mind goofy, how much horizontal?" If we reduce
> > this to a number of goofiness, a trig function would serve quite well.
> > Most students who were trained in mechanics would recognize the method

> > to deconstruct an angle into its two, XY, components. If the tilt
> > were 45 degrees, in full view of that angle you must experience the
> > single antenna as having two equal vertical and horizontal
> > contributions to radiation. If it were tilted 30 degrees, obviously
> > one polarization would dominate over the other. Ground would compound
> > the issue, but would not negate the general principle.
>
> > This last part returns us to the discussion of isotropism which
> > encompasses the topic of Lambert's Law which is generally confined to
> > a black body radiator (or the sun from a great distance as it fails to
> > be isotropic in the near view, such as we have here on earth). Few
> > here need concern themselves with this unless they are making patch
> > antennas. However, within the discussion above, the topic of view,
> > angle, and radiation contribution are wrapped up in Lambert and
> > cosine.
>
> > 73's
> > Richard Clark, KB7QHC
>
> Richard cannot read this. However I find his posting to be rewarding .
> The present aproach to radiation is that a free electron is torn away
> from the nucleous of an atom which creates uncertaincy. Such an action
> is that of the strong force which is akin the the splitting of an atom
> where such an action would release electrons such that they would
> bombard electrical networks such as in Hawaii. When one uses Maxwells
> equations
> it becomes very obvious that with decreasing impeadance radiation
> increases until we get to the point of zero impedance where reality is
> forced to be reviewed.
> Since we now recognize that radiation is not created by the radiator
> itself as it is only a carrier of a radiator, the model used must be
> of cylinder type of homogeonos free electrons
> where removal of the free electrons/particles is by a "weak force" and
> not a strong force.
> Thus in reality the model to be used is that of a cylinder where the
> "stiction" of each electron,(I should really keep to the term particle
> so one does not automatically insert neutrinos or a subset of
> leptons) to a diamagnetic material is effectively replaced by a hoop
> stress which first showed up in the boundary of the "Big Bang".
> Now we have something that meets reality, where increase in current
> applied creates an increase in radiation and where the model is seen
> to be a boundary consisting of particles bound to each other! This is
> basically implied by Maxwell's equations as illustrated by the
> computer programs where radiation increase is proportional to the
> decrease of impedance
> of the energy robbing metallic radiator and where cylindrical boundary
> model increases it's share of the current applied for continued
> radiation and still is in concert with known laws
> without resorting to extreme low temperature to attain "zero
> impedance" which lacks reality.

> As a side note. It is the arbitrary boundary in shear (spin) which
> provides the Weak Force of the Standard Model as foreseen by Einstein
> when he took on his fruitless search. And it would appear that the
> reversal of the positive sign of the shown "Radio World" material is
> somewhat supporting of this posting but that should be the subject of
> a separate thread.
> Art Unwin

I might add that this solves a nagging problem of mine. What is
normally referred to
as a "half wave" is in reality the equivalent of a "full wave folded
dipole" where the particle sleeve represents the other half of a wave
length (see "U" antenna mentioned by Richard)
Of course the inner element formally seen as a radiator takes on its
true form of a carrier only but does provide for the required
equilibrium even tho the lumped load capacitance area in between "has
disappeared" or the equivalent of cancellation of lumped loads to
provide maximum efficiency while accounting for all forces involved.
This now completely solves the radiation problem, that has lasted a
Century, in compliance with all existing laws. as well as being
suplimented by the Gaussian extention . The above also solves the
identification of the Weak Force which provided completion of the
Standard Model as envisioned by Einstein. All is now of a proven
nature UNTIL my peers can point to where it deviates from existing
laws of Classical Physics.
It has been fun over the years exposing the self perceived psuedo
experts of this newsgroup as well as exposing to the World those who
follow and quote only books in the effort to resist change.
Bottom line is.
If you can't develop a theme from first principles you are just a
follower
and not a true Engineer.
Art Unwin KB9MZ....XG(UK)

2011. Re: Spherical radiation pattern

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-14 19:49:39 UTC
From: joe <none@invalid.com>
Message-ID: <VwBrm.430691$Ta5.363987@newsfe15.iad>
Source record: 13134

Art Unwin wrote:

> On Sep 14, 11:15 am, Art Unwin <arthurun...@gmail.com> wrote:
>> On Sep 13, 11:29 am, Richard Clark <kb7...@comcast.net> wrote:
>>
>>
>>
>> > On Sun, 13 Sep 2009 12:46:30 +0100, "christofire"
>>
>> > <christof...@btinternet.com> wrote:
>> > >> Does one wave has many polarizations, or one antenna has many
>> > >> polarizations? Which one: transmitter or receiver? Could you teach
>> > >> me? A*
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>> > >You appear to have changed your identity from S* to A* !
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>> > >The answers according to the physics that real-life radio
>> > >communication depends upon, and was designed by, are:
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>> > A much simpler, and compelling explanation:
>> > what you see is what you get.
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>> > If it looks vertical, the polarization is vertical;
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>> > It thus stands to reason that if the radiator is U shaped you see both
>> > horizontal and vertical - hence the full sphere filled with radiation.
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>> > explanation - there is no such thing as a free lunch:
>>
>> > Now, I can well anticipate some wag pointing out that they are
>> > standing, looking at these "goal posts" edge on and see only the
>> > vertical supports. "There is no horizontal view - no horizontal
>> > polarization. It can't be isotropic!"
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>> > Of course it can't; and yet the vertical radiation fills the null of
>> > the horizontal (and likewise, the horizontal fills the null of the
>> > vertical). Total field is spherical.
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>> > goofy vertical. In other perspectives it just looks vertical. As Art
>> > might protest: "Never mind goofy, how much horizontal?" If we reduce

>> > this to a number of goofiness, a trig function would serve quite well.
>> > Most students who were trained in mechanics would recognize the method
>> > to deconstruct an angle into its two, XY, components. If the tilt
>> > were 45 degrees, in full view of that angle you must experience the
>> > single antenna as having two equal vertical and horizontal
>> > contributions to radiation. If it were tilted 30 degrees, obviously
>> > one polarization would dominate over the other. Ground would compound
>> > the issue, but would not negate the general principle.
>>
>> > This last part returns us to the discussion of isotropism which
>> > encompasses the topic of Lambert's Law which is generally confined to
>> > a black body radiator (or the sun from a great distance as it fails to
>> > be isotropic in the near view, such as we have here on earth). Few
>> > here need concern themselves with this unless they are making patch
>> > antennas. However, within the discussion above, the topic of view,
>> > angle, and radiation contribution are wrapped up in Lambert and
>> > cosine.
>>
>> > 73's
>> > Richard Clark, KB7QHC
>>
>> Richard cannot read this. However I find his posting to be rewarding .
>> The present aproach to radiation is that a free electron is torn away
>> from the nucleous of an atom which creates uncertaincy.

Well, movement of electrons is the basis for current flow. 'Torn away' is an interesting choice of words, but separation of electrons from an atom is commonplace. (BTW the electrons come from the atom, not the nucleus.)

>> Such an action
>> is that of the strong force which is akin the the splitting of an atom
>> where such an action would release electrons such that they would
>> bombard electrical networks such as in Hawaii.

Removing an election and 'splitting of an atom' are vastly different concepts. You are talking about two vastly different things.

>> When one uses Maxwells
>> equations
>> it becomes very obvious that with decreasing impeadance radiation
>> increases until we get to the point of zero impedance where reality is
>> forced to be reviewed.
>> Since we now recognize that radiation is not created by the radiator
>> itself as it is only a carrier of a radiator, the model used must be
>> of cylinder type of homogeonos free electrons
>> where removal of the free electrons/particles is by a "weak force" and
>> not a strong force.

So, explain this model. A cylinder of homogeneous (whatever that means) free electrons would repel each other and dissipate into space. They would be lost forever.

>> Thus in reality the model to be used is that of a cylinder where the
>> "stiction" of each electron,(I should really keep to the term particle
>> so one does not automatically insert neutrinos or a subset of
>> leptons) to a diamagnetic material is effectively replaced by a hoop
>> stress

What is the hoop stress. You have created another undefined term which is
meaningless.

>> which first showed up in the boundary of the "Big Bang".
>> Now we have something that meets reality, where increase in current
>> applied creates an increase in radiation and where the model is seen
>> to be a boundary consisting of particles bound to each other! This is
>> basically implied by Maxwell's equations as illustrated by the
>> computer programs where radiation increase is proportional to the
>> decrease of impedance
>> of the energy robbing metallic radiator and where cylindrical boundary
>> model increases it's share of the current applied for continued
>> radiation and still is in concert with known laws
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>> impedance" which lacks reality.
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>> provides the Weak Force of the Standard Model as foreseen by Einstein
>> when he took on his fruitless search. And it would appear that the
>> reversal of the positive sign of the shown "Radio World" material is
>> somewhat supporting of this posting but that should be the subject of
>> a separate thread.
>> Art Unwin
>
> I might add that this solves a nagging problem of mine. What is
> normally referred to
> as a "half wave" is in reality the equivalent of a "full wave folded
> dipole" where the particle sleeve represents the other half of a wave
> length (see "U" antenna mentioned by Richard)

You seem to have created your own, new, definition of a folded dipole. One
where the length in wavelengths is no longer the distance from end to end,
rather the length of material used (or the perceived circuit path).

What is more amazing is that your definition of full wavelength is now 1/2
what you originally thought it to be. Yet that apparently doesn't cause you
significant concern.

> Of course the inner element formally seen as a radiator takes on its
> true form of a carrier only but does provide for the required
> equilibrium even tho the lumped load capacitance area in between "has
> disappeared" or the equivalent of cancellation of lumped loads to
> provide maximum efficiency while accounting for all forces involved.

However, you completely ignore the 'laws' regarding the fields that are
generated by the current in the 'carrier'. Or that they would cancel the
result from the field generated by the outer element.

> This now completely solves the radiation problem, that has lasted a
> Century, in compliance with all existing laws.

You have not shown, in any way, how this is in compliance with what you call laws. Since you show no math, nobody can really know what you are talking about.

> as well as being
> suplimented by the Gaussian extention . The above also solves the
> identification of the Weak Force which provided completion of the
> Standard Model as envisioned by Einstein. All is now of a proven
> nature UNTIL my peers can point to where it deviates from existing
> laws of Classical Physics.

Proof of your concept is something YOU PROVIDE. Nothing is proven until you can show, in a clear manner, what you think you understand about how antennas work. If you really have some new idea, you should be able to document it and verify it with real work experiments. Your work should also be verifiable and able to be repeated independently by others. When that happens you may have developed some new scientific understanding.

> It has been fun over the years exposing the self perceived psuedo
> experts of this newsgroup as well as exposing to the World those who
> follow and quote only books in the effort to resist change.

I would venture to guess that it is not the others resisting change, rather it is their opposition to someone who proposes concepts that ignore and contradict the current understanding of antennas. If you have some new idea regarding antennas, it should not conflict with the understood state of the art, rather, it should expand the state of the art. Your ideas conflict in numerous areas which other have pointed out. However, you choose to ignore those inputs.

> Bottom line is.
> If you can't develop a theme from first principles you are just a
> follower
> and not a true Engineer.

An engineer does not need to develop all his ideas from first principles. Rather, existing ideas are extended. The engineer should know the first principles, but deriving everything from first principles is grossly inefficient.

But the big thing is you just spout those first principles without really understanding them. The true engineer knows what he is talking about.

The true engineer also validates his work with models and prototypes. He tests his ideas to show they actually work as expected. You play with models (but never adequately share them) and your prototypes have not been shown to have real usefulness as an antenna.

When asked to provide results from experiments any good engineer will have, or get, data that supports his position. When you are asked, your favorite answer is 'I don't work for you'.

You even use this response when someone gives you a suggestion on how to verify the cause of a problem you are having.

You are NOT an engineer. You are NOT a scientist. You may have been an engineer in the past, but today, you are not showing that ability.

The pity is, you believe what you are doing. That is the only thing that can be verified. (Verification comes from the fact you did submit a patent application. That is the only thing that can be independently verified.)

> Art Unwin KB9MZ....XG(UK)

2012. Re: Spherical radiation pattern

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-14 20:05:25 UTC
From: joe <none@invalid.com>
Message-ID: <LLBrm.30749$nP6.18208@newsfe25.iad>
Source record: 13135

Art Unwin wrote:

> On Sep 14, 5:45 pm, "Dave" <no...@nowhere.com> wrote:
>> "Art Unwin" <arthurun...@gmail.com> wrote in message
>>
>> news:5e598eba-0e47-4045-8045-f80c6c3f820b@p36g2000vbn.googlegroups.com...
>>
>> >Point to a law that I have violated of which you learned about in
>> >academia.
>> >As for me I am at peace with my offering and thus can move on until a
>> >violation of law is presented.
>>
>> then don't you dare go away until you explain how your weak and strong
>> force can have any effect on conduction band electrons when their range
>> of effect is confined to the nucleus.
>
> And why not? You keep shooting from the hip on baseless statements.
> For me I have supplied a trail for examination that I believe is in
> complience of existing laws.

And someone has pointed out something is wrong. As is typical, you avoid the point and ignore the conflict with your position.

> You were the first to state I was in error by applying a time varying
> field to Gauss's law of Statics and the group followed your position
> where no body provided academic proof.

You provided no proof of you assertion.

> Then Dr Davis came along and provided academic proof per its
> legitimacy. Having a Doctorate from MIT and working for the Space
> Agency gives him some what of a track record.

All Dr. Davis stated was the relationship between Gauss and Maxwell. You claimed to come up with something new, and it was there all the time. He did not say anything about the validity of your ideas regarding antennas.

> I then found out that
> one of the prolific antagonistic posters did not survive high school.
> True, he was suspended, so it was not really his fault!
> Obviously such things are not the norm in this group but it does give
> you thought regarding a antagonistic track record when lacking in
> independent thought shoots from the hip or extract a paragraph from a
> book like a copy provided by a copying machine of which he has no
> understanding.
> Nope, I have provided details of my independent work all of which

> follows the existing laws
> of Classical physics.

Any details you have presented are minimal.

> At this time I see it as a worthwhile theory
> with merit and possibly more if there is no violation of existing
> laws.

"if there is no violation" means you aren't even convinced.

> If you have doubts then contact your alma
> to provide consistency in your allegations. Or alternatively wait for
> the PTO printing of my
> present concluding patent request such that all details are available
> for inspection.
> This newsgroup is available for free speech but for the reader caution
> is advised. Reverse your position on the Gaussian extension so we can
> then continue the discussion.

If you extension to Gauss is just a re-iteration of Maxwell, then you have presented nothing new.

Time and time again you have shown that you are not willing to discuss. You do a lot of verbal handwaving, but there is no substance.

2013. Re: Spherical radiation pattern

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-14 20:30:44 UTC
From: Richard Fry <rfry@adams.net>
Message-ID: <1559f9c5-b184-4c73-877d-04314ae93129@r36g2000vbn.googlegroups.com>
Source record: 13123

On Sep 14, 2:22 pm, Art Unwin <arthurun...@gmail.com> wrote:

> Bottom line is.
> If you can't develop a theme from first principles you are
> just a follower and not a true Engineer.

I submit that industry-recognized, expert sources on the subject of antennas such as Kraus, Balanis, Johnson/Jasik, George Brown etc were and are much more likely to understand and respect those first principles.

Anyone can develop and publicize a theme about the operation of antennas.

Scientifically PROVING that such a theme is correct takes a true "Engineer."

RF

2014. Re: Spherical radiation pattern

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-14 21:11:16 UTC
From: Art Unwin <arthurunwin@gmail.com>
Message-ID: <5e598eba-0e47-4045-8045-f80c6c3f820b@p36g2000vbn.googlegroups.com>
Source record: 13124

On Sep 14, 3:30 pm, Richard Fry <r...@adams.net> wrote:
> On Sep 14, 2:22 pm, Art Unwin <arthurun...@gmail.com> wrote:
>
> > Bottom line is.
> > If you can't develop a theme from first principles you are
> > just a follower and not a true Engineer.
>
> I submit that industry-recognized, expert sources on the subject of
> antennas such as Kraus, Balanis, Johnson/Jasik, George Brown etc were
> and are much more likely to understand and respect those first
> principles.
Yes that is normally true but how many people at the table has asked
for the salt
when it was right in frony of them?

>
> Anyone can develop and publicize a theme about the operation of
> antennas.

I consider that a difficult task without running into trouble with
existing laws.

>
> Scientifically PROVING that such a theme is correct takes a true
> "Engineer."

When you deliver a theme or paper in front of college graduates,
professionals and
above, one assumes that they are fully aware of the basic laws
involved. Since your only connection to antenna engineering is the
repetitive pushing the "on" and "off" button at a local radio station
as its resident engineer it is more than possible that you have not
had a academic training. Your past posts gives some truth to that
statement, tho it is possible that I will have to stand corrected if,
as with many, age has taken its toll.
As you have stated in the past
. "your move"!
Point to a law that I have violated of which you learned about in
academia. Alternatively
ask the question from your local academic centre where interllectuals
reside who have more knowledge of such things than either of us will
ever attain.
As for me I am at peace with my offering and thus can move on until a
violation of law is
presented.

>
> RF

2015. Re: Did I make a mistake in connecting radials to...

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-14 21:13:23 UTC
From: Dave <noone@nowhere.com>
Message-ID: <Tlyrm.2218$Jd7.273@nwrddc02.gnilink.net>
Source record: 13125

"Myron A. Calhoun" <mcalhoun@sdf.lNoOnSePsAtMar.org> wrote in message
news:h8m283$m77$1@chessie.cirr.com...
> I've read a lot about radials: elevated vs. gull-wings vs. underground,
> how many (120/64/31/16/4/2/0), etc. After reading the following, maybe
> someone will tell me if I did right or wrong. This is long, but the
> nitty-gritty details might be necessary for a good answer.
>
> I recently erected a 20-meter vertical in my front yard with 16 equally-
> spaced, about-20-foot-long, UNinsulated radials (electric-fence wire)
> around its base starting at a metal plate and just laid on grass about
> 3 inches above the soil and "pinned" (with about 8-inch-long stiff-wire
> loops) to the soil at the ends to keep them taut/straight. The metal
> plate was "grounded" with a 2-feet-long metal rod driven into the soil.
>
> The antenna worked acceptably well, so I decided to make it more
> permanent (and the radials less-likely to be tripped over!-) by
> mowing the grass REALLY short and resituating the radials such that
> they are now only about an inch above the soil (and will soon be
> hidden below 2 inches of grass). I also "pinned" the radials a
> little more tightly to the soil once or twice along their lengths.
>
> While doing that, I realized that if I lengthened two of the radials
> by about 10 feet, I could connect them to 8-foot ground rods (at the
> bases of a tower and a flagpole) that were themselves connected (with
> thick, multi-strand, insulated copper wires that run from the tops of
> the ground rods horizontally about 10 feet and then 9 feet down) to
> a 75-foot-long Ufer ground that goes around about half of the
> foundation of my basement.
>
> My worry revolves around the fact that, while my radials are NOT *IN*
> the soil, they are pretty-well connected TO the soil, and two of them
> are connected to the best ground I could buy when my house was being
> built. Have I done wrong by grounding them, or should I have used
> INSULATED radials and NOT "pinned" them to the soil and NOT connected
> them to my Ufer ground?
>
> --W0PBV.
> --
> --Myron A. Calhoun.
> Five boxes preserve our freedoms: soap, ballot, witness, jury, and
> cartridge
> NRA Life Member & Certified Instructor for Rifle, Pistol, & Home Firearm
> Safety
> Also Certified Instructor for the Kansas Concealed-Carry Handgun (CCH)

> license

it sounds like you have done right.

2016. Re: Spherical radiation pattern

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-14 22:06:14 UTC
From: Richard Fry <rfry@adams.net>
Message-ID: <b6d43363-061a-4703-b20e-6d55925aa9f5@s6g2000vbp.googlegroups.com>
Source record: 13126

On Sep 14, 4:11 pm, Art Unwin <arthurun...@gmail.com> wrote:

> > (Fry) I submit that industry-recognized, expert sources on the subject of
> > antennas such as Kraus, Balanis, Johnson/Jasik, George Brown etc were
> > and are much more likely to understand and respect those first
> > principles.
>
> (Unwin) Yes that is normally true but how many people at the table has
> asked for the salt when it was right in frony of them?

So YOU have the salt compared to the names I mentioned, and their
published documents? Not very likely.

You would be better off, Art, and create less animosity for yourself
if you relied more on their work, and less on your own "themes."

RF

2017. Re: Spherical radiation pattern

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-14 22:40:24 UTC
From: Dave <noone@nowhere.com>
Message-ID: <sDzrm.2227$Jd7.938@nwrddc02.gnilink.net>
Source record: 13127

"Art Unwin" <arthurunwin@gmail.com> wrote in message
news:e6bbc40e-9bf4-4c38-8f26-23aa42b6702e@m11g2000vbl.googlegroups.com...
> The above also solves the
>identification of the Weak Force which provided completion of the
>Standard Model as envisioned by Einstein. All is now of a proven
>nature UNTIL my peers can point to where it deviates from existing
>laws of Classical Physics.

you violate the range of the weak and strong forces. they are both confined
to the nucleus of the atom and have nothing to do with the conduction band
electrons.

2018. Re: Spherical radiation pattern

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-14 22:45:43 UTC
From: Dave <noone@nowhere.com>
Message-ID: <rlzrm.2229$Jd7.204@nwrddc02.gnilink.net>
Source record: 13128

"Art Unwin" <arthurunwin@gmail.com> wrote in message
news:5e598eba-0e47-4045-8045-f80c6c3f820b@p36g2000vbn.googlegroups.com...
>Point to a law that I have violated of which you learned about in
>academia.
>As for me I am at peace with my offering and thus can move on until a
>violation of law is presented.

then don't you dare go away until you explain how your weak and strong force
can have any effect on conduction band electrons when their range of effect
is confined to the nucleus.

2019. Re: Ringo Ranger ARX2 vs ARX2b

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-14 22:52:42 UTC
From: Chuck Forsberg WA7KGX N2469R <caf@omen.com>
Message-ID: <ovmdnRy5pMWnVDPXnZ2dnUVZ_sudnZ2d@giganews.com>
Source record: 13129

On Mon, 14 Sep 2009 03:53:48 -0700, nm5k wrote:

> On Sep 13, 9:05 pm, JIMMIE <JIMMIEDEE...@YAHOO.COM> wrote:
>> On Sep 13, 6:35 pm, n...@wt.net wrote:
>>
>>
>>
>> > On Sep 13, 5:21 am, Chuck Forsberg WA7KGX N2469R <c...@omen.com>
>> > wrote:
>>
>> > > The B version has a piece of mast below the main part of the
>> > > antenna. Is there much difference in performance between the arx2b
>> > > and the original arx2?
>>
>> > > --
>> > > Chuck Forsberg   c...@omen.com www.omen.com 503-614-0430
>> > > Developer of Industrial ZMODEM(Tm) for Embedded Applications
>> > >   Omen Technology Inc   "The High Reliability Software"
>> > > 10255 NW Old Cornelius Pass Portland OR 97231   FAX 629-0665
>>
>> > There is no extra mast. You are using the support mast below the feed
>> > point. The extra parts are a 50 inch length of coax, and a union to
>> > support a set of 20 inch long radials. The radials are connected to
>> > the shield of the coax. Years ago I converted an original Ringo
>> > Ranger to a Ringo Ranger two using home brew parts. I then did
>> > comparison tests with and without the radial set. Made a huge
>> > difference in performance in my case. Cushcraft seemed to consider it
>> > a third 5/8 WL element, but I tend to consider it a decoupling
>> > section much like the lower cone you see on an Isopole, or using a
>> > 2nd set of radials or cones below a ground plane. Yes, it is worth
>> > converting. The ARX2B is a pretty good antenna. Not quite as good as
>> > the Isopole, but close.
>>
>> I have seen people swear by and swear at Ringo Rangers. Is this because
>> of by chance some people get the right/wrong length mast and/ or coax
>> length?
>>
>> Jimmie
>
> That could be the case with the non decoupled version. :/ But the RR2 is
> a pretty good antenna. I used one for a long time and never had any
> problems.
> The mast and coax length could be fairly critical on the non decoupled
> version.

> Like I said, I converted an old ARX2 to a ARX2B and then compared the
> two when receiving local signals. The difference in my particular case
> was quite large. I'm talking 2-3+ S units on the radio meter which
> actually would be a huge difference. It was quite apparent that the
> common mode currents were really whacking the pattern on the one I tried
> without the decoupling section. I assume most was from the feed line.

what is the easiest/cheapest way to add the decoupling?
Just add some 1/4 wavelength radials 1/2 wavelength below
the arx2?

--
Chuck Forsberg caf@omen.com www.omen.com 503-614-0430
Developer of Industrial ZMODEM(Tm) for Embedded Applications
Omen Technology Inc "The High Reliability Software"
10255 NW Old Cornelius Pass Portland OR 97231 FAX 629-0665

2020. Re: Spherical radiation pattern

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-14 23:30:50 UTC
From: Art Unwin <arthurunwin@gmail.com>
Message-ID: <b92c322a-5ba4-4625-84b9-85e66ac6488c@b18g2000vbl.googlegroups.com>
Source record: 13130

On Sep 14, 5:45 pm, "Dave" <no...@nowhere.com> wrote:
> "Art Unwin" <arthurun...@gmail.com> wrote in message
>
> news:5e598eba-0e47-4045-8045-f80c6c3f820b@p36g2000vbn.googlegroups.com...
>
> >Point to a law that I have violated of which you learned about in
> >academia.
> >As for me I am at peace with my offering and thus can move on until a
> >violation of law is presented.
>
> then don't you dare go away until you explain how your weak and strong force
> can have any effect on conduction band electrons when their range of effect
> is confined to the nucleus.

And why not? You keep shooting from the hip on baseless statements.
For me I have supplied a trail for examination that I believe is in
complience of existing laws.
You were the first to state I was in error by applying a time varying
field to Gauss's law of Statics and the group followed your position
where no body provided academic proof.
Then Dr Davis came along and provided academic proof per its
legitimacy. Having a Doctorate from MIT and working for the Space
Agency gives him some what of a track record. I then found out that
one of the prolific antagonistic posters did not survive high school.
True, he was suspended, so it was not really his fault!
Obviously such things are not the norm in this group but it does give
you thought regarding a antagonistic track record when lacking in
independent thought shoots from the hip or extract a paragraph from a
book like a copy provided by a copying machine of which he has no
understanding.
Nope, I have provided details of my independent work all of which
follows the existing laws
of Classical physics. At this time I see it as a worthwhile theory
with merit and possibly more if there is no violation of existing
laws. If you have doubts then contact your alma
to provide consistency in your allegations. Or alternatively wait for
the PTO printing of my
present concluding patent request such that all details are available
for inspection.
This newsgroup is available for free speech but for the reader caution
is advised. Reverse your position on the Gaussian extension so we can
then continue the discussion.

2021. Re: Spherical radiation pattern

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-14 23:35:46 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <dckta5p3f9m8i2539fds8odld8kd4sfiu9@4ax.com>
Source record: 13131

On Mon, 14 Sep 2009 22:40:24 GMT, "Dave" <noone@nowhere.com> wrote:

>
>"Art Unwin" <arthurunwin@gmail.com> wrote in message
>news:e6bbc40e-9bf4-4c38-8f26-23aa42b6702e@m11g2000vbl.googlegroups.com...
>> The above also solves the
>>identification of the Weak Force which provided completion of the
>>Standard Model as envisioned by Einstein. All is now of a proven
>>nature UNTIL my peers can point to where it deviates from existing
>>laws of Classical Physics.
>
>you violate the range of the weak and strong forces. they are both confined
>to the nucleus of the atom and have nothing to do with the conduction band
>electrons.

Ah!

But if you extrapolate the nucleus as the sun of the solar system, the
earth as an electron; then the conduction band is easily managed with
a weak force as significant as a bite of bread stuck to the roof of
your mouth with peanut butter.

Peanut butter is diamagnetic, and if you buy the crunchy style, you
get the combination of waves and particles.

[this premonitory peanutbutter presentation posting possibly protected
by provisional patent pending]

73's
Richard Clark, KB7QHC

2022. Re: Spherical radiation pattern

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-15 00:20:38 UTC
From: Richard Fry <rfry@adams.net>
Message-ID: <d96a34ee-c15e-4274-90b0-392027d9c3ce@33g2000vbe.googlegroups.com>
Source record: 13132

On Sep 14, 12:03 pm, Richard Fry <r...@adams.net> wrote:
> On Sep 14, 11:15 am, Art Unwin <arthurun...@gmail.com> wrote:
>
> > Now we have something that meets reality, where increase in current
> > applied creates an increase in radiation...
>
> NOW ?? This has been true forever.
>
> >... and where the model is seen
> > to be a boundary consisting of particles bound to each other! This is
> > basically implied by Maxwell's equations as illustrated by the
> > computer programs where radiation increase is proportional to the
> > decrease of impedance of the energy robbing metallic radiator etc
>
> Decreasing the feedpoint impedance of an antenna to 0 +j0 ohms (if
> that were possible) does not maximize radiation.
>
> The first term in the antenna impedance specification in a practical
> antenna consists mainly of radiation resistance -- which is required
> in order for radiation to occur. Radiation resistance is a function
> of the electrical length, diameter and form of the radiator exposed to
> space. If it is zero then there is no radiation.
>
> Higher radiation resistances lead to higher efficiencies for the
> antenna SYSTEM, because then the power radiated can be much greater
> than what is dissipated in the relatively smaller I^2R losses of the
> system.
>
> RF

Art,

How do you respond to my comments to your statements above, seeing as
though you have responded to later r.r.a.a. posts with no further
response to the above sequence?

NO RESPONSE from you easily may be taken to understand that you cannot
defend/support your position on such subjects.

If your lack of response was an oversight, then probably most of us
will understand.

But what IS your position on this subject?

RF

2023. Re: Spherical radiation pattern

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-15 00:48:09 UTC
From: tom <news4792@taring.org>
Message-ID: <4aaee438$0$28117$8046368a@newsreader.iphouse.net>
Source record: 13133

Art Unwin wrote:
> On Sep 14, 5:45 pm, "Dave" <no...@nowhere.com> wrote:
>> "Art Unwin" <arthurun...@gmail.com> wrote in message
>>
>> news:5e598eba-0e47-4045-8045-f80c6c3f820b@p36g2000vbn.googlegroups.com...
>>
>>> Point to a law that I have violated of which you learned about in
>>> academia.
>>> As for me I am at peace with my offering and thus can move on until a
>>> violation of law is presented.
>> then don't you dare go away until you explain how your weak and strong force
>> can have any effect on conduction band electrons when their range of effect
>> is confined to the nucleus.
>
> And why not? You keep shooting from the hip on baseless statements.
> For me I have supplied a trail for examination that I believe is in
> complience of existing laws.
> You were the first to state I was in error by applying a time varying
> field to Gauss's law of Statics and the group followed your position
> where no body provided academic proof.
> Then Dr Davis came along and provided academic proof per its
> legitimacy. Having a Doctorate from MIT and working for the Space
> Agency gives him some what of a track record. I then found out that
> one of the prolific antagonistic posters did not survive high school.
> True, he was suspended, so it was not really his fault!
> Obviously such things are not the norm in this group but it does give
> you thought regarding a antagonistic track record when lacking in
> independent thought shoots from the hip or extract a paragraph from a
> book like a copy provided by a copying machine of which he has no
> understanding.
> Nope, I have provided details of my independent work all of which
> follows the existing laws
> of Classical physics. At this time I see it as a worthwhile theory
> with merit and possibly more if there is no violation of existing
> laws. If you have doubts then contact your alma
> to provide consistency in your allegations. Or alternatively wait for
> the PTO printing of my
> present concluding patent request such that all details are available
> for inspection.
> This newsgroup is available for free speech but for the reader caution
> is advised. Reverse your position on the Gaussian extension so we can
> then continue the discussion.

So Art again fails to step up when asked to prove something.

"I'M RIGHT!!! PROVE ME WRONG!!!" is Art's continual wail. No Art, you have to prove you are right, and just claiming it isn't even a start.

FRAUD == ART

tom
K0TAR

2024. Re: Spherical radiation pattern

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-15 01:06:35 UTC
From: Art Unwin <arthurunwin@gmail.com>
Message-ID: <d3b0b1f4-148c-4934-9dbe-4e7bf0541f49@o21g2000vbl.googlegroups.com>
Source record: 13136

On Sep 14, 6:35 pm, Richard Clark <kb7...@comcast.net> wrote:
> On Mon, 14 Sep 2009 22:40:24 GMT, "Dave" <no...@nowhere.com> wrote:
>
> >"Art Unwin" <arthurun...@gmail.com> wrote in message
> >news:e6bbc40e-9bf4-4c38-8f26-23aa42b6702e@m11g2000vbl.googlegroups.com...
> >> The above also solves the
> >>identification of the Weak Force which provided completion of the
> >>Standard Model as envisioned by Einstein. All is now of a proven
> >>nature UNTIL my peers can point to where it deviates from existing
> >>laws of Classical Physics.
>
> >you violate the range of the weak and strong forces. they are both confined
> >to the nucleus of the atom and have nothing to do with the conduction band
> >electrons.
>
> Ah!
>
> But if you extrapolate the nucleus as the sun of the solar system, the
> earth as an electron; then the conduction band is easily managed with
> a weak force as significant as a bite of bread stuck to the roof of
> your mouth with peanut butter.
>
> Peanut butter is diamagnetic, and if you buy the crunchy style, you
> get the combination of waves and particles.
>
> [this premonitory peanutbutter presentation posting possibly protected
> by provisional patent pending]
>
> 73's
> Richard Clark, KB7QHC

You used David as your role model! You also stamped all over Dr Davis.
You would be better off standing on David's shoulders and staying in
lock step with him and hold that silly tongue of yours for your next
partner.

2025. Re: Spherical radiation pattern

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-15 01:09:13 UTC
From: Art Unwin <arthurunwin@gmail.com>
Message-ID: <315e88a5-4259-4075-bd5c-187d4f83806f@r36g2000vbn.googlegroups.com>
Source record: 13137

On Sep 14, 7:20 pm, Richard Fry <r...@adams.net> wrote:
> On Sep 14, 12:03 pm, Richard Fry <r...@adams.net> wrote:
>
> > On Sep 14, 11:15 am, Art Unwin <arthurun...@gmail.com> wrote:
>
> > > Now we have something that meets reality, where increase in current
> > > applied creates an increase in radiation...
>
> > NOW ?? This has been true forever.
>
> > >... and where the model is seen
> > > to be a boundary consisting of particles bound to each other! This is
> > > basically implied by Maxwell's equations as illustrated by the
> > > computer programs where radiation increase is proportional to the
> > > decrease of impedance of the energy robbing metallic radiator etc
>
> > Decreasing the feedpoint impedance of an antenna to 0 +j0 ohms (if
> > that were possible) does not maximize radiation.
>
> > The first term in the antenna impedance specification in a practical
> > antenna consists mainly of radiation resistance -- which is required
> > in order for radiation to occur. Radiation resistance is a function
> > of the electrical length, diameter and form of the radiator exposed to
> > space. If it is zero then there is no radiation.
>
> > Higher radiation resistances lead to higher efficiencies for the
> > antenna SYSTEM, because then the power radiated can be much greater
> > than what is dissipated in the relatively smaller I^2R losses of the
> > system.
>
> > RF
>
> ----------
>
> Art,
>
> How do you respond to my comments to your statements above, seeing as
> though you have responded to later r.r.a.a. posts with no further
> response to the above sequence?
>
> NO RESPONSE from you easily may be taken to understand that you cannot
> defend/support your position on such subjects.
>
> If your lack of response was an oversight, then probably most of us

> will understand.
>
> But what IS your position on this subject?
>
> RF

Sorry, but that is how it is. I do respond to some statements but not
all.

2026. Re: Spherical radiation pattern

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-15 01:24:56 UTC
From: Art Unwin <arthurunwin@gmail.com>
Message-ID: <9477ab58-a1cd-4950-82c4-363ac7ca323e@r33g2000vbp.googlegroups.com>
Source record: 13138

```
On Sep 14, 2:49 pm, joe <n...@invalid.com> wrote:
> Art Unwin wrote:
> > On Sep 14, 11:15 am, Art Unwin <arthurun...@gmail.com> wrote:
> >> On Sep 13, 11:29 am, Richard Clark <kb7...@comcast.net> wrote:
>
> >> > On Sun, 13 Sep 2009 12:46:30 +0100, "christofire"
>
> >> > <christof...@btinternet.com> wrote:
> >> > >> Does one wave has many polarizations, or one antenna has many
> >> > >> polarizations? Which one: transmitter or receiver? Could you teach
> >> > >> me? A*
>
> >> > >You appear to have changed your identity from S* to A* !
>
> >> > >The answers according to the physics that real-life radio
> >> > >communication depends upon, and was designed by, are:
>
> >> > A much simpler, and compelling explanation:
> >> > what you see is what you get.
>
> >> > If it looks vertical, the polarization is vertical;
> >> > If it looks horizontal, the polarization is horizontal.
>
> >> > It thus stands to reason that if the radiator is U shaped you see both
> >> > horizontal and vertical - hence the full sphere filled with radiation.
>
> >> > This closes the simple answer, which of course drives a very lengthy
> >> > explanation - there is no such thing as a free lunch:
>
> >> > Now, I can well anticipate some wag pointing out that they are
> >> > standing, looking at these "goal posts" edge on and see only the
> >> > vertical supports.  "There is no horizontal view - no horizontal
> >> > polarization.  It can't be isotropic!"
>
> >> > Of course it can't; and yet the vertical radiation fills the null of
> >> > the horizontal (and likewise, the horizontal fills the null of the
> >> > vertical).  Total field is spherical.
>
> >> > What does this make of a tilted radiator?  What you see is what you
> >> > get.  At some perspectives it looks goofy horizontal AND it looks
> >> > goofy vertical.  In other perspectives it just looks vertical.  As Art
> >> > might protest:  "Never mind goofy, how much horizontal?"  If we reduce
> >> > this to a number of goofiness, a trig function would serve quite well.
> >> > Most students who were trained in mechanics would recognize the method
```

> >> > to deconstruct an angle into its two, XY, components. If the tilt
> >> > were 45 degrees, in full view of that angle you must experience the
> >> > single antenna as having two equal vertical and horizontal
> >> > contributions to radiation. If it were tilted 30 degrees, obviously
> >> > one polarization would dominate over the other. Ground would compound
> >> > the issue, but would not negate the general principle.
>
> >> > This last part returns us to the discussion of isotropism which
> >> > encompasses the topic of Lambert's Law which is generally confined to
> >> > a black body radiator (or the sun from a great distance as it fails to
> >> > be isotropic in the near view, such as we have here on earth). Few
> >> > here need concern themselves with this unless they are making patch
> >> > antennas. However, within the discussion above, the topic of view,
> >> > angle, and radiation contribution are wrapped up in Lambert and
> >> > cosine.
>
> >> > 73's
> >> > Richard Clark, KB7QHC
>
> >> Richard cannot read this. However I find his posting to be rewarding .
> >> The present aproach to radiation is that a free electron is torn away
> >> from the nucleous of an atom which creates uncertaincy.
>
> Well, movement of electrons is the basis for current flow. 'Torn away' is an
> interesting choice of words, but separation of electrons from an atom is
> commonplace. (BTW the electrons come from the atom, not the nucleus.)
>
> >> Such an action
> >> is that of the strong force which is akin the the splitting of an atom
> >> where such an action would release electrons such that they would
> >> bombard electrical networks such as in Hawaii.
>
> Removing an election and 'splitting of an atom' are vastly different
> concepts. You are talking about two vastly different things.
>
> >> When one uses Maxwells
> >> equations
> >> it becomes very obvious that with decreasing impeadance radiation
> >> increases until we get to the point of zero impedance where reality is
> >> forced to be reviewed.
> >> Since we now recognize that radiation is not created by the radiator
> >> itself as it is only a carrier of a radiator, the model used must be
> >> of cylinder type of homogeonos free electrons
> >> where removal of the free electrons/particles is by a "weak force" and
> >> not a strong force.
>
> So, explain this model. A cylinder of homogeneous (whatever that means) free
> electrons would repel each other and dissipate into space. They would be
> lost forever.
>

> >> Thus in reality the model to be used is that of a cylinder where the
> >> "stiction" of each electron,(I should really keep to the term particle
> >> so one does not automatically insert neutrinos or a subset of
> >> leptons) to a diamagnetic material is effectively replaced by a hoop
> >> stress
>
> What is the hoop stress. You have created another undefined term which is
> meaningless.
>
> >> which first showed up in the boundary of the "Big Bang".
> >> Now we have something that meets reality, where increase in current
> >> applied creates an increase in radiation and where the model is seen
> >> to be a boundary consisting of particles bound to each other! This is
> >> basically implied by Maxwell's equations as illustrated by the
> >> computer programs where radiation increase is proportional to the
> >> decrease of impedance
> >> of the energy robbing metallic radiator and where cylindrical boundary
> >> model increases it's share of the current applied for continued
> >> radiation and still is in concert with known laws
> >> without resorting to extreme low temperature to attain "zero
> >> impedance" which lacks reality.
> >> As a side note. It is the arbitrary boundary in shear (spin) which
> >> provides the Weak Force of the Standard Model as foreseen by Einstein
> >> when he took on his fruitless search. And it would appear that the
> >> reversal of the positive sign of the shown "Radio World" material is
> >> somewhat supporting of this posting but that should be the subject of
> >> a separate thread.
> >> Art Unwin
>
> > I might add that this solves a nagging problem of mine. What is
> > normally referred to
> > as a "half wave" is in reality the equivalent of a "full wave folded
> > dipole" where the particle sleeve represents the other half of a wave
> > length (see "U" antenna mentioned by Richard)
>
> You seem to have created your own, new, definition of a folded dipole. One
> where the length in wavelengths is no longer the distance from end to end,
> rather the length of material used (or the perceived circuit path).
>
> What is more amazing is that your definition of full wavelength is now 1/2
> what you originally thought it to be. Yet that apparently doesn't cause you
> significant concern.
>
> > Of course the inner element formally seen as a radiator takes on its
> > true form of a carrier only but does provide for the required
> > equilibrium even tho the lumped load capacitance area in between "has
> > disappeared" or the equivalent of cancellation of lumped loads to
> > provide maximum efficiency while accounting for all forces involved.
>
> However, you completely ignore the 'laws' regarding the fields that are

> generated by the current in the 'carrier'. Or that they would cancel the
> result from the field generated by the outer element.
>
> > This now completely solves the radiation problem, that has lasted a
> > Century, in compliance with all existing laws.
>
> You have not shown, in any way, how this is in compliance with what you call
> laws. Since you show no math, nobody can really know what you are talking
> about.
>
> > as well as being
> > suplimented by the Gaussian extention . The above also solves the
> > identification of the Weak Force which provided completion of the
> > Standard Model as envisioned by Einstein. All is now of a proven
> > nature UNTIL my peers can point to where it deviates from existing
> > laws of Classical Physics.
>
> Proof of your concept is something YOU PROVIDE. Nothing is proven until you
> can show, in a clear manner, what you think you understand about how
> antennas work. If you really have some new idea, you should be able to
> document it and verify it with real work experiments. Your work should also
> be verifiable and able to be repeated independently by others. When that
> happens you may have developed some new scientific understanding.
>
> > It has been fun over the years exposing the self perceived psuedo
> > experts of this newsgroup as well as exposing to the World those who
> > follow and quote only books in the effort to resist change.
>
> I would venture to guess that it is not the others resisting change, rather
> it is their opposition to someone who proposes concepts that ignore and
> contradict the current understanding of antennas. If you have some new idea
> regarding antennas, it should not conflict with the understood state of the
> art, rather, it should expand the state of the art. Your ideas conflict in
> numerous areas which other have pointed out. However, you choose to ignore
> those inputs.
>
> > Bottom line is.
> > If you can't develop a theme from first principles you are just a
> > follower
> > and not a true Engineer.
>
> An engineer does not need to develop all his ideas from first principles.
> Rather, existing ideas are extended. The engineer should know the first
> principles, but deriving everything from first principles is grossly
> inefficient.
>
> But the big thing is you just spout those first principles without really
> understanding them. The true engineer knows what he is talking about.
>
> The true engineer also validates his work with models and prototypes. He

> tests his ideas to show they actually work as expected. You play with models
> (but never adequately share them) and your prototypes have not been shown to
> have real usefulness as an antenna.
>
> When asked to provide results from experiments any good engineer will have,
> or get, data that supports his position. When you are asked, your favorite
> answer is 'I don't work for you'.
>
> You even use this response when someone gives you a suggestion on how to
> verify the cause of a problem you are having.
>
> You are NOT an engineer. You are NOT a scientist. You may have been an
> engineer in the past, but today, you are not showing that ability.
>
> The pity is, you believe what you are doing. That is the only thing that can
> be verified. (Verification comes from the fact you did submit a patent
> application. That is the only thing that can be independently verified.)> Art Unwin
KB9MZ....XG(UK)

I don't know who you are or where you came from into this discussion
that has lasted for years. I did read a portion of what you stated but
you must recognize that this newsgroup
is like a magnet to those who want to sound off without revealing
themselves. It is called free speechand I know not where you fit in! I
am sorry I inadvertently came into your court room your honour. Joe
the judge I presume and not Joe the plumber
That is the best I can do for you until the patent office prints the
rest.
Then you can base all the above accusations that you made prior to the
facts

2027. Re: Spherical radiation pattern

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-15 02:35:15 UTC
From: Registered User <n4jvp@ix.netcom.com>
Message-ID: <i8uta5t4617lhesn2nq6ckju3r8g4cved6@4ax.com>
Source record: 13140

On Mon, 14 Sep 2009 16:30:50 -0700 (PDT), Art Unwin
<arthurunwin@gmail.com> wrote:

>On Sep 14, 5:45ï¿½pm, "Dave" <no...@nowhere.com> wrote:
>> "Art Unwin" <arthurun...@gmail.com> wrote in message
>>
>> news:5e598eba-0e47-4045-8045-f80c6c3f820b@p36g2000vbn.googlegroups.com...
>>
>> >Point to a law that I have violated ï¿½of which you learned about in
>> >academia.
>> >As for me I am at peace with my offering and thus can move on until a
>> >violation of law is presented.
>>
>> then don't you dare go away until you explain how your weak and strong force
>> can have any effect on conduction band electrons when their range of effect
>> is confined to the nucleus.
>
>And why not?

If you're going to go away just go away. I don't understand why you
would expect anyone to accept your fancies as fact based upon the
rambling, incoherent explanations you provide. Your only success is
the audience you have gathered while acting as troll.

2028. Re: Spherical radiation pattern

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-15 02:35:28 UTC
From: tom <news4792@taring.org>
Message-ID: <4aaefd61$0$28118$8046368a@newsreader.iphouse.net>
Source record: 13139

Art Unwin wrote:
>> You are NOT an engineer. You are NOT a scientist. You may have been an
>> engineer in the past, but today, you are not showing that ability.
>>
>> The pity is, you believe what you are doing. That is the only thing that can
>> be verified. (Verification comes from the fact you did submit a patent
>> application. That is the only thing that can be independently verified.)> Art Unwin
KB9MZ....XG(UK)
>
> I don't know who you are or where you came from into this discussion
> that has lasted for years. I did read a portion of what you stated but
> you must recognize that this newsgroup
> is like a magnet to those who want to sound off without revealing
> themselves. It is called free speechand I know not where you fit in! I
> am sorry I inadvertently came into your court room your honour. Joe
> the judge I presume and not Joe the plumber
> That is the best I can do for you until the patent office prints the
> rest.
> Then you can base all the above accusations that you made prior to the
> facts

Years is a fallacy. You showed up with your fantasies quite recently,
not even 2 years ago, at least with the nonsense you currently spout.
If it's true, prove it.

You have gotten farther and farther from reality as time has passed. If
it's true, prove it.

You refuse to give proof for your claims. If it's true, prove it.

You refuse to refute proofs against your claims. If it's true, prove it.

You won't give us a design to test because you know none of them
actually work the way you claim. If it's true, prove it.

Your claims of diamagnetic levitating neutrinos and other nonsense has
nothing to do with reality. If it's true, prove it.

You are a FRAUD. Prove you are not.

And I will predict your answer, if you give one, will be equivalent to
"You need to prove I'm wrong".

tom
K0TAR

2029. Re: Spherical radiation pattern

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-15 02:56:24 UTC
From: Art Unwin <arthurunwin@gmail.com>
Message-ID: <598972b2-b843-45e0-aa69-22b29865a3f2@q14g2000vbi.googlegroups.com>
Source record: 13141

On Sep 14, 9:35 pm, tom <news4...@taring.org> wrote:
> Art Unwin wrote:
> >> You are NOT an engineer. You are NOT a scientist. You may have been an
> >> engineer in the past, but today, you are not showing that ability.
>
> >> The pity is, you believe what you are doing. That is the only thing that can
> >> be verified. (Verification comes from the fact you did submit a patent
> >> application. That is the only thing that can be independently verified.)> Art Unwin
KB9MZ....XG(UK)
>
> > I don't know who you are or where you came from into this discussion
> > that has lasted for years. I did read a portion of what you stated but
> > you must recognize that this newsgroup
> > is like a magnet to those who want to sound off without revealing
> > themselves. It is called free speechand I know not where you fit in! I
> > am sorry I inadvertently came into your court room your honour. Joe
> > the judge I presume and not Joe the plumber
> > That is the best I can do for you until the patent office prints the
> > rest.
> > Then you can base all the above accusations that you made prior to the
> > facts
>
> Years is a fallacy. You showed up with your fantasies quite recently,
> not even 2 years ago, at least with the nonsense you currently spout.
> If it's true, prove it.
>
> You have gotten farther and farther from reality as time has passed. If
> it's true, prove it.
>
> You refuse to give proof for your claims. If it's true, prove it.
>
> You refuse to refute proofs against your claims. If it's true, prove it.
>
> You won't give us a design to test because you know none of them
> actually work the way you claim. If it's true, prove it.
>
> Your claims of diamagnetic levitating neutrinos and other nonsense has
> nothing to do with reality.   If it's true, prove it.
>
> You are a FRAUD. Prove you are not.
>
> And I will predict your answer, if you give one, will be equivalent to
> "You need to prove I'm wrong".
>

> tom
> K0TAR

Gimmi,Gimmi, Gimme. Eat your heart out or get a nights sleep.

2030. Re: Spherical radiation pattern

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-15 03:30:16 UTC
From: Art Unwin <arthurunwin@gmail.com>
Message-ID: <edbc8316-7d59-492a-bfe4-0b7fb0567373@e34g2000vbm.googlegroups.com>
Source record: 13142

On Sep 14, 9:35 pm, Registered User <n4...@ix.netcom.com> wrote:
> On Mon, 14 Sep 2009 16:30:50 -0700 (PDT), Art Unwin
>
>
>
> <arthurun...@gmail.com> wrote:
> >On Sep 14, 5:45 pm, "Dave" <no...@nowhere.com> wrote:
> >> "Art Unwin" <arthurun...@gmail.com> wrote in message
>
> >>news:5e598eba-0e47-4045-8045-f80c6c3f820b@p36g2000vbn.googlegroups.com...
>
> >> >Point to a law that I have violated of which you learned about in
> >> >academia.
> >> >As for me I am at peace with my offering and thus can move on until a
> >> >violation of law is presented.
>
> >> then don't you dare go away until you explain how your weak and strong force
> >> can have any effect on conduction band electrons when their range of effect
> >> is confined to the nucleus.
>
> >And why not?
>
> If you're going to go away just go away. I don't understand why you
> would expect anyone to accept your fancies as fact based upon the
> rambling, incoherent explanations you provide. Your only success is
> the audience you have gathered while acting as troll.

No. "Success" is showing up the self perceived experts.
The question is why is adding a time varying field to the Gaussian law
of statics illegal ?
Or stated another way, what is it illegal by changing a static field
into a dynamic field?
This is not trolling. I am exposing people for what they are and they
are fraustrated
in their inability to show me as wrong or even having a book that
states where and why I am wrong. This is not rambling. Since when is
the truth rambling? If you are an expert take up the challenge in
terms of academics or consult a professor for an answer Either is
acceptable for the purposes of debate of what is true or not
true.Everything I have stated
stands upon this very point So guys, direct yourselves at the root
instead of floundering around in a aimless fashion.
And as far as the size of the audience the bigger the better the
exposure and the more success I have against those who rely on

slander. I want this to be as wide spread as possible instead of
running away. Live with it . I am quite sure that many hams around the
World is following this augument looking for that first person you
will take up the challenge
and provide closure with an answer to this very simple question,
without the fear of recrimination from the group all of which say it
is illegal. Until then......

2031. Re: Ringo Ranger ARX2 vs ARX2b

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-15 03:31:37 UTC
From: nm5k@wt.net
Message-ID: <adf4577a-88be-42e1-a6c0-c628087c0232@j9g2000prh.googlegroups.com>
Source record: 13143

On Sep 14, 5:52 pm, Chuck Forsberg WA7KGX N2469R <c...@omen.com>
wrote:

>
> what is the easiest/cheapest way to add the decoupling?
> Just add some 1/4 wavelength radials 1/2 wavelength below
> the arx2?

The factory version uses some kind of donut thing with
threaded holes for the radials. In my case, I just rigged
up a L plate of sorts that I drilled a hole for a coax union.
I used stiff wire radials that I bent into a short L at the end
and clamped them to the mast at that same plate.
The plate and radials naturally are grounded to the support
mast. You run a 50 inch length of coax from the feed point
down to the union on the radial/union plate. Adjust the
clamp so it's fairly taut. The radials are 20 inches long.
Not much to it. The trickiest part is making a union plate
and clamping it to the mast. Just use your imagination.
Not really critical as long as it's stays in place and grounds
to the mast. You can buy the threaded coax unions at
most of the radio parts stores. Maybe even rat shack.

2032. Re: Spherical radiation pattern

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-15 05:11:06 UTC
From: joe <none@invalid.com>
Message-ID: <iLJrm.495$6f4.122@newsfe08.iad>
Source record: 13147

Art Unwin wrote:

>
> I don't know who you are or where you came from into this discussion
> that has lasted for years. I did read a portion of what you stated

As expected, you ignore that which conflicts with your claims.

> but
> you must recognize that this newsgroup
> is like a magnet to those who want to sound off without revealing
> themselves. It is called free speechand I know not where you fit in! I
> am sorry I inadvertently came into your court room your honour. Joe
> the judge I presume and not Joe the plumber
> That is the best I can do for you until the patent office prints the
> rest.

I have read you patent.

http://www.freshpatents.com/Gaussian-radiative-cluster-dt20080925ptan20080231540.php?type=claims

http://www.freshpatents.com/Gaussian-radiative-cluster-dt20080925ptan20080231540.php?type=description

http://appft.uspto.gov/netacgi/nph-Parser?Sect1=PTO2&Sect2=HITOFF&p=1&u=%2Fnetahtml%2FPTO%2Fsearch-bool.html&r=1&f=G&l=50&co1=AND&d=PG01&s1=%22Gaussian+radiative+cluster%22&OS=%22Gaussian+radiative+cluster%22&RS=%22Gaussian+radiative+cluster%22

It broadly describes a yagi antenna after it has been blown down
by a wind storm. No wonder the patent office has an issue with it.

> Then you can base all the above accusations that you made prior to the
> facts

You patent does not provide any facts that support the claims you
have been making in this group.

2033. Re: Spherical radiation pattern

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-15 05:56:22 UTC
From: joe <none@invalid.com>
Message-ID: <MpKrm.30893$nP6.11794@newsfe25.iad>
Source record: 13149

Szczepan Białek wrote:

>
> "Richard Fry" <rfry@adams.net> wrote
> news:2432a1c8-9efc-4942-a757-8b77aac1e6ec@l35g2000vba.googlegroups.com...
> On Sep 14, 12:41 pm, Szczepan Białek <sz.bia...@wp.pl> wrote:
>
>>> In which parts of antenna the charges acclerate?
>
>>Parts with r-f-current flow, the greatest radiation occurring from
> locations along the radiator where current is greatest.
>
> Your words: ">Only the change in current and charge, over time, produces
> EM radiation."
> At oscillations the current start from zero, accelerate to max speed and
> deccelerate to zero.
> At the max speed no acceleration at all.
>
>>Current flow is near zero at the ends of any unloaded dipole, and at
> the top of any unloaded vertical monopole (even those in directional
> arrays).
>
> At the ends are the max accelerations and the max radiation.
> S*

Your problem is not understanding the motion of charges in the antenna.

Sure, the derivative of a sine wave is 0 at the peak, but this does
not directly translate to the motion of the electrons
at specific locations in the antenna.

Look at the antenna current as an electron oscillating
back and forth between the ends. The position over time is described
by a function. Throughout the entire length, the electron is
changing velocity (accelerating).

Hint: the _voltage_ at the feed point may be described by a sine wave.
Your challenge is to determine how the electrons move in response
to that sine wave.

Part of understanding this is knowing the difference between what is
happing as time progresses at the different parts of the antenna.

The trick to understanding this is to carefully do and understand
the mathematics that are involved.

2034. Re: Spherical radiation pattern

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-15 06:51:44 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <7jdua5lhdl7a47tpuaapg03r4n4n5dss2g@4ax.com>
Source record: 13144

On Mon, 14 Sep 2009 21:35:28 -0500, tom <news4792@taring.org> wrote:

>Years is a fallacy. You showed up with your fantasies quite recently,
>not even 2 years ago, at least with the nonsense you currently spout.
>If it's true, prove it.

Hi Tom,

Actually Art arrived back in the dark ages of the fin-de-siecle. He had just had a patent issued for a new invented antenna and asked if anyone could explain how it worked. (drum-roll)

Several were astonished (as I have already mentioned) to find that his antenna design had reflector (the new and improved model had two) elements that were shorter than the driven element, and the director elements longer.

Well, when no one could fulfill that request, we've been sub-morons ever since. It's a rare honour that he keeps coming back here for the validation of cretins when the Nobel Committee is located in Sweden.

73's
Richard Clark, KB7QHC

2035. Re: Spherical radiation pattern

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-15 06:57:39 UTC
From: Szczepan Białek <sz.bialek@wp.pl>
Message-ID: <h8n2q1ber1@node1.news.atman.pl>
Source record: 13145

"Richard Fry" <rfry@adams.net> wrote
news:2432a1c8-9efc-4942-a757-8b77aac1e6ec@l35g2000vba.googlegroups.com...
On Sep 14, 12:41 pm, Szczepan Biaďž˝ek <sz.bia...@wp.pl> wrote:

>> In which parts of antenna the charges acclerate?

>Parts with r-f-current flow, the greatest radiation occurring from
locations along the radiator where current is greatest.

Your words: ">Only the change in current and charge, over time, produces EM
radiation."
At oscillations the current start from zero, accelerate to max speed and
deccelerate to zero.
At the max speed no acceleration at all.

>Current flow is near zero at the ends of any unloaded dipole, and at
the top of any unloaded vertical monopole (even those in directional
arrays).

At the ends are the max accelerations and the max radiation.
S*

2036. Re: Spherical radiation pattern

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-15 07:21:17 UTC
From: Szczepan Białek <sz.bialek@wp.pl>
Message-ID: <h8n46abmo1@node1.news.atman.pl>
Source record: 13146

"Richard Clark" <kb7qhc@comcast.net>wrote
news:830ta5hk96s85uscd4b2b3p24iv6o18mtm@4ax.com...
> >
> As I stand on the corner waving goodbye to that bus, I fondly recall
> how the logic stood that no current could be found on the tips of
> radiators, thus trim them off to no loss of radiation. It took very
> few decades before Art had then recognized that his new antenna's tips
> had no more current than the full-length one, and he trimmed that one
> once again! New and improved (as the saying goes). Another decade
> passed into the new millennium and he observed that he could extend
> this logic once again to the point where his last design encompassed a
> 160M full sized antenna in the space of two shoe boxes. The TRIUMPH
> OF TITANIC PROPORTIONS.

Is any simillarity between Art and Tesla?
Bill Miller wrote: "*But* Tesla's "antennas" were similar physically to the
well-known "Tesla
Coil." These antennas, in spite of their enormous size, were electrically
"small" when compared with a wavelength. They were essentially a metallic
ball that was fed from the secondary of a resonant transformer. But they
appear to have had fairly large effective bandwidths in spite of their
electrically small size,"
S*

2037. Re: Spherical radiation pattern

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-15 10:52:19 UTC
From: christofire <christofire@btinternet.com>
Message-ID: <scKdnf-kjYd67DLXnZ2dnUVZ8jWdnZ2d@bt.com>
Source record: 13148

"Szczepan Bia&#65533;ek" <sz.bialek@wp.pl> wrote in message
news:h8n2q1ber1@node1.news.atman.pl...
>
> "Richard Fry" <rfry@adams.net> wrote
> news:2432a1c8-9efc-4942-a757-8b77aac1e6ec@l35g2000vba.googlegroups.com...
> On Sep 14, 12:41 pm, Szczepan Bia&#65533;ek <sz.bia...@wp.pl> wrote:
>
>>> In which parts of antenna the charges acclerate?
>
>>Parts with r-f-current flow, the greatest radiation occurring from
> locations along the radiator where current is greatest.
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> radiation."
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>
>>Current flow is near zero at the ends of any unloaded dipole, and at
> the top of any unloaded vertical monopole (even those in directional
> arrays).
>
> At the ends are the max accelerations and the max radiation.
> S*

No, you have it wrong again - the current must be zero at the ends, there is nowhere for it to go, and there cannot be acceleration of charge is there's no current. Please go away and read some books and the NEETS module to which I provided the link.

Chris

2038. Re: Spherical radiation pattern

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-15 11:06:08 UTC
From: christofire <christofire@btinternet.com>
Message-ID: <iJednUlwYe276DLXnZ2dnUVZ8tydnZ2d@bt.com>
Source record: 13150

"Szczepan Bia&#65533;ek" <sz.bialek@wp.pl> wrote in message
news:h8n46abmo1@node1.news.atman.pl...
>
> "Richard Clark" <kb7qhc@comcast.net>wrote
> news:830ta5hk96s85uscd4b2b3p24iv6o18mtm@4ax.com...
>> >
>> As I stand on the corner waving goodbye to that bus, I fondly recall
>> how the logic stood that no current could be found on the tips of
>> radiators, thus trim them off to no loss of radiation. It took very
>> few decades before Art had then recognized that his new antenna's tips
>> had no more current than the full-length one, and he trimmed that one
>> once again! New and improved (as the saying goes). Another decade
>> passed into the new millennium and he observed that he could extend
>> this logic once again to the point where his last design encompassed a
>> 160M full sized antenna in the space of two shoe boxes. The TRIUMPH
>> OF TITANIC PROPORTIONS.
>
> Is any simillarity between Art and Tesla?
> Bill Miller wrote: "*But* Tesla's "antennas" were similar physically to
> the well-known "Tesla
> Coil." These antennas, in spite of their enormous size, were electrically
> "small" when compared with a wavelength. They were essentially a metallic
> ball that was fed from the secondary of a resonant transformer. But they
> appear to have had fairly large effective bandwidths in spite of their
> electrically small size,"
> S*

Tesla created HF transformers. He didn't design them as antennas but, because of their significant length at the operating wavelength, they did act that way to some extent. The metallic ball (often a torus nowadays) is a means of terminating the secondary in a way that reduces spurious discharges - its radius of curvature is large. His ideas to distribute electrical power using Tesla coils were crazy and dangerous, but some argue he was the inspiration for AC distribution at much lower voltages, which is a good thing.

There is very little apparent similarity between Nicola Tesla and that 'Art Unwin' character. Tesla was an inventor who realised amazing feats of hardware construction, some of which worked as intended. 'Professor Unwin' doesn't appear to create anything in hardware - he just talks about his own, paraphysical theories and expects others to believe what he says.

Again, don't believe what I write - go to a technical library and read the stuff that made it into books. You can't rely on what people write on the

internet; there are too many 'Unwins' out there.

Chris

2039. Re: Spherical radiation pattern

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-15 11:31:51 UTC
From: jaroslav lipka <jarolipka@gmail.com>
Message-ID: <4fb769fd-549b-400e-a78b-29abd15deb47@p10g2000prm.googlegroups.com>
Source record: 12951

```
On Sep 15, 7:06 pm, "christofire" <christof...@btinternet.com> wrote:
> "Szczepan Bia³ek" <sz.bia...@wp.pl> wrote in message
>
> news:h8n46a$bmo$1@node1.news.atman.pl...
>
>
>
>
>
> > "Richard Clark" <kb7...@comcast.net>wrote
> >news:830ta5hk96s85uscd4b2b3p24iv6o18mtm@4ax.com...
>
> >> As I stand on the corner waving goodbye to that bus, I fondly recall
> >> how the logic stood that no current could be found on the tips of
> >> radiators, thus trim them off to no loss of radiation.  It took very
> >> few decades before Art had then recognized that his new antenna's tips
> >> had no more current than the full-length one, and he trimmed that one
> >> once again!  New and improved (as the saying goes).  Another decade
> >> passed into the new millennium and he observed that he could extend
> >> this logic once again to the point where his last design encompassed a
> >> 160M full sized antenna in the space of two shoe boxes.  The TRIUMPH
> >> OF TITANIC PROPORTIONS.
>
> > Is any simillarity between Art and Tesla?
> > Bill Miller wrote: "*But* Tesla's "antennas" were similar physically to
> > the well-known "Tesla
> > Coil." These antennas, in spite of their enormous size, were electrically
> > "small" when compared with a wavelength. They were essentially a metallic
> > ball that was fed from the secondary of a resonant transformer. But they
> > appear to have had fairly large effective bandwidths in spite of their
> > electrically small size,"
> > S*
>
> Tesla created HF transformers.  He didn't design them as antennas but,
> because of their significant length at the operating wavelength, they did
> act that way to some extent.  The metallic ball (often a torus nowadays) is
> a means of terminating the secondary in a way that reduces spurious
> discharges - its radius of curvature is large.  His ideas to distribute
> electrical power using Tesla coils were crazy and dangerous, but some argue
> he was the inspiration for AC distribution at much lower voltages, which is
> a good thing.
>
> There is very little apparent similarity between Nicola Tesla and that 'Art
> Unwin' character.  Tesla was an inventor who realised amazing feats of
```

> hardware construction, some of which worked as intended. 'Professor Unwin'
> doesn't appear to create anything in hardware - he just talks about his own,
> paraphysical theories and expects others to believe what he says.
>
> Again, don't believe what I write - go to a technical library and read the
> stuff that made it into books. You can't rely on what people write on the
> internet; there are too many 'Unwins' out there.
>
> Chr

2040. Re: Spherical radiation pattern

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-15 12:13:00 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <qxLrm.8919$j34.2943@newsfe01.iad>
Source record: 12952

joe wrote:
> Look at the antenna current as an electron oscillating
> back and forth between the ends.

At HF frequencies, the electrons move hardly at all, tending
to oscillate back and forth in place. The idea that electrons
race from end to end in an antenna is simply false.

http://c2.com/cgi/wiki?SpeedOfElectrons

"... for a copper wire of radius 1 mm carrying a steady
current of 10 Amps, the drift velocity is only about
0.024 cm/sec!"

For a 100w 10 MHz RF wave, you can divide that distance by
more than 10,000,000. Exactly how far can the electron travel
in 0.05 microsecond?

It is the photons emitted by the electrons that travel at
the speed of light in the medium. That's the fields surrounding
the antenna conductor, not the electrons in the conductor.
--
73, Cecil, IEEE, OOTC, http://www.w5dxp.com

2041. Re: Spherical radiation pattern

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-15 12:15:04 UTC
From: jaroslav lipka <jarolipka@gmail.com>
Message-ID: <b3555336-f48e-4c45-8881-e4f4251c0b6f@y10g2000prf.googlegroups.com>
Source record: 12953

On Sep 15, 7:06 pm, "christofire" <christof...@btinternet.com> wrote:

>
> There is very little apparent similarity between Nicola Tesla and that 'Art
> Unwin' character. Tesla was an inventor who realised amazing feats of
> hardware construction, some of which worked as intended. 'Professor Unwin'
> doesn't appear to create anything in hardware - he just talks about his own,
> paraphysical theories and expects others to believe what he says.
>
> Again, don't believe what I write - go to a technical library and read the
> stuff that made it into books. You can't rely on what people write on the
> internet; there are too many 'Unwins' out there.
>
> Chris

Hi Chris
The question that goes to nub of Arts claim is
why is adding a time varying field to the Gaussian law of statics
illegal? or to state it another way,
How is it illegal to change a static field into a dynamic field?
can you, will you answer the question or are you just sitting on
Richards shirt tail.

Jaro

2042. Re: Spherical radiation pattern

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-15 12:16:20 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <xALrm.8920$j34.7526@newsfe01.iad>
Source record: 12954

Szczepan Białˇżˇek wrote:
> At the ends are the max accelerations and the max radiation.

How can an electron accelerate at at open-circuit?
The acceleration is maximum at the current zero-
crossing with the greatest slope. That's at the
center of a 1/2WL dipole.
--
73, Cecil, IEEE, OOTC, http://www.w5dxp.com

2043. Re: Spherical radiation pattern

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-15 12:20:18 UTC
From: tom <news4792@taring.org>
Message-ID: <4aaf86d7$0$42844$8046368a@newsreader.iphouse.net>
Source record: 12955

Richard Clark wrote:
> On Mon, 14 Sep 2009 21:35:28 -0500, tom <news4792@taring.org> wrote:
>
>> Years is a fallacy. You showed up with your fantasies quite recently,
>> not even 2 years ago, at least with the nonsense you currently spout.
>> If it's true, prove it.
>
> Hi Tom,
>
> Actually Art arrived back in the dark ages of the fin-de-siecle. He
> had just had a patent issued for a new invented antenna and asked if
> anyone could explain how it worked. (drum-roll)
>
> Several were astonished (as I have already mentioned) to find that his
> antenna design had reflector (the new and improved model had two)
> elements that were shorter than the driven element, and the director
> elements longer.
>
> Well, when no one could fulfill that request, we've been sub-morons
> ever since. It's a rare honour that he keeps coming back here for the
> validation of cretins when the Nobel Committee is located in Sweden.
>
> 73's
> Richard Clark, KB7QHC

So are his fantasies new? Or did he have them before and just got a
stump from the patent office?

I truthfully don't remember him being around until lately.

The amazing thing is that his story slowly morphs with time, although it
might be better to say he adds more layers of manure.

tom
K0TAR

2044. Re: Spherical radiation pattern

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-15 12:49:42 UTC
From: jaroslav lipka <jarolipka@gmail.com>
Message-ID: <a4767808-892b-4177-9fb4-20394a79edd7@z4g2000prh.googlegroups.com>
Source record: 12956

On Sep 15, 8:20 pm, tom <news4...@taring.org> wrote:
> Richard Clark wrote:
> > On Mon, 14 Sep 2009 21:35:28 -0500, tom <news4...@taring.org> wrote:
>
> >> Years is a fallacy. You showed up with your fantasies quite recently,
> >> not even 2 years ago, at least with the nonsense you currently spout.
> >> If it's true, prove it.
>
> > Hi Tom,
>
> > Actually Art arrived back in the dark ages of the fin-de-siecle. He
> > had just had a patent issued for a new invented antenna and asked if
> > anyone could explain how it worked. (drum-roll)
>
> > Several were astonished (as I have already mentioned) to find that his
> > antenna design had reflector (the new and improved model had two)
> > elements that were shorter than the driven element, and the director
> > elements longer.
>
> > Well, when no one could fulfill that request, we've been sub-morons
> > ever since. It's a rare honour that he keeps coming back here for the
> > validation of cretins when the Nobel Committee is located in Sweden.
>
> > 73's
> > Richard Clark, KB7QHC
>
> So are his fantasies new? Or did he have them before and just got a
> stump from the patent office?
>
> I truthfully don't remember him being around until lately.
>
> The amazing thing is that his story slowly morphs with time, although it
> might be better to say he adds more layers of manure.
>
> tom
> K0TAR

And you would know seeing as you are full of it,
Art has posed the question can you answer it or are you
going to duck it as you usually do by making demands
and no offerings.

Jaro

2045. Re: Spherical radiation pattern

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-15 13:15:14 UTC
From: christofire <christofire@btinternet.com>
Message-ID: <sLSdnbcXsvL6DjLXnZ2dnUVZ8qmdnZ2d@bt.com>
Source record: 12957

"jaroslav lipka" <jarolipka@gmail.com> wrote in message
news:b3555336-f48e-4c45-8881-e4f4251c0b6f@y10g2000prf.googlegroups.com...
On Sep 15, 7:06 pm, "christofire" <christof...@btinternet.com> wrote:

>
> There is very little apparent similarity between Nicola Tesla and that
> 'Art
> Unwin' character. Tesla was an inventor who realised amazing feats of
> hardware construction, some of which worked as intended. 'Professor Unwin'
> doesn't appear to create anything in hardware - he just talks about his
> own,
> paraphysical theories and expects others to believe what he says.
>
> Again, don't believe what I write - go to a technical library and read the
> stuff that made it into books. You can't rely on what people write on the
> internet; there are too many 'Unwins' out there.
>
> Chris

Hi Chris
The question that goes to nub of Arts claim is
why is adding a time varying field to the Gaussian law of statics
illegal? or to state it another way,
How is it illegal to change a static field into a dynamic field?
can you, will you answer the question or are you just sitting on
Richards shirt tail.

Jaro

I certainly haven't arrived here by sitting on anyone's shirt tails. If
you'd care to read some of the history of this NG you'd see where I come
from.

Your question is not put clearly, although I have seen garbled sentences
like this before in this Usenet group. My first question is: have you
bothered to read any of the respected books on the subject, such as
'Electromagnetics with applications' by Krauss and Fleisch. I suspect if
you had you wouldn't be asking me such a question - it makes no sense! Do I
take it you are referring to Gauss's law for electric fields? Are you aware
that there is a counterpart Gauss's law for magnetic fields? I don't
believe there is such a thing as a single 'Gaussian law of statics' -
someone has made that up!

Gauss's law for electric fields states: the integral of the electric flux
density over a closed surface equals the charge enclosed. This is an
important part of the basis of electrostatics, that is the study of

electrical phenomena caused by static charges, but it applicable at a point in time to any scenario that involves an enclosed charge - which means any electrical conductor, whether it carries a non-moving charge, DC or AC. Gauss's law for magnetic fields states: the integral of the magnetic flux density over a closed surface is equal to zero, and this is an important part of the basis of magnetics, again whether static or changing.

Both of Gauss's laws are embodied in Maxwell's equations and for the normal RF case of sinusoidally-alternating variables a number of different notations can be used, a popular one being phasor notation. As you will know, phasors are vectors that rotate at the same angular frequency but have arbitrary phase relationships and amplitudes - so phasor notation is a compact way of expressing quite a lot. But, in this case, every one of the phasors involved, D the displacement current density, rho the enclosed charge, and B the magnetic flux density, is a variable that alternates with the passage of time. 'Dynamic' variables if you want to call them that.

Neither of Gauss's laws applies directly to strength of an electric or magnetic field but the linkage is the other two of Maxwell's equations based on Ampere's law and Faraday's law, which are both applicable to time-varying fields - 'dynamic fields' if you must.

So ... would you like to put your question more clearly? What do you actually mean by 'to change a static field into a dynamic field' in respect of antennas, where all the electrical and magnetic variables are changing with time, especially the fields? Is this the result of a misunderstanding of the meaning of the word 'electrostatic' - used to differentiate between those phenomena caused by the presence of contained charge and those caused by its movement?

Chris

2046. Re: Spherical radiation pattern

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-15 14:04:50 UTC
From: Registered User <n4jvp@ix.netcom.com>
Message-ID: <mj3va5ln04sb9gtbp15kfo2mi9s64p4au2@4ax.com>
Source record: 12958

On Mon, 14 Sep 2009 20:30:16 -0700 (PDT), Art Unwin
<arthurunwin@gmail.com> wrote:

>On Sep 14, 9:35ï¿½pm, Registered User <n4...@ix.netcom.com> wrote:
>> On Mon, 14 Sep 2009 16:30:50 -0700 (PDT), Art Unwin
>>
>>
>>
>> <arthurun...@gmail.com> wrote:
>> >On Sep 14, 5:45ï¿½pm, "Dave" <no...@nowhere.com> wrote:
>> >> "Art Unwin" <arthurun...@gmail.com> wrote in message
>>
>> >>news:5e598eba-0e47-4045-8045-f80c6c3f820b@p36g2000vbn.googlegroups.com...
>>
>> >> >Point to a law that I have violated ï¿½of which you learned about in
>> >> >academia.
>> >> >As for me I am at peace with my offering and thus can move on until a
>> >> >violation of law is presented.
>>
>> >> then don't you dare go away until you explain how your weak and strong force
>> >> can have any effect on conduction band electrons when their range of effect
>> >> is confined to the nucleus.
>>
>> >And why not?
>>
>> If you're going to go away just go away. I don't understand why you
>> would expect anyone to accept your fancies as fact based upon the
>> rambling, incoherent explanations you provide. Your only success is
>> the audience you have gathered while acting as troll.
>
>No. "Success" is showing up the self perceived experts.
So says the only self-proclaimed expert.
- snip -
>This is not trolling. I am exposing people for what they are and they
>are fraustrated
The only person you're exposing is yourself and not in a good way. It
is extremely difficult to take your arguments seriously or even
understand them given your posts' poor spelling and grammar along with
the abysmal formatting.The spelling variants are understandable, my
schooling started on the banks of the Devon river. Words like
"fraustrated' are something else altogether. That isn't a fat-fingered
error.

Don't blame it one the web interface you post through.Your posts could
be composed and spell-checked in a text editor before the content is

pasted into a web interface. You could
also let
the web interface handle word-wrapping
instead of inserting
seemingly random cr/lf pairs in your
posts.

If you want to be taken seriously you need to present your theories
and arguments in a rational, cohesive manner.

>in their inability to show me as wrong or even having a book that
>states where and why I am wrong.
This is equaled and exceeded by your inability to clearly state and
detail your theories without the use of circular logic. Many times
when a question is asked rather than answer you choose to start a new
thread.

>This is not rambling. Since when is
>the truth rambling?
What makes any of your ramblings the truth? Was your post on GB
standing alone (3 Sept 2009) the truth? You conveniently ignored the
fact that GB's declaration of war came about because Germany had
attacked GB's ally Poland. GB stood beside Poland and not alone.

>If you are an expert take up the challenge in
>terms of academics or consult a professor for an answer Either is
>acceptable for the purposes of debate of what is true or not
>true.Everything I have stated
>stands upon this very point
I have previously suggested that you present your theories directly to
those in the academic community. Why not obtain validation there and
then come back and say 'I told you so'?

>So guys, direct yourselves at the root
>instead of floundering around in a aimless fashion.
>And as far as the size of the audience the bigger the better the
>exposure and the more success I have against those who rely on
>slander. I want this to be as wide spread as possible instead of
>running away. Live with it .
Yet you always run to a new thread.

> I am quite sure that many hams around the
>World is following this augument looking for that first person you
>will take up the challenge
>and provide closure with an answer to this very simple question,
>without the fear of recrimination from the group all of which say it
>is illegal.
Did I mention something about spelling, grammar and formatting?

I'm not certain how "many hams around the World is following this
augument" but that number is insignificantly small relative to the
world-wide amateur community. The size of the amateur community is in

turn insignificantly small relative to the world-wide academic
community. You choice of venue is as questionable as anything else.

selah

2047. Re: Spherical radiation pattern

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-15 14:31:37 UTC
From: Art Unwin <arthurunwin@gmail.com>
Message-ID: <e06936ba-1f7f-4ea1-b146-eebcfe228863@q35g2000vbi.googlegroups.com>
Source record: 12959

```
On Sep 15, 8:15 am, "christofire" <christof...@btinternet.com> wrote:
> "jaroslav lipka" <jaroli...@gmail.com> wrote in message
>
> news:b3555336-f48e-4c45-8881-e4f4251c0b6f@y10g2000prf.googlegroups.com...
> On Sep 15, 7:06 pm, "christofire" <christof...@btinternet.com> wrote:
>
>
>
> > There is very little apparent similarity between Nicola Tesla and that
> > 'Art
> > Unwin' character. Tesla was an inventor who realised amazing feats of
> > hardware construction, some of which worked as intended. 'Professor Unwin'
> > doesn't appear to create anything in hardware - he just talks about his
> > own,
> > paraphysical theories and expects others to believe what he says.
>
> > Again, don't believe what I write - go to a technical library and read the
> > stuff that made it into books. You can't rely on what people write on the
> > internet; there are too many 'Unwins' out there.
>
> > Chris
>
>   Hi Chris
>               The question that goes to nub of Arts claim is
> why is adding a time varying field to the Gaussian law of statics
> illegal?  or to state it another way,
>      How is it illegal to change a static field into a dynamic field?
> can you, will you answer the question or are you just sitting on
> Richards shirt tail.
>
>  Jaro
>
> I certainly haven't arrived here by sitting on anyone's shirt tails.  If
> you'd care to read some of the history of this NG you'd see where I come
> from.
>
> Your question is not put clearly, although I have seen garbled sentences
> like this before in this Usenet group.  My first question is: have you
> bothered to read any of the respected books on the subject, such as
> 'Electromagnetics with applications' by Krauss and Fleisch.  I suspect if
> you had you wouldn't be asking me such a question - it makes no sense!  Do I
> take it you are referring to Gauss's law for electric fields?  Are you aware
> that there is a counterpart Gauss's law for magnetic fields?  I don't
> believe there is such a thing as a single 'Gaussian law of statics' -
```

> someone has made that up!
>
> Gauss's law for electric fields states: the integral of the electric flux
> density over a closed surface equals the charge enclosed. This is an
> important part of the basis of electrostatics, that is the study of
> electrical phenomena caused by static charges, but it applicable at a point
> in time to any scenario that involves an enclosed charge - which means any
> electrical conductor, whether it carries a non-moving charge, DC or AC.
> Gauss's law for magnetic fields states: the integral of the magnetic flux
> density over a closed surface is equal to zero, and this is an important
> part of the basis of magnetics, again whether static or changing.
>
> Both of Gauss's laws are embodied in Maxwell's equations and for the normal
> RF case of sinusoidally-alternating variables a number of different
> notations can be used, a popular one being phasor notation. As you will
> know, phasors are vectors that rotate at the same angular frequency but have
> arbitrary phase relationships and amplitudes - so phasor notation is a
> compact way of expressing quite a lot. But, in this case, every one of the
> phasors involved, D the displacement current density, rho the enclosed
> charge, and B the magnetic flux density, is a variable that alternates with
> the passage of time. 'Dynamic' variables if you want to call them that.
>
> Neither of Gauss's laws applies directly to strength of an electric or
> magnetic field but the linkage is the other two of Maxwell's equations based
> on Ampere's law and Faraday's law, which are both applicable to time-varying
> fields - 'dynamic fields' if you must.
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> actually mean by 'to change a static field into a dynamic field' in respect
> of antennas, where all the electrical and magnetic variables are changing
> with time, especially the fields? Is this the result of a misunderstanding
> of the meaning of the word 'electrostatic' - used to differentiate between
> those phenomena caused by the presence of contained charge and those caused
> by its movement?
>
> Chris

Gauss's law of statics is enclosed particles in equilibrium. Add a
time varying field to same it becomes a dynamic field in equilibrium
and thus equates with Maxwell's laws.

2048. Re: Spherical radiation pattern

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-15 15:21:55 UTC
From: JIMMIE <JIMMIEDEE123@YAHOO.COM>
Message-ID: <a6f10983-c845-444d-8f7f-9721d8b44a26@h30g2000vbr.googlegroups.com>
Source record: 12960

On Sep 14, 11:30 pm, Art Unwin <arthurun...@gmail.com> wrote:
> On Sep 14, 9:35 pm, Registered User <n4...@ix.netcom.com> wrote:
>
>
>
> > On Mon, 14 Sep 2009 16:30:50 -0700 (PDT), Art Unwin
>
> > <arthurun...@gmail.com> wrote:
> > >On Sep 14, 5:45 pm, "Dave" <no...@nowhere.com> wrote:
> > >> "Art Unwin" <arthurun...@gmail.com> wrote in message
>
> > >>news:5e598eba-0e47-4045-8045-f80c6c3f820b@p36g2000vbn.googlegroups.com...
>
> > >> >Point to a law that I have violated of which you learned about in
> > >> >academia.
> > >> >As for me I am at peace with my offering and thus can move on until a
> > >> >violation of law is presented.
>
> > >> then don't you dare go away until you explain how your weak and strong force
> > >> can have any effect on conduction band electrons when their range of effect
> > >> is confined to the nucleus.
>
> > >And why not?
>
> > If you're going to go away just go away. I don't understand why you
> > would expect anyone to accept your fancies as fact based upon the
> > rambling, incoherent explanations you provide. Your only success is
> > the audience you have gathered while acting as troll.
>
> No. "Success" is showing up the self perceived experts.
> The question is why is adding a time varying field to the Gaussian law
> of statics illegal ?
> Or stated another way, what is it illegal by changing a static field
> into a dynamic field?
> This is not trolling. I am exposing people for what they are and they
> are fraustrated
> in their inability to show me as wrong or even having a book that
> states where and why I am wrong. This is not rambling. Since when is
> the truth rambling? If you are an expert take up the challenge in
> terms of academics or consult a professor for an answer Either is
> acceptable for the purposes of debate of what is true or not
> true.Everything I have stated
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> slander. I want this to be as wide spread as possible instead of
> running away. Live with it . I am quite sure that many hams around the
> World is following this augument looking for that first person you
> will take up the challenge
> and provide closure with an answer to this very simple question,
> without the fear of recrimination from the group all of which say it
> is illegal. Until then......

The easiest way to support your hypothesis is to show a plot or data
table showing how time effects a static field. Frankly I don't know
how you could show any relevant data since the word STATIC means
"unchanging over time" . Applying a time variable to something that is
static is pointless.
Time is relevant to DYNAMIC fields but someone else has already taken
care of that for us.

Jimmie

2049. Re: Spherical radiation pattern

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-15 15:24:00 UTC
From: JIMMIE <JIMMIEDEE123@YAHOO.COM>
Message-ID: <ca7644b3-428e-48fa-8900-136a1a7b73c0@r36g2000vbn.googlegroups.com>
Source record: 12961

On Sep 14, 1:56 pm, "christofire" <christof...@btinternet.com> wrote:
> "Szczepan Bia³ek" <sz.bia...@wp.pl> wrote in message
>
> news:h8lk4r$58c$1@node1.news.atman.pl...
>
>
>
> > "Richard Fry" <r...@adams.net> wrote
> >news:c9447e7c-460f-47ff-91e9-af4f168b07b1@p36g2000vbn.googlegroups.com...
>
> - - small snip --
>
>
>
> >>QUOTE
> >>A radio antenna may be defined as the structure associated with the
> > region of transition between a guided wave and a free-space wave, or
> > vice-versa. Antennas convert electrons to photons, or vice-versa.
>
> >>Regardless of antenna type, all involve the same basic principle that
> > radiation is produced by accelerated (or decelerated) charge. The
> > basic equation of radiation may be expressed simply as:
>
> >>IL = Qv   (A m s^-1)
>
> >>where
>
> > I = time-changing current, A s^-1
> > L = length of current element, m
> > Q = charge, C
> > v = time change of velocity which equals the acceleration of the
> > charge, m s^-2
>
> >>Thus, time-changing current radiates and accelerated charge radiates.
>
> > In which parts of antenna the charges acclerate?
> > S*
>
> In all the parts that carry current, of course. Isn't that obvious?
>
> Incidentally, who is A* ? ... the person who wrote:
>
>   Does one wave has many polarizations, or one antenna has many
> polarizations?

> Which one: transmitter or receiver? Could you teach me?
> A*
>
> Chris

Could mean that Art and S are the same person, one does seem to appear when the other disappears.

Jimmie

2050. Re: Spherical radiation pattern

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-15 15:24:14 UTC
From: christofire <christofire@btinternet.com>
Message-ID: <RsKdnau0beo-LDLXnZ2dnUVZ8v-dnZ2d@bt.com>
Source record: 12962

"Art Unwin" <arthurunwin@gmail.com> wrote in message
news:e06936ba-1f7f-4ea1-b146-eebcfe228863@q35g2000vbi.googlegroups.com...
On Sep 15, 8:15 am, "christofire" <christof...@btinternet.com> wrote:
> "jaroslav lipka" <jaroli...@gmail.com> wrote in message
>
> news:b3555336-f48e-4c45-8881-e4f4251c0b6f@y10g2000prf.googlegroups.com...
> On Sep 15, 7:06 pm, "christofire" <christof...@btinternet.com> wrote:

- - snip - -

> I certainly haven't arrived here by sitting on anyone's shirt tails. If
> you'd care to read some of the history of this NG you'd see where I come
> from.
>
> Your question is not put clearly, although I have seen garbled sentences
> like this before in this Usenet group. My first question is: have you
> bothered to read any of the respected books on the subject, such as
> 'Electromagnetics with applications' by Krauss and Fleisch. I suspect if
> you had you wouldn't be asking me such a question - it makes no sense! Do
> I
> take it you are referring to Gauss's law for electric fields? Are you
> aware
> that there is a counterpart Gauss's law for magnetic fields? I don't
> believe there is such a thing as a single 'Gaussian law of statics' -
> someone has made that up!
>
> Gauss's law for electric fields states: the integral of the electric flux
> density over a closed surface equals the charge enclosed. This is an
> important part of the basis of electrostatics, that is the study of
> electrical phenomena caused by static charges, but it applicable at a
> point
> in time to any scenario that involves an enclosed charge - which means any
> electrical conductor, whether it carries a non-moving charge, DC or AC.
> Gauss's law for magnetic fields states: the integral of the magnetic flux
> density over a closed surface is equal to zero, and this is an important
> part of the basis of magnetics, again whether static or changing.
>
> Both of Gauss's laws are embodied in Maxwell's equations and for the
> normal
> RF case of sinusoidally-alternating variables a number of different
> notations can be used, a popular one being phasor notation. As you will
> know, phasors are vectors that rotate at the same angular frequency but
> have
> arbitrary phase relationships and amplitudes - so phasor notation is a
> compact way of expressing quite a lot. But, in this case, every one of the

> phasors involved, D the displacement current density, rho the enclosed
> charge, and B the magnetic flux density, is a variable that alternates
> with
> the passage of time. 'Dynamic' variables if you want to call them that.
>
> Neither of Gauss's laws applies directly to strength of an electric or
> magnetic field but the linkage is the other two of Maxwell's equations
> based
> on Ampere's law and Faraday's law, which are both applicable to
> time-varying
> fields - 'dynamic fields' if you must.
>
> So ... would you like to put your question more clearly? What do you
> actually mean by 'to change a static field into a dynamic field' in
> respect
> of antennas, where all the electrical and magnetic variables are changing
> with time, especially the fields? Is this the result of a misunderstanding
> of the meaning of the word 'electrostatic' - used to differentiate between
> those phenomena caused by the presence of contained charge and those
> caused
> by its movement?
>
> Chris

(written by Unwin)
Gauss's law of statics is enclosed particles in equilibrium. Add a
time varying field to same it becomes a dynamic field in equilibrium
and thus equates with Maxwell's laws.

(written by Chris)
This appears to be paraphysical nonsense, once again.

(a) There are no 'Maxwell's laws' - there are the four Maxwell's equations
based on laws ascribed to the other three authors named above. The term
'eqilibrium' does not feature in, and is not required in, Maxwell's
equations or the laws it is based upon. Radio communication has been based
on Maxwell's equations for more than 100 years without need for
modification.

(b) There is no single 'Gauss's law of statics' as I explained above, and
both of Gauss's laws can be applied to time varying quantities but neither
contains a field.

(c) Both of Gauss's laws are included in Maxwell's equations without
modification - there is no need to 'Add a time varying field to same' - it
is there already in each case.
Once again: Gauss's laws are already applicable to time varying
quantities.

(d) What Maxwell provided was unification of the presentation of the four
equations in differential, integral or phasor form, so the relationships and
linkage between them became clear and they could all be used together to

solve electromagnetic problems.

I think the group is aware by now what I think of the writings of people who claim to know better than Kraus, Jordan & Balmain, Jasik, et al, on the basis of no practical evidence.

Chris

2051. Re: Spherical radiation pattern

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-15 15:36:23 UTC
From: christofire <christofire@btinternet.com>
Message-ID: <LvadnfgRQuDmKTLXnZ2dnUVZ8h2dnZ2d@bt.com>
Source record: 12963

"JIMMIE" <JIMMIEDEE123@YAHOO.COM> wrote in message
news:a6f10983-c845-444d-8f7f-9721d8b44a26@h30g2000vbr.googlegroups.com...
On Sep 14, 11:30 pm, Art Unwin <arthurun...@gmail.com> wrote:
> On Sep 14, 9:35 pm, Registered User <n4...@ix.netcom.com> wrote:
>
>
>
> > On Mon, 14 Sep 2009 16:30:50 -0700 (PDT), Art Unwin
>
> > <arthurun...@gmail.com> wrote:
> > >On Sep 14, 5:45 pm, "Dave" <no...@nowhere.com> wrote:
> > >> "Art Unwin" <arthurun...@gmail.com> wrote in message
>
> > >>news:5e598eba-0e47-4045-8045-f80c6c3f820b@p36g2000vbn.googlegroups.com...
>
> > >> >Point to a law that I have violated of which you learned about in
> > >> >academia.
> > >> >As for me I am at peace with my offering and thus can move on until
> > >> >a
> > >> >violation of law is presented.
>
> > >> then don't you dare go away until you explain how your weak and
> > >> strong force
> > >> can have any effect on conduction band electrons when their range of
> > >> effect
> > >> is confined to the nucleus.
>
> > >And why not?
>
> > If you're going to go away just go away. I don't understand why you
> > would expect anyone to accept your fancies as fact based upon the
> > rambling, incoherent explanations you provide. Your only success is
> > the audience you have gathered while acting as troll.
>
> No. "Success" is showing up the self perceived experts.
> The question is why is adding a time varying field to the Gaussian law
> of statics illegal ?
> Or stated another way, what is it illegal by changing a static field
> into a dynamic field?
> This is not trolling. I am exposing people for what they are and they
> are fraustrated
> in their inability to show me as wrong or even having a book that
> states where and why I am wrong. This is not rambling. Since when is
> the truth rambling? If you are an expert take up the challenge in

> terms of academics or consult a professor for an answer Either is
> acceptable for the purposes of debate of what is true or not
> true.Everything I have stated
> stands upon this very point So guys, direct yourselves at the root
> instead of floundering around in a aimless fashion.
> And as far as the size of the audience the bigger the better the
> exposure and the more success I have against those who rely on
> slander. I want this to be as wide spread as possible instead of
> running away. Live with it . I am quite sure that many hams around the
> World is following this augument looking for that first person you
> will take up the challenge
> and provide closure with an answer to this very simple question,
> without the fear of recrimination from the group all of which say it
> is illegal. Until then......

The easiest way to support your hypothesis is to show a plot or data
table showing how time effects a static field. Frankly I don't know
how you could show any relevant data since the word STATIC means
"unchanging over time" . Applying a time variable to something that is
static is pointless.
Time is relevant to DYNAMIC fields but someone else has already taken
care of that for us.

Jimmie

I've noted, further down the thread, that the term 'electrostatic' is used
in electromagnetics to distinguish between phenomena that depend on the
presence of a quantity of charge (e.g. electric field strength) and
phenomena that depend on the rate of movement of charge (e.g. magnetic field
strength). Perhaps the 'static' part of the word is a misnomer when the
whole system is alternating at a radio frequency, but it is used widely in
the literature. For example, if you look up the components of electric
field around a dipole you'll find close-in reactive components that are
often referred to as 'electrostatic'.

As always: if in doubt, read Kraus.

Chris

2052. Re: Spherical radiation pattern

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-15 15:45:18 UTC
From: Art Unwin <arthurunwin@gmail.com>
Message-ID: <2e5403f3-2be9-4340-9729-97debad473c3@f33g2000vbm.googlegroups.com>
Source record: 12964

On Sep 15, 10:24 am, "christofire" <christof...@btinternet.com> wrote:
> "Art Unwin" <arthurun...@gmail.com> wrote in message
>
> news:e06936ba-1f7f-4ea1-b146-eebcfe228863@q35g2000vbi.googlegroups.com...
> On Sep 15, 8:15 am, "christofire" <christof...@btinternet.com> wrote:
>
> > "jaroslav lipka" <jaroli...@gmail.com> wrote in message
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> >news:b3555336-f48e-4c45-8881-e4f4251c0b6f@y10g2000prf.googlegroups.com...
> > On Sep 15, 7:06 pm, "christofire" <christof...@btinternet.com> wrote:
>
> - - snip - -
>
>
>
> > I certainly haven't arrived here by sitting on anyone's shirt tails. If
> > you'd care to read some of the history of this NG you'd see where I come
> > from.
>
> > Your question is not put clearly, although I have seen garbled sentences
> > like this before in this Usenet group. My first question is: have you
> > bothered to read any of the respected books on the subject, such as
> > 'Electromagnetics with applications' by Krauss and Fleisch. I suspect if
> > you had you wouldn't be asking me such a question - it makes no sense! Do
> > I
> > take it you are referring to Gauss's law for electric fields? Are you
> > aware
> > that there is a counterpart Gauss's law for magnetic fields? I don't
> > believe there is such a thing as a single 'Gaussian law of statics' -
> > someone has made that up!
>
> > Gauss's law for electric fields states: the integral of the electric flux
> > density over a closed surface equals the charge enclosed. This is an
> > important part of the basis of electrostatics, that is the study of
> > electrical phenomena caused by static charges, but it applicable at a
> > point
> > in time to any scenario that involves an enclosed charge - which means any
> > electrical conductor, whether it carries a non-moving charge, DC or AC.
> > Gauss's law for magnetic fields states: the integral of the magnetic flux
> > density over a closed surface is equal to zero, and this is an important
> > part of the basis of magnetics, again whether static or changing.
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> > Both of Gauss's laws are embodied in Maxwell's equations and for the
> > normal

> > RF case of sinusoidally-alternating variables a number of different
> > notations can be used, a popular one being phasor notation. As you will
> > know, phasors are vectors that rotate at the same angular frequency but
> > have
> > arbitrary phase relationships and amplitudes - so phasor notation is a
> > compact way of expressing quite a lot. But, in this case, every one of the
> > phasors involved, D the displacement current density, rho the enclosed
> > charge, and B the magnetic flux density, is a variable that alternates
> > with
> > the passage of time. 'Dynamic' variables if you want to call them that.
>
> > Neither of Gauss's laws applies directly to strength of an electric or
> > magnetic field but the linkage is the other two of Maxwell's equations
> > based
> > on Ampere's law and Faraday's law, which are both applicable to
> > time-varying
> > fields - 'dynamic fields' if you must.
>
> > So ... would you like to put your question more clearly? What do you
> > actually mean by 'to change a static field into a dynamic field' in
> > respect
> > of antennas, where all the electrical and magnetic variables are changing
> > with time, especially the fields? Is this the result of a misunderstanding
> > of the meaning of the word 'electrostatic' - used to differentiate between
> > those phenomena caused by the presence of contained charge and those
> > caused
> > by its movement?
>
> > Chris
>
> (written by Unwin)
> Gauss's law of statics is enclosed particles in equilibrium. Add a
> time varying field to same it becomes a dynamic field in equilibrium
> and thus equates with Maxwell's laws.
>
> (written by Chris)
> This appears to be paraphysical nonsense, once again.
>
> (a) There are no 'Maxwell's laws' - there are the four Maxwell's equations
> based on laws ascribed to the other three authors named above. The term
> 'eqilibrium' does not feature in, and is not required in, Maxwell's
> equations or the laws it is based upon. Radio communication has been based
> on Maxwell's equations for more than 100 years without need for
> modification.
>
> (b) There is no single 'Gauss's law of statics' as I explained above, and
> both of Gauss's laws can be applied to time varying quantities but neither
> contains a field.
>
> (c) Both of Gauss's laws are included in Maxwell's equations without

> modification - there is no need to 'Add a time varying field to same' - it
> is there already in each case.
>   Once again: Gauss's laws are already applicable to time varying
> quantities.
>
> (d) What Maxwell provided was unification of the presentation of the four
> equations in differential, integral or phasor form, so the relationships and
> linkage between them became clear and they could all be used together to
> solve electromagnetic problems.
>
> I think the group is aware by now what I think of the writings of people who
> claim to know better than Kraus, Jordan & Balmain, Jasik, et al, on the
> basis of no practical evidence.
>
> Chris

You still did not put a stake in the ground, just walked around the
question and then walked away. One more chance before I place you in
"unsure". Where in Maxwell's equations does it refer to "particles" or
do they have no place in his views on radiation?
What is your call sign or do you prefer to remain as a unknown?

2053. Re: Spherical radiation pattern

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-15 15:53:47 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <nMOrm.39899$ec2.34778@newsfe13.iad>
Source record: 12965

christofire wrote:
> It is in the nature of a challenge for him to take up if he wishes, and if
> he does then his bet will be in respect of his positive assertion, but, of
> course, he hasn't taken it up yet. If he doesn't take up the challenge then
> nothing new is proved - whichever way you care to interpret that.

Sorry, Chris, I misread your posting. You were not asking
Art to prove a negative which I falsely assumed.
--
73, Cecil, IEEE, OOTC, http://www.w5dxp.com

2054. Re: Spherical radiation pattern

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-15 15:58:55 UTC
From: christofire <christofire@btinternet.com>
Message-ID: <CrGdnfc92eZYJDLXnZ2dnUVZ8tydnZ2d@bt.com>
Source record: 12966

"Art Unwin" <arthurunwin@gmail.com> wrote in message
news:2e5403f3-2be9-4340-9729-97debad473c3@f33g2000vbm.googlegroups.com...
On Sep 15, 10:24 am, "christofire" <christof...@btinternet.com> wrote:
> "Art Unwin" <arthurun...@gmail.com> wrote in message
>
>
> - - snip - -
>
>

You still did not put a stake in the ground, just walked around the
question and then walked away. One more chance before I place you in
"unsure". Where in Maxwell's equations does it refer to "particles" or
do they have no place in his views on radiation?
What is your call sign or do you prefer to remain as a unknown?

Incorrect; I gave a positive answer to the question. My answer was based on
normal physics and identified what must, therefore, be paraphysical or
nonsense (or both). The equations don't make any reference to particles -
as I'm sure you are aware. As to the views of Maxwell, the person, I
daresay you can make them up to your heart's content without provable
challenge.

I don't much care what category you place me in - you already know how I
categorise people who make up their own versions of physics and expect other
to believe them ... and sadly some appear to!

My call sign, if I have one, is none of your business.

Chris

2055. Re: Spherical radiation pattern

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-15 16:20:59 UTC
From: Art Unwin <arthurunwin@gmail.com>
Message-ID: <03c48fc7-a8e8-4777-adc2-c287ed253bdd@s6g2000vbp.googlegroups.com>
Source record: 12967

On Sep 15, 10:21 am, JIMMIE <JIMMIEDEE...@YAHOO.COM> wrote:
> On Sep 14, 11:30 pm, Art Unwin <arthurun...@gmail.com> wrote:
>
>
>
> > On Sep 14, 9:35 pm, Registered User <n4...@ix.netcom.com> wrote:
>
> > > On Mon, 14 Sep 2009 16:30:50 -0700 (PDT), Art Unwin
>
> > > <arthurun...@gmail.com> wrote:
> > > >On Sep 14, 5:45 pm, "Dave" <no...@nowhere.com> wrote:
> > > >> "Art Unwin" <arthurun...@gmail.com> wrote in message
>
> > > >>news:5e598eba-0e47-4045-8045-f80c6c3f820b@p36g2000vbn.googlegroups.com...
>
> > > >> >Point to a law that I have violated of which you learned about in
> > > >> >academia.
> > > >> >As for me I am at peace with my offering and thus can move on until a
> > > >> >violation of law is presented.
>
> > > >> then don't you dare go away until you explain how your weak and strong force
> > > >> can have any effect on conduction band electrons when their range of effect
> > > >> is confined to the nucleus.
>
> > > >And why not?
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> > > If you're going to go away just go away. I don't understand why you
> > > would expect anyone to accept your fancies as fact based upon the
> > > rambling, incoherent explanations you provide. Your only success is
> > > the audience you have gathered while acting as troll.
>
> > No. "Success" is showing up the self perceived experts.
> > The question is why is adding a time varying field to the Gaussian law
> > of statics illegal ?
> > Or stated another way, what is it illegal by changing a static field
> > into a dynamic field?
> > This is not trolling. I am exposing people for what they are and they
> > are fraustrated
> > in their inability to show me as wrong or even having a book that
> > states where and why I am wrong. This is not rambling. Since when is
> > the truth rambling? If you are an expert take up the challenge in
> > terms of academics or consult a professor for an answer Either is
> > acceptable for the purposes of debate of what is true or not
> > true.Everything I have stated

> > stands upon this very point So guys, direct yourselves at the root
> > instead of floundering around in a aimless fashion.
> > And as far as the size of the audience the bigger the better the
> > exposure and the more success I have against those who rely on
> > slander. I want this to be as wide spread as possible instead of
> > running away. Live with it . I am quite sure that many hams around the
> > World is following this augument looking for that first person you
> > will take up the challenge
> > and provide closure with an answer to this very simple question,
> > without the fear of recrimination from the group all of which say it
> > is illegal. Until then......
>
> The easiest way to support your hypothesis is to show a plot or data
> table showing how time effects a static field. Frankly I don't know
> how you could show any relevant data since the word STATIC means
> "unchanging over time" . Applying a time variable to something that is
> static is pointless.
> Time is relevant to DYNAMIC fields but someone else has already taken
> care of that for us.
>
> Jimmie

No, it is not pointless because it enables particles at rest ON
radiators. to be implied. This has been the problem for decades that
has prevented advancement. This extension thus moves away from the
idea of parts removed from the radiator itself. Referring to books is
like saying "all is known". So the question posed is all important
because, if true, it means that a radiator can be any shape size or
elevation as long as all contained is in a state of equilibrium.
Now all avoid the question because they say they don't understand the
word "equilibrium."
So I posed the question to a antenna optimizer where it responded with
a non planar design in equilibrium. Never mind whether it is useable
or not it confirmed the extension given. We have argued for a long
time on a question that contains the word equilibrium rather than
focussing on that which is now revealed. Now along comes this "chris"
who unlike Dr Davis declares he doesn't understand the question(not
equilibrium), tho he has been prolific in advice and insults. So
there has been absolutely no closure on the question thus giving rise
to insults.which all can supply with ease. The question is still
there and does not have academic closure!

2056. Re: Spherical radiation pattern

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-15 16:37:09 UTC
From: Art Unwin <arthurunwin@gmail.com>
Message-ID: <d0e1c87d-58d5-4518-b2be-19a3a048b494@p23g2000vbl.googlegroups.com>
Source record: 12968

On Sep 15, 10:58 am, "christofire" <christof...@btinternet.com> wrote:
> "Art Unwin" <arthurun...@gmail.com> wrote in message
>
> news:2e5403f3-2be9-4340-9729-97debad473c3@f33g2000vbm.googlegroups.com...
> On Sep 15, 10:24 am, "christofire" <christof...@btinternet.com> wrote:
>
> > "Art Unwin" <arthurun...@gmail.com> wrote in message
>
> > - - snip - -
>
> You still did not put a stake in the ground, just walked around the
> question and then walked away. One more chance before I place you in
> "unsure". Where in Maxwell's equations does it refer to "particles" or
> do they have no place in his views on radiation?
> What is your call sign or do you prefer to remain as a unknown?
>
> Incorrect; I gave a positive answer to the question. My answer was based on
> normal physics and identified what must, therefore, be paraphysical or
> nonsense (or both). The equations don't make any reference to particles -
> as I'm sure you are aware. As to the views of Maxwell, the person, I
> daresay you can make them up to your heart's content without provable
> challenge.
>
> I don't much care what category you place me in - you already know how I
> categorise people who make up their own versions of physics and expect other
> to believe them ... and sadly some appear to!
>
> My call sign, if I have one, is none of your business.
>
> Chris

O.k. So the thread as posted in the title is now closed. On the
question on the Gauss extension this is not understood so that is also
now closed. Insults? Well they can go on for ever as this is the main
attraction for its members.

2057. Re: Spherical radiation pattern

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-15 16:43:00 UTC
From: Szczepan Białek <sz.bialek@wp.pl>
Message-ID: <h8o53b$hd9$1@node1.news.atman.pl>
Source record: 12969

"JIMMIE" <JIMMIEDEE123@YAHOO.COM> wrote
news:ca7644b3-428e-48fa-8900-136a1a7b73c0@r36g2000vbn.googlegroups.com...
On Sep 14, 1:56 pm, "christofire" <christof...@btinternet.com> wrote:
> "Szczepan Biaďż˝ek" <sz.bia...@wp.pl> wrote in message
>
> news:h8lk4r$58c$1@node1.news.atman.pl...
>
>
>
> > "Richard Fry" <r...@adams.net> wrote
> >news:c9447e7c-460f-47ff-91e9-af4f168b07b1@p36g2000vbn.googlegroups.com...
>
> - - small snip --
>
>
>
> >>QUOTE
> >>A radio antenna may be defined as the structure associated with the
> > region of transition between a guided wave and a free-space wave, or
> > vice-versa. Antennas convert electrons to photons, or vice-versa.
>
> >>Regardless of antenna type, all involve the same basic principle that
> > radiation is produced by accelerated (or decelerated) charge. The
> > basic equation of radiation may be expressed simply as:
>
> >>IL = Qv (A m s^-1)
>
> >>where
>
> > I = time-changing current, A s^-1
> > L = length of current element, m
> > Q = charge, C
> > v = time change of velocity which equals the acceleration of the
> > charge, m s^-2
>
> >>Thus, time-changing current radiates and accelerated charge radiates.
>
> > In which parts of antenna the charges acclerate?
> > S*
>
> In all the parts that carry current, of course. Isn't that obvious?
>
> Incidentally, who is A* ? ... the person who wrote:
>

> Does one wave has many polarizations, or one antenna has many
> polarizations?
> Which one: transmitter or receiver? Could you teach me?
> A*
>
> Chris

>Could mean that Art and S are the same person, one does seem to appear
when the other disappears.

You are right. Few mans ago I was writting that Gauss law is enough to do
antennas. Of course not this for magnetism.
Static charge produces static electric field and pulsed (in the end of the
antena) alternating field. It is radiation. For me there are ether vaves.
For Art photons or something else.
S*

2058. Re: Spherical radiation pattern

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-15 16:51:28 UTC
From: christofire <christofire@btinternet.com>
Message-ID: <VuednR7s2ZGJWzLXnZ2dnUVZ8lidnZ2d@bt.com>
Source record: 12970

"Art Unwin" <arthurunwin@gmail.com> wrote in message
news:d0e1c87d-58d5-4518-b2be-19a3a048b494@p23g2000vbl.googlegroups.com...
On Sep 15, 10:58 am, "christofire" <christof...@btinternet.com> wrote:
> "Art Unwin" <arthurun...@gmail.com> wrote in message
>
> news:2e5403f3-2be9-4340-9729-97debad473c3@f33g2000vbm.googlegroups.com...
> On Sep 15, 10:24 am, "christofire" <christof...@btinternet.com> wrote:
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> > "Art Unwin" <arthurun...@gmail.com> wrote in message
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> You still did not put a stake in the ground, just walked around the
> question and then walked away. One more chance before I place you in
> "unsure". Where in Maxwell's equations does it refer to "particles" or
> do they have no place in his views on radiation?
> What is your call sign or do you prefer to remain as a unknown?
>
> Incorrect; I gave a positive answer to the question. My answer was based
> on
> normal physics and identified what must, therefore, be paraphysical or
> nonsense (or both). The equations don't make any reference to particles -
> as I'm sure you are aware. As to the views of Maxwell, the person, I
> daresay you can make them up to your heart's content without provable
> challenge.
>
> I don't much care what category you place me in - you already know how I
> categorise people who make up their own versions of physics and expect
> other
> to believe them ... and sadly some appear to!
>
> My call sign, if I have one, is none of your business.
>
> Chris

O.k. So the thread as posted in the title is now closed. On the
question on the Gauss extension this is not understood so that is also
now closed. Insults? Well they can go on for ever as this is the main
attraction for its members.

What do you think gives you the power or the right to close a thread - is
this something written in the Usenet 'code of practice'? Surely, in
practice it will continue until all aspects of discussion have reached their
conclusions and more interesting threads have appeared.

Do yourself a favour Art, visit a technical library, read and try to understand the real physics on which radio communication has been based. If you have problems with any of the parts that are well documented then there will be plenty of folk here who will be willing and able to illuminate, including some with less time on their hands than myself who don't post very often but have extensive knowledge. I think you will find it fascinating how intelligence can be passed between two points in space without any need for the passage of matter between them - all puns accepted!

Chris

2059. Re: Spherical radiation pattern

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-15 16:53:45 UTC
From: Szczepan Białek <sz.bialek@wp.pl>
Message-ID: <h8o5nfhfg1@node1.news.atman.pl>
Source record: 12971

"joe" <none@invalid.com>wrote news:MpKrm.30893$nP6.11794@newsfe25.iad...
>
> Your problem is not understanding the motion of charges in the antenna.
>
> Sure, the derivative of a sine wave is 0 at the peak,

It is the math

>but this does
> not directly translate to the motion of the electrons
> at specific locations in the antenna.
>
> Look at the antenna current as an electron oscillating
> back and forth between the ends. The position over time is described
> by a function. Throughout the entire length, the electron is
> changing velocity (accelerating).
>
> Hint: the _voltage_ at the feed point may be described by a sine wave.
> Your challenge is to determine how the electrons move in response
> to that sine wave.
>
> Part of understanding this is knowing the difference between what is
> happing as time progresses at the different parts of the antenna.
>
> The trick to understanding this is to carefully do and understand
> the mathematics that are involved.

It is not easy to understand you. Math says that "the derivative of a sine
wave is 0 at the peak," next that it is not true and next that math is
always right.

Electrons flow free in feed line and are compressed in ends. After short
rest they come back to supply unit.
S*

>
>

2060. Re: Spherical radiation pattern

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-15 16:53:48 UTC
From: christofire <christofire@btinternet.com>
Message-ID: <AZydnej7wa09WzLXnZ2dnUVZ8vCdnZ2d@bt.com>
Source record: 12972

"Szczepan Bia&#65533;ek" <sz.bialek@wp.pl> wrote in message
news:h8o53b$hd9$1@node1.news.atman.pl...
>
> "JIMMIE" <JIMMIEDEE123@YAHOO.COM> wrote
> news:ca7644b3-428e-48fa-8900-136a1a7b73c0@r36g2000vbn.googlegroups.com...
> On Sep 14, 1:56 pm, "christofire" <christof...@btinternet.com> wrote:
>> "Szczepan Bia&#65533;ek" <sz.bia...@wp.pl> wrote in message
>>
>> news:h8lk4r$58c$1@node1.news.atman.pl...
>>
>>
>>
>> > "Richard Fry" <r...@adams.net> wrote
>> >news:c9447e7c-460f-47ff-91e9-af4f168b07b1@p36g2000vbn.googlegroups.com...
>>
>> - - small snip --
>>
>>
>>
>> >>QUOTE
>> >>A radio antenna may be defined as the structure associated with the
>> > region of transition between a guided wave and a free-space wave, or
>> > vice-versa. Antennas convert electrons to photons, or vice-versa.
>>
>> >>Regardless of antenna type, all involve the same basic principle that
>> > radiation is produced by accelerated (or decelerated) charge. The
>> > basic equation of radiation may be expressed simply as:
>>
>> >>IL = Qv (A m s^-1)
>>
>> >>where
>>
>> > I = time-changing current, A s^-1
>> > L = length of current element, m
>> > Q = charge, C
>> > v = time change of velocity which equals the acceleration of the
>> > charge, m s^-2
>>
>> >>Thus, time-changing current radiates and accelerated charge radiates.
>>
>> > In which parts of antenna the charges acclerate?
>> > S*
>>

>> In all the parts that carry current, of course. Isn't that obvious?
>>
>> Incidentally, who is A* ? ... the person who wrote:
>>
>> Does one wave has many polarizations, or one antenna has many
>> polarizations?
>> Which one: transmitter or receiver? Could you teach me?
>> A*
>>
>> Chris
>
>>Could mean that Art and S are the same person, one does seem to appear
> when the other disappears.
>
> You are right. Few mans ago I was writting that Gauss law is enough to do
> antennas. Of course not this for magnetism.
> Static charge produces static electric field and pulsed (in the end of the
> antena) alternating field. It is radiation. For me there are ether vaves.
> For Art photons or something else.
> S*

Which one of Gauss's two laws?

Chris

2061. Re: Spherical radiation pattern

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-15 16:58:32 UTC
From: Szczepan Białek <sz.bialek@wp.pl>
Message-ID: <h8o60ehgg1@node1.news.atman.pl>
Source record: 12973

"Cecil Moore" <nospam@w5dxp.com> wrote
news:qxLrm.8919$j34.2943@newsfe01.iad...
> joe wrote:
>> Look at the antenna current as an electron oscillating
>> back and forth between the ends.
>
> At HF frequencies, the electrons move hardly at all, tending
> to oscillate back and forth in place. The idea that electrons
> race from end to end in an antenna is simply false.
>
> http://c2.com/cgi/wiki?SpeedOfElectrons
>
> "... for a copper wire of radius 1 mm carrying a steady
> current of 10 Amps, the drift velocity is only about
> 0.024 cm/sec!"
>
> For a 100w 10 MHz RF wave, you can divide that distance by
> more than 10,000,000. Exactly how far can the electron travel
> in 0.05 microsecond?
>
> It is the photons emitted by the electrons that travel at
> the speed of light in the medium. That's the fields surrounding
> the antenna conductor, not the electrons in the conductor.

It is for students. Hall and others developed technics to estimate how many
electrons are free in different metals.
It is not one per atom.
S*
> --
> 73, Cecil, IEEE, OOTC, http://www.w5dxp.com

2062. Re: Spherical radiation pattern

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-15 17:00:36 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <fLPrm.39902$ec2.13137@newsfe13.iad>
Source record: 12974

Art Unwin wrote:
> Where in Maxwell's equations does it refer to "particles" or
> do they have no place in his views on radiation?

Linear math fails at the nonlinear point. There are
lots of examples. This is just one of them.
--
73, Cecil, IEEE, OOTC, http://www.w5dxp.com

2063. Re: Spherical radiation pattern

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-15 17:06:27 UTC
From: Szczepan Białek <sz.bialek@wp.pl>
Message-ID: <h8o6fg$hi5$1@node1.news.atman.pl>
Source record: 12975

"christofire" <christofire@btinternet.com> wrote
news:scKdnf-kjYd67DLXnZ2dnUVZ8jWdnZ2d@bt.com...
>
> "Szczepan Biaďż˝ek" <sz.bialek@wp.pl> wrote in message
>>>
>> At the ends are the max accelerations and the max radiation.
>> S*
>
> No, you have it wrong again - the current must be zero at the ends, there
> is nowhere for it to go, and there cannot be acceleration of charge is
> there's no current.

Current will be when charges start their flow back to the supply. The
acceleration is close to end.

> Please go away and read some books and the NEETS module to
which I provided the link.

Most of wrote that radiation is not fully known. I am trying to explain you.
S*

2064. Re: Spherical radiation pattern

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-15 17:07:04 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <gRPrm.39906$ec2.31223@newsfe13.iad>
Source record: 12976

Art Unwin wrote:
> ... it enables particles at rest ON radiators.

As far as RF is concerned, free electron particles indeed
do rest ON radiators. It's called "skin effect".
--
73, Cecil, IEEE, OOTC, http://www.w5dxp.com

2065. Re: Spherical radiation pattern

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-15 17:12:11 UTC
From: Szczepan Białek <sz.bialek@wp.pl>
Message-ID: <h8o6q1hll1@node1.news.atman.pl>
Source record: 12977

Uďż˝ytkownik "Cecil Moore" <nospam@w5dxp.com> napisaďż˝ w wiadomoďż˝ci
news:xALrm.8920$j34.7526@newsfe01.iad...
> Szczepan Biaďż˝ek wrote:
>> At the ends are the max accelerations and the max radiation.
>
> How can an electron accelerate at at open-circuit?
> The acceleration is maximum at the current zero-
> crossing with the greatest slope. That's at the
> center of a 1/2WL dipole.

Accelerate and deccelerate. It is only possible with compressible electrons
(as electrn gas). It is impossible in Heavisde's hydraulic analogy.
S*

2066. Re: Spherical radiation pattern

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-15 17:13:07 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <OWPrm.39909$ec2.28847@newsfe13.iad>
Source record: 12978

Szczepan Białż˝ek wrote:
> Electrons flow free in feed line and are compressed in ends. After short
> rest they come back to supply unit.

How can they possibly do that while traveling at
"0.024 cm/sec"?
--
73, Cecil, IEEE, OOTC, http://www.w5dxp.com

2067. Re: Spherical radiation pattern

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-15 17:14:56 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <sYPrm.39910$ec2.2383@newsfe13.iad>
Source record: 12979

Szczepan Białż˝ek wrote:
> It is for students. Hall and others developed technics to estimate how
> many electrons are free in different metals.
> It is not one per atom.

Nobody said it is "one per atom".
--
73, Cecil, IEEE, OOTC, http://www.w5dxp.com

2068. Re: Spherical radiation pattern

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-15 17:20:48 UTC
From: Szczepan Białek <sz.bialek@wp.pl>
Message-ID: <h8o7a9hna1@node1.news.atman.pl>
Source record: 12980

Uďż˝ytkownik "christofire" <christofire@btinternet.com> napisaďż˝ w wiadomoďż˝ci
news:iJednUlwYe276DLXnZ2dnUVZ8tydnZ2d@bt.com...
>
> "Szczepan Biaďż˝ek" <sz.bialek@wp.pl> wrote in message
> news:h8n46abmo1@node1.news.atman.pl...
>>
>> "Richard Clark" <kb7qhc@comcast.net>wrote
>> news:830ta5hk96s85uscd4b2b3p24iv6o18mtm@4ax.com...
>>> >
>>> As I stand on the corner waving goodbye to that bus, I fondly recall
>>> how the logic stood that no current could be found on the tips of
>>> radiators, thus trim them off to no loss of radiation. It took very
>>> few decades before Art had then recognized that his new antenna's tips
>>> had no more current than the full-length one, and he trimmed that one
>>> once again! New and improved (as the saying goes). Another decade
>>> passed into the new millennium and he observed that he could extend
>>> this logic once again to the point where his last design encompassed a
>>> 160M full sized antenna in the space of two shoe boxes. The TRIUMPH
>>> OF TITANIC PROPORTIONS.
>>
>> Is any simillarity between Art and Tesla?
>> Bill Miller wrote: "*But* Tesla's "antennas" were similar physically to
>> the well-known "Tesla
>> Coil." These antennas, in spite of their enormous size, were electrically
>> "small" when compared with a wavelength. They were essentially a metallic
>> ball that was fed from the secondary of a resonant transformer. But they
>> appear to have had fairly large effective bandwidths in spite of their
>> electrically small size,"
>> S*
>
>
> Tesla created HF transformers. He didn't design them as antennas but,
> because of their significant length at the operating wavelength, they did
> act that way to some extent. The metallic ball (often a torus nowadays)
> is a means of terminating the secondary in a way that reduces spurious
> discharges - its radius of curvature is large.

It is than "tipping".

> His ideas to distribute electrical power using Tesla coils were crazy and
> dangerous, but some argue he was the inspiration for AC distribution at
> much lower voltages, which is a good thing.
>
> There is very little apparent similarity between Nicola Tesla and that
> 'Art Unwin' character. Tesla was an inventor who realised amazing feats

> of hardware construction, some of which worked as intended. 'Professor
> Unwin' doesn't appear to create anything in hardware - he just talks about
> his own, paraphysical theories and expects others to believe what he says.
>
> Again, don't believe what I write - go to a technical library and read the
> stuff that made it into books. You can't rely on what people write on the
> internet; there are too many 'Unwins' out there.

In library are very old things. Will be there about tipping?
S*

2069. Re: Spherical radiation pattern

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-15 17:22:07 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <0bgva5l4a27aaipmt1lrqtlis1orvomc6t@4ax.com>
Source record: 12981

On Tue, 15 Sep 2009 07:20:18 -0500, tom <news4792@taring.org> wrote:

>So are his fantasies new?

Hi Tom,

By no means. The only thing that has changed over the years is that
he stopped his lamentations of being a martyr duct-taped to his
alumin(i)um crosses.

73's
Richard Clark, KB7QHC

2070. Re: Spherical radiation pattern

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-15 17:23:23 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <ioiva5dvb5a388i0opgjk3vmbckl3hlavp@4ax.com>
Source record: 12982

On Tue, 15 Sep 2009 11:52:19 +0100, "christofire"
<christofire@btinternet.com> wrote:

>No, you have it wrong again - the current must be zero at the ends, there is
>nowhere for it to go, and there cannot be acceleration of charge is there's
>no current. Please go away and read some books and the NEETS module to
>which I provided the link.
>
>Chris

Hi Chris,

This mistake is being compounded daily, so it seems. The "absence" of
current on any particular portion of the antenna is the superposition
of two currents flowing - hence the term "standing wave antenna."
Hence there is something of a paradox that where two currents reside
(the metal elements are continuous and conductive) it is said no
current flows. There is a correlation between this superposed
solution and the pattern of the far-field pattern but that does not
lead to the conclusion that there is no "acceleration" of charge at
the ends. After-all, the abundant alternating voltage at those same
ends is also charge, n'est pas? It could be as easily argued that
superposed voltage nodes also define the pattern of the far-field
pattern.

73's
Richard Clark, KB7QHC

2071. Re: Spherical radiation pattern

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-15 17:28:34 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <3fjva5tumfasmgnpph8op0jhc7l5npjklq@4ax.com>
Source record: 12983

On Tue, 15 Sep 2009 09:21:17 +0200, Szczepan Bia?ek <sz.bialek@wp.pl>
wrote:

>Is any simillarity between Art and Tesla?

Do you have a photo of Art with a mustache?

73's
Richard Clark, KB7QHC

2072. Re: Spherical radiation pattern

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-15 17:30:42 UTC
From: Szczepan Białek <sz.bialek@wp.pl>
Message-ID: <h8o7sohpa1@node1.news.atman.pl>
Source record: 12984

```
"christofire" <christofire@btinternet.com> napisaďż˝ w wiadomoďż˝ci
news:AZydnej7wa09WzLXnZ2dnUVZ8vCdnZ2d@bt.com...
>
> "Szczepan Biaďż˝ek" <sz.bialek@wp.pl> wrote in message
> news:h8o53b$hd9$1@node1.news.atman.pl...
>>
>> "JIMMIE" <JIMMIEDEE123@YAHOO.COM> wrote
>> news:ca7644b3-428e-48fa-8900-136a1a7b73c0@r36g2000vbn.googlegroups.com...
>> On Sep 14, 1:56 pm, "christofire" <christof...@btinternet.com> wrote:
>>> "Szczepan Biaďż˝ek" <sz.bia...@wp.pl> wrote in message
>>>
>>> news:h8lk4r$58c$1@node1.news.atman.pl...
>>>
>>>
>>>
>>> > "Richard Fry" <r...@adams.net> wrote
>>> >news:c9447e7c-460f-47ff-91e9-af4f168b07b1@p36g2000vbn.googlegroups.com...
>>>
>>> - - small snip --
>>>
>>>
>>>
>>> >>QUOTE
>>> >>A radio antenna may be defined as the structure associated with the
>>> > region of transition between a guided wave and a free-space wave, or
>>> > vice-versa. Antennas convert electrons to photons, or vice-versa.
>>>
>>> >>Regardless of antenna type, all involve the same basic principle that
>>> > radiation is produced by accelerated (or decelerated) charge. The
>>> > basic equation of radiation may be expressed simply as:
>>>
>>> >>IL = Qv (A m s^-1)
>>>
>>> >>where
>>>
>>> > I = time-changing current, A s^-1
>>> > L = length of current element, m
>>> > Q = charge, C
>>> > v = time change of velocity which equals the acceleration of the
>>> > charge, m s^-2
>>>
>>> >>Thus, time-changing current radiates and accelerated charge radiates.
>>>
>>> > In which parts of antenna the charges acclerate?
```

>>> > S*
>>>
>>> In all the parts that carry current, of course. Isn't that obvious?
>>>
>>> Incidentally, who is A* ? ... the person who wrote:
>>>
>>> Does one wave has many polarizations, or one antenna has many
>>> polarizations?
>>> Which one: transmitter or receiver? Could you teach me?
>>> A*
>>>
>>> Chris
>>
>>>Could mean that Art and S are the same person, one does seem to appear
>> when the other disappears.
>>
>> You are right. Few mans ago I was writting that Gauss law is enough to do
>> antennas. Of course not this for magnetism.
>> Static charge produces static electric field and pulsed (in the end of
>> the antena) alternating field. It is radiation. For me there are ether
>> vaves. For Art photons or something else.
>> S*
>
>
> Which one of Gauss's two laws?
Above is wrote: "Of course not this for magnetism". The electric one.
S*

2073. Re: Spherical radiation pattern

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-15 17:31:03 UTC
From: JIMMIE <JIMMIEDEE123@YAHOO.COM>
Message-ID: <028a391c-40cf-4609-b80c-cd516bf6eacf@h30g2000vbr.googlegroups.com>
Source record: 12985

On Sep 15, 8:15 am, jaroslav lipka <jaroli...@gmail.com> wrote:
> On Sep 15, 7:06 pm, "christofire" <christof...@btinternet.com> wrote:
>
>
>
> > There is very little apparent similarity between Nicola Tesla and that 'Art
> > Unwin' character. Tesla was an inventor who realised amazing feats of
> > hardware construction, some of which worked as intended. 'Professor Unwin'
> > doesn't appear to create anything in hardware - he just talks about his own,
> > paraphysical theories and expects others to believe what he says.
>
> > Again, don't believe what I write - go to a technical library and read the
> > stuff that made it into books. You can't rely on what people write on the
> > internet; there are too many 'Unwins' out there.
>
> > Chris
>
>   Hi Chris
>   The question that goes to nub of Arts claim is
> why is adding a time varying field to the Gaussian law of statics
> illegal? or to state it another way,
>   How is it illegal to change a static field into a dynamic field?
> can you, will you answer the question or are you just sitting on
> Richards shirt tail.
>
> Jaro

Applying time to a static field doesn't make a static field a dynamic
field.

Jimmie

2074. Re: Spherical radiation pattern

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-15 17:33:57 UTC
From: Szczepan Białek <sz.bialek@wp.pl>
Message-ID: <h8o82r$hq3$1@node1.news.atman.pl>
Source record: 12986

Uďż˝ytkownik "Cecil Moore" <nospam@w5dxp.com> napisaďż˝ w wiadomoďż˝ci
news:OWPrm.39909$ec2.28847@newsfe13.iad...
> Szczepan Biaďż˝ek wrote:
>> Electrons flow free in feed line and are compressed in ends. After short
>> rest they come back to supply unit.
>
> How can they possibly do that while traveling at
> "0.024 cm/sec"?

Only in students homework.
S*

2075. Re: Spherical radiation pattern

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-15 17:42:26 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <17kva59o85dh9i3dtu73uu8bqne72hilhr@4ax.com>
Source record: 12987

On Tue, 15 Sep 2009 05:15:04 -0700 (PDT), jaroslav lipka
<jarolipka@gmail.com> wrote:

>The question that goes to nub of Arts claim is
>why is adding a time varying field to the Gaussian law of statics
>illegal?

Maxwell did exactly that and called it Gauss' Law (Gauss did not do it in his law that he did not call Gauss' Law). History came along and uses the same name for two laws. Maxwell acknowledged Gauss' contribution for statics and applied time to them to arrive at dynamics (and honored Gauss by naming his dynamics Gauss' Law). So History and Maxwell have long observed TWO Gauss' laws - each distinctive as the first being static, the second dynamic.

Art has never gotten past this historical hiccup.

73's
Richard Clark, KB7QHC

2076. Re: Spherical radiation pattern

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-15 19:00:57 UTC
From: Art Unwin <arthurunwin@gmail.com>
Message-ID: <4ea30a8d-0d32-464c-b7cd-b83b00bc4bd7@o13g2000vbl.googlegroups.com>
Source record: 12988

On Sep 15, 12:42 pm, Richard Clark <kb7...@comcast.net> wrote:
> On Tue, 15 Sep 2009 05:15:04 -0700 (PDT), jaroslav lipka
>
> <jaroli...@gmail.com> wrote:
> >The question that goes to nub of Arts claim is
> >why is adding a time varying field to the Gaussian law of statics
> >illegal?
>
> Maxwell did exactly that and called it Gauss' Law (Gauss did not do it
> in his law that he did not call Gauss' Law). History came along and
> uses the same name for two laws. Maxwell acknowledged Gauss'
> contribution for statics and applied time to them to arrive at
> dynamics (and honored Gauss by naming his dynamics Gauss' Law). So
> History and Maxwell have long observed TWO Gauss' laws - each
> distinctive as the first being static, the second dynamic.
>
> Art has never gotten past this historical hiccup.
>
> 73's
> Richard Clark, KB7QHC

At last, at last. Richard has turned around after giving a drubbing to
Dr Davis and now
comes around to stamp the extension as legal. In fact he states it was
always like that!
Now will the group as a whole follow his lead and do a spin in
thinking? You can, you can
add an extension of a time varying field to a static field to turn it
into a dynamic field.
I will leave the group to turn to Richard and question his present
motives and advise him to reverse his new posture
OLAY OLAY Dead men walking

2077. Re: Spherical radiation pattern

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-15 19:02:41 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <txRrm.5277$tG1.1250@newsfe22.iad>
Source record: 12989

Szczepan Białż˝ek wrote:
>
> "Cecil Moore" <nospam@w5dxp.com> wrote:
>> How can they possibly do that while traveling at
>> "0.024 cm/sec"?
>
> Only in students homework.

So what speed do your measurements indicate for
free electrons on an antenna?
--
73, Cecil, IEEE, OOTC, http://www.w5dxp.com

2078. Re: Spherical radiation pattern

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-15 19:47:04 UTC
From: christofire <christofire@btinternet.com>
Message-ID: <B_ydnb-S9ZGhcjLXnZ2dnUVZ8qidnZ2d@bt.com>
Source record: 12990

"Szczepan Bia&#65533;ek" <sz.bialek@wp.pl> wrote in message
news:h8o7sohpa1@node1.news.atman.pl...
>
>>>> - - moderate-sized snip --
>>>>
>>>
>>> You are right. Few mans ago I was writting that Gauss law is enough to
>>> do antennas. Of course not this for magnetism.
>>> Static charge produces static electric field and pulsed (in the end of
>>> the antena) alternating field. It is radiation. For me there are ether
>>> vaves. For Art photons or something else.
>>> S*
>>
>>
>> Which one of Gauss's two laws?
> Above is wrote: "Of course not this for magnetism". The electric one.
> S*

Well that's not correct - you can't 'do antennas' with Guass's law for electric field alone. You've already been told that radiation requires acceleration and deceleration of charge, that is, alternating current, which creates a magnetic field and the strength of this field is related to the amplitude of the current by Ampere's (circuital) law, which is the basis for one of Maxwell's equations.

In fact, it takes current (i.e. movement of charge) to create potential differences so, even if you are encumbered with 'electrostatic blinkers', the current comes first and is more fundamental.

Chris

2079. Re: Spherical radiation pattern

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-15 19:53:35 UTC
From: Art Unwin <arthurunwin@gmail.com>
Message-ID: <4c111948-7a39-4924-89a5-54268ba6ad8c@q35g2000vbi.googlegroups.com>
Source record: 12991

On Sep 15, 12:07 pm, Cecil Moore <nos...@w5dxp.com> wrote:
> Art Unwin wrote:
> > ... it enables particles at rest ON radiators.
>
> As far as RF is concerned, free electron particles indeed
> do rest ON radiators. It's called "skin effect".
> --
> 73, Cecil, IEEE, OOTC, http://www.w5dxp.com

Cecil, After all this time of taking no decision who lost itat the
last minuite
Skin effect refers to current flow along the aluminum. It even shows
witness of this by inlaying circular grooves in its surface. This by
the way is a measurement tool in non destructive measurement. This
current method provides resistive impedance which signifies energy
lost. You then have another component which is termed radiation
resistance which points to energy applied to to create radiation by
the launching of the particles. When you do your fancy playing with
EZNEC you will notice that as the impedance goes down the radiation
increases. It will continue to do so while the impedance goes down as
a result of more current flowing outside the aluminum When you get to
the point when the impedance is zero it shows that all applied
current has been applied outside the aluminum which is now not
carrying ANY of the applied current. WOW!
You can also apply even more current of which all will still go to the
external sleeve of
particles to increase radiation and still no increase in current flow
in the surface of aluminum, even tho the impedance may go into the
negative quadrant. You also stated that applying a time varying field
is an example of typical failures! No idea where that comes from. Now
with reference to current flow in the particle sleeve. We had an
extensive discussion as to how the circuit of a half wave vertical
antenna was formed. At that time I was adamant that it must be a
closed circuit and suggested that return flow was thru the centre of
the antenna. Another brou har ensued with the implication was that
both the upward and downward travels of the applied current was on the
same skin deep surfaces! Very wierd. One of your past disagreements
with the group extended beyond the 1000 posts so I am certainly not
going to take on the debate mode with you.
Have a happy day.

2080. Re: Spherical radiation pattern

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-15 20:25:29 UTC
From: christofire <christofire@btinternet.com>
Message-ID: <BNKdnVtM_K6gZTLXnZ2dnUVZ8lmdnZ2d@bt.com>
Source record: 12992

"Richard Clark" <kb7qhc@comcast.net> wrote in message
news:ioiva5dvb5a388i0opgjk3vmbckl3hlavp@4ax.com...
> On Tue, 15 Sep 2009 11:52:19 +0100, "christofire"
> <christofire@btinternet.com> wrote:
>
>>No, you have it wrong again - the current must be zero at the ends, there
>>is
>>nowhere for it to go, and there cannot be acceleration of charge is
>>there's
>>no current. Please go away and read some books and the NEETS module to
>>which I provided the link.
>>
>>Chris
>
> Hi Chris,
>
> This mistake is being compounded daily, so it seems. The "absence" of
> current on any particular portion of the antenna is the superposition
> of two currents flowing - hence the term "standing wave antenna."
> Hence there is something of a paradox that where two currents reside
> (the metal elements are continuous and conductive) it is said no
> current flows. There is a correlation between this superposed
> solution and the pattern of the far-field pattern but that does not
> lead to the conclusion that there is no "acceleration" of charge at
> the ends. After-all, the abundant alternating voltage at those same
> ends is also charge, n'est pas? It could be as easily argued that
> superposed voltage nodes also define the pattern of the far-field
> pattern.
>
> 73's
> Richard Clark, KB7QHC

Well, the moment of a section of a dipole is proportional to the average net current on it and it's the integral of the moments at a point of inspection that yields the radiation pattern. In my simplistic way of thinking, if the moment of the end sections is zero, or as close as makes no difference, then there's no contribution to the pattern from there, so there's no radiation from there. Someone else who posted here a while ago used the term 'unopposed' current which is useful because it's the basis of why twin-wire transmission line, driven differentially, is a poor radiator - put another way, the moment at any point is close to zero. Alternatively, if there's no radiation from a 'source' then there can't be any unopposed current there.

I wouldn't contradict what you say about there being a collection of charge at the ends of a dipole during each cycle, especially when it has added

capacitance (e.g. a 'hat' or the top of a 'Tee'), but the current in a symmetrical hat is fully opposed and, as I noted before, the current at the end of the conductor must be zero - by the definition of conduction.

I believe there is danger in trying to relate radiation to voltages rather than currents, arguing that displacement current causes radiation. Therein lies the fallacy of the CFA, E-H antennas, and associated efforts at re-writing of Maxwell's equations, which are all being demonstrated as bunk. Also, this appears to be the basis of Mr. Bialek's lecture series. If you wish to argue 'that superposed voltage nodes also define the (pattern of the...sic) far-field pattern' then I won't stand in your way ... but I probably won't believe you.

Chris

2081. Re: Spherical radiation pattern

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-15 20:33:26 UTC
From: christofire <christofire@btinternet.com>
Message-ID: <Eo-dnZdWC_CGZzLXnZ2dnUVZ8rednZ2d@bt.com>
Source record: 12993

"Szczepan Bia&#65533;ek" <sz.bialek@wp.pl> wrote in message
news:h8o7a9hna1@node1.news.atman.pl...
>
> U&#65533;ytkownik "christofire" <christofire@btinternet.com> napisa&#65533; w wiadomo&#65533;ci
> news:iJednUlwYe276DLXnZ2dnUVZ8tydnZ2d@bt.com...
>>
>> "Szczepan Bia&#65533;ek" <sz.bialek@wp.pl> wrote in message
>> news:h8n46abmo1@node1.news.atman.pl...
>>>
>>> "Richard Clark" <kb7qhc@comcast.net>wrote
>>> news:830ta5hk96s85uscd4b2b3p24iv6o18mtm@4ax.com...
>>>> >
>>>> As I stand on the corner waving goodbye to that bus, I fondly recall
>>>> how the logic stood that no current could be found on the tips of
>>>> radiators, thus trim them off to no loss of radiation. It took very
>>>> few decades before Art had then recognized that his new antenna's tips
>>>> had no more current than the full-length one, and he trimmed that one
>>>> once again! New and improved (as the saying goes). Another decade
>>>> passed into the new millennium and he observed that he could extend
>>>> this logic once again to the point where his last design encompassed a
>>>> 160M full sized antenna in the space of two shoe boxes. The TRIUMPH
>>>> OF TITANIC PROPORTIONS.
>>>
>>> Is any simillarity between Art and Tesla?
>>> Bill Miller wrote: "*But* Tesla's "antennas" were similar physically to
>>> the well-known "Tesla
>>> Coil." These antennas, in spite of their enormous size, were
>>> electrically
>>> "small" when compared with a wavelength. They were essentially a
>>> metallic
>>> ball that was fed from the secondary of a resonant transformer. But they
>>> appear to have had fairly large effective bandwidths in spite of their
>>> electrically small size,"
>>> S*
>>
>>
>> Tesla created HF transformers. He didn't design them as antennas but,
>> because of their significant length at the operating wavelength, they did
>> act that way to some extent. The metallic ball (often a torus nowadays)
>> is a means of terminating the secondary in a way that reduces spurious
>> discharges - its radius of curvature is large.
>
> It is than "tipping".

* No, it has nothing to do with tipping. The electrostatic field strength close to a conductor is reduced by giving the conductor a large radius of curvature: it's greatest between points and least between parallel plates. Read Kraus; Electromagnetics!

>> His ideas to distribute electrical power using Tesla coils were crazy and
>> dangerous, but some argue he was the inspiration for AC distribution at
>> much lower voltages, which is a good thing.
>>
>> There is very little apparent similarity between Nicola Tesla and that
>> 'Art Unwin' character. Tesla was an inventor who realised amazing feats
>> of hardware construction, some of which worked as intended. 'Professor
>> Unwin' doesn't appear to create anything in hardware - he just talks
>> about his own, paraphysical theories and expects others to believe what
>> he says.
>>
>> Again, don't believe what I write - go to a technical library and read
>> the stuff that made it into books. You can't rely on what people write
>> on the internet; there are too many 'Unwins' out there.
>
> In library are very old things. Will be there about tipping?
> S*

* Probably in the section about waste disposal ... where it belongs!

Chris

2082. Re: Spherical radiation pattern

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-15 20:34:59 UTC
From: jaroslav lipka <jarolipka@gmail.com>
Message-ID: <d3d99b1e-f9a7-4f05-8cfa-6cdccd45a5a3@u16g2000pru.googlegroups.com>
Source record: 12994

On Sep 16, 1:31 am, JIMMIE <JIMMIEDEE...@YAHOO.COM> wrote:
> On Sep 15, 8:15 am, jaroslav lipka <jaroli...@gmail.com> wrote:
>
>
>
> > On Sep 15, 7:06 pm, "christofire" <christof...@btinternet.com> wrote:
>
> > > There is very little apparent similarity between Nicola Tesla and that 'Art
> > > Unwin' character. Tesla was an inventor who realised amazing feats of
> > > hardware construction, some of which worked as intended. 'Professor Unwin'
> > > doesn't appear to create anything in hardware - he just talks about his own,
> > > paraphysical theories and expects others to believe what he says.
>
> > > Again, don't believe what I write - go to a technical library and read the
> > > stuff that made it into books. You can't rely on what people write on the
> > > internet; there are too many 'Unwins' out there.
>
> > > Chris
>
> >   Hi Chris
> >   The question that goes to nub of Arts claim is
> > why is adding a time varying field to the Gaussian law of statics
> > illegal? or to state it another way,
> >   How is it illegal to change a static field into a dynamic field?
> > can you, will you answer the question or are you just sitting on
> > Richards shirt tail.
>
> > Jaro
>
> Applying time to a static field doesn't make a static field a dynamic
> field.
>
> Jimmie

OUCH bad timing Jimmie

2083. Re: Spherical radiation pattern

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-15 21:11:37 UTC
From: Richard Fry <rfry@adams.net>
Message-ID: <2fe523ac-f224-4e6b-a965-0981c36d63de@p15g2000vbl.googlegroups.com>
Source record: 12995

On Sep 15, 2:53 pm, Art Unwin <arthurun...@gmail.com> wrote:
> When you do your fancy playing with EZNEC you will notice
> that as the impedance goes down the radiation increases.

Art, below to help you analyze your belief is a link to the calculated radiation efficiency for a system with a perfect, base-driven, monopole radiator using an r-f ground better than that used by most AM broadcast stations.

The system is brought to resonance with a loading coil. The feedpoint impedance is 4.1131 +j0 ohms, of which the radiation resistance component is ~ 0.1 ohm.

So if, as you write, reducing feedpoint impedance increases radiation, what do think accounts for this extremely poor system efficiency (2.75%), compared to the ~ 95% system efficiency typical of a 1/4-wave monopole using that same r-f ground?

http://i62.photobucket.com/albums/h85/rfry-100/CompliantPart15AMBestCase.gif

RF

2084. Radio Shack SWR meter FA - Re-listed

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-15 22:04:18 UTC
From: Arky Bob <Arky_Bob_Rules@yahoo.com>
Message-ID: <c1cbd53f-fc7d-4d1c-bbf9-7bbac6f9b0da@y20g2000vbk.googlegroups.com>
Source record: 12996
Cross-posted to: rec.radio.swap,rec.radio.amateur.equipment,rec.radio.amateur.antenna

http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=190335452335&ssPageName=STRK:MESELX:IT

2085. Re: Spherical radiation pattern

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-15 22:44:04 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <1240b55co7musi8bv5rsflnf6ns05k1tsp@4ax.com>
Source record: 12997

On Tue, 15 Sep 2009 21:25:29 +0100, "christofire"
<christofire@btinternet.com> wrote:

>Well, the moment of a section of a dipole is proportional to the average net
>current on it and it's the integral of the moments at a point of inspection
>that yields the radiation pattern.

Hi Chris,

I have already offered that what you say above is not disputed. I
merely add that it is not the only perspective and says nothing of the
"absence" of current throughout the entire radiator.

> In my simplistic way of thinking, if the
>moment of the end sections is zero, or as close as makes no difference, then
>there's no contribution to the pattern from there, so there's no radiation
>from there.

That was the logical basis for Art's claims of length efficiency:
those portions that did not support current (read contribute to
radiation) were thus ancillary (redundant as the Briticism would go)
and unneeded. Art would then expand this logic to perform his Ritual
Antenna Bris and lop off a portion to reduce the length (increase the
efficiency). I've already commented on this reductio ad absurdum.

Far field patterns are created from the phase relationships and time
relationships, and distance relationships (all the same thing,
mathematically) from all points of the radiator to any single point of
the characteristic lobe. In the teachings of radiation as light, a
wave front can be considered to be an infinite number of points of
radiation along a curved line (that front).

Interference (with its product being the shape of a lobe) is the
combination of all their phases, distances, and times.

>Someone else who posted here a while ago used the term
>'unopposed' current which is useful because it's the basis of why twin-wire
>transmission line, driven differentially, is a poor radiator - put another
>way, the moment at any point is close to zero. Alternatively, if there's no
>radiation from a 'source' then there can't be any unopposed current there.

This is not the same sense of current in a single wire that gives rise
to a structure known as a "standing wave antenna."

If you ran a twin line up into the air to an open connection, then you
would have two closely space radiators. The open would enforce a both
a longitudinal and transverse standing wave. They would both radiate

like twin fire hoses. The key point here is that in the distance of
their separation, that distance is an incredibly small fraction of the
wavelength they are radiating. Their two currents (the standing waves
on each wire being immaterial) impose an 180 degree relationship
throughout their entire length. Both waves' phases, distances, and
times cancel to within the degree of that space of separation. This
is very easy to demonstrate by observing how they become efficient and
productive non-canceling radiators as you draw them apart to form the
V antenna. The only thing that has changed is the distance which
imparts a phase (or time, or distance - all the same thing
mathematically) shift apparent at a great distance. They will still
have the same SWR along their length, and the same currents (apart
from what is imposed through the radiation resistance).

>
>I wouldn't contradict what you say about there being a collection of charge
>at the ends of a dipole during each cycle, especially when it has added
>capacitance (e.g. a 'hat' or the top of a 'Tee'), but the current in a
>symmetrical hat is fully opposed and, as I noted before, the current at the
>end of the conductor must be zero - by the definition of conduction.

Well, to this point there has been no discussion of end loading.
Doesn't matter, all the key issues are discussed above.
>
>I believe there is danger in trying to relate radiation to voltages rather
>than currents, arguing that displacement current causes radiation.

This is an engineering shorthand. It works with great precision. But
the simple fact of the matter is there is no current without a
potential gradient. Radiation could as easily be described by it.
Without regard for patterns, radiation is a function of Ohm's law and
we have three variables there. You cannot ignore any element or
assess some distinction of one at the cost of the other(s).

>Therein
>lies the fallacy of the CFA, E-H antennas, and associated efforts at
>re-writing of Maxwell's equations, which are all being demonstrated as bunk.
>Also, this appears to be the basis of Mr. Bialek's lecture series. If you
>wish to argue 'that superposed voltage nodes also define the (pattern of
>the...sic) far-field pattern' then I won't stand in your way ... but I
>probably won't believe you.

So I gather. It is merely a shift in perspective of conventions, not
an up-ending of them. You may note that none of my discussion above
demands any new physics, nothing new in math, no novel methods. I've
used only two wires both close together and drawn farther apart under
the most simple of terms to reveal on one hand a transmission line,
and on the other hand a V antenna. The math of phase, distance, and
time is drawn from NEC; or rather, NEC leans heavily upon it and drew
it from Optics and I state my case in the strict terms of a method of
moments.

To cut to the chase: The full length of the radiator contributes to radiation and the evidence of this is found in any characteristic lobe displayed in the far field.

73's
Richard Clark, KB7QHC

2086. Re: Spherical radiation pattern

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-15 23:53:55 UTC
From: Richard Fry <rfry@adams.net>
Message-ID: <27a8fb92-6e85-43e8-91ce-b3f07511600a@e18g2000vbe.googlegroups.com>
Source record: 12998

On Sep 15, 5:44 pm, Richard Clark <kb7...@comcast.net> wrote:
> To cut to the chase: The full length of the radiator contributes to
> radiation and the evidence of this is found in any characteristic lobe
> displayed in the far field.

In practical and provable terms, how much of that characteristic, far-field radiation pattern can be attributed to the linear, unloaded, center-fed dipole radiator lengths as exist less than ~10% distant from the endpoints of that dipole?

Just wanting to learn.

RF

2087. Re: Spherical radiation pattern

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-16 00:09:22 UTC
From: tom <news4792@taring.org>
Message-ID: <4ab02c9c$0$28119$8046368a@newsreader.iphouse.net>
Source record: 12999

jaroslav lipka wrote:
>
> And you would know seeing as you are full of it,
> Art has posed the question can you answer it or are you
> going to duck it as you usually do by making demands
> and no offerings.
>
> Jaro
>

Jaro

Welcome to the group! This is what, maybe your 3rd post? And you have
done nothing but snipe in all of them.

Art has posed no questions with any meaning to me, or for anyone else
for that matter. And I have said nothing that disagrees with reality.
Unlike Art, who is trying to prove fantasy with empty contrived
arguments that change day by day. He lives on diamagnetic levitating sand.

So yes, I will duck the non-question.

tom
K0TAR

2088. Re: Spherical radiation pattern

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-16 01:19:40 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <80b0b5h7ttbtkn0mkaiu2o7pm7alafeg3s@4ax.com>
Source record: 13000

On Tue, 15 Sep 2009 16:53:55 -0700 (PDT), Richard Fry <rfry@adams.net>
wrote:

>On Sep 15, 5:44ï¿½pm, Richard Clark <kb7...@comcast.net> wrote:
>> To cut to the chase: ï¿½The full length of the radiator contributes to
>> radiation and the evidence of this is found in any characteristic lobe
>> displayed in the far field.
>
>In practical and provable terms, how much of that characteristic, far-
>field radiation pattern can be attributed to the linear, unloaded,
>center-fed dipole radiator lengths as exist less than ~10% distant
>from the endpoints of that dipole?

The math behind this has been terribly abused by Cecil in the past,
but we shouldn't let that poison the well. It is based in optics, a
field that predates RF by several centuries.

"... S1 and S2 are two point sources of light each
emitting a sinusoidal wave of the same angular
frequency omega. They have position vectors r1
and r2. The field point P where we evaluate the
intensity [flux density] has position r. The electric
field at P resulting from the two sources is assumed
to be of the form....
"The total relative phase Psi0 between the two waves
at P thus consists of two parts: a part Phi2 - Phi1
coming from the relative phases at the two sources,
and a part -Dell coming from the different
retardation in phase suffered by the two
beams resulting from the propagation
from S2 to P and from S1 to P.
"An important special case occurs when
A1 == A2. Then we can write
I = 2ï¿½I1ï¿½(1 + cos(phi2 - phi1 - Dell))"

Every point along the radiator is considered to be a point source with
the same frequency. However, each point is not at the same phase by
virtue of its distance from the feedpoint and its distance from other
points. Each point is not at the same distance from P (a point in the
far field) which gives rise to a retardation of that altered phase.
Thus the phase accumulates over two distances: one from the excitation
source to the point on the radiator; and, two, from the point on the
radiator to the point of the lobe where we are observing all of the
effects of the combined illumination from all point sources along the
length of the radiator. The extract above speaks to the contributions

of only two points, an antenna comprises many, many more.

I will add here that the intensity variable now draws in the discussion of the superposed forward and reflected currents. This is the remaining part of the analysis which is more instructive for your very simple example. Clearly, from a very small dipole to a half wave, there is little variation in the far field pattern and it is appealing to infer that the differences in length suggest that that additional length suggests nothing is going on in the ends. However, when we add only a slightly longer length (by proportion*), this negates the appealing suggestion. The superposed current distribution change accounts for this and we are still talking about simple linear elements (and there is still zero current at the ends).

If we were to succumb to the argument of "length efficiency" as offered in the practice and Art of Antenna Bris, then the additional gain of that proportionate smaller length addition would have been lost to that invalid proposition.

The NEC method of moments is by definition the application of the formula above to the middle of EVERY segment to EVERY point in three space. The resulting curve is an abstraction of that fog of numbers that is reduced to a planar curve (or to a solid model in the 3D representation).

[* What is this proportional and proportionate mean? For a dipole of 0.05 WL to a dipole of 0.5WL, the far field change for that 10:1 variation is negligible. However, for a dipole of 0.5WL to a dipole of 1.25WL, the far field change for that 2.5:1 (a smaller proportion) variation is very noticeable.]

73's
Richard Clark, KB7QHC

2089. Re: Spherical radiation pattern

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-16 02:05:29 UTC
From: tom <news4792@taring.org>
Message-ID: <4ab047d3$0$28124$8046368a@newsreader.iphouse.net>
Source record: 13051

Art Unwin wrote:
>> Your claims of diamagnetic levitating neutrinos and other nonsense has
>> nothing to do with reality. If it's true, prove it.
>>
>> You are a FRAUD. Prove you are not.
>>
>> And I will predict your answer, if you give one, will be equivalent to
>> "You need to prove I'm wrong".
>>
>> tom
>> K0TAR
>
> Gimmi,Gimmi, Gimme. Eat your heart out or get a nights sleep.

Just what I expected. Art's normal non-answer.

Tell you what, I'll get a night's sleep (it's possessive stupid), and
you try and get a dose of reality.

But you won't and you'll continue to be wrong.

Mr Fraud.

tom
K0TAR

2090. Re: Spherical radiation pattern

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-16 08:02:51 UTC
From: Szczepan Białek <sz.bialek@wp.pl>
Message-ID: <h8pqvlouf1@node1.news.atman.pl>
Source record: 13052

"Cecil Moore" <nospam@w5dxp.com>wrote
news:txRrm.5277$tG1.1250@newsfe22.iad...
> Szczepan Biaďż˝ek wrote:
>>
>> "Cecil Moore" <nospam@w5dxp.com> wrote:
>>> How can they possibly do that while traveling at
>>> "0.024 cm/sec"?
>>
>> Only in students homework.
>
> So what speed do your measurements indicate for
> free electrons on an antenna?

You assume: "The value for conduction electrons / m^3 matched the number of
atoms / m^3, within the error of the copper's density"

It is not true. So the speed for steady current is bigger.
But in antennas is oscillating current. To describe the electrons one must
take into account acceleratin and compressibility. Speed at small movements
can be small but acceleration huge.
S*

2091. Re: Spherical radiation pattern

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-16 09:24:16 UTC
From: Szczepan Białek <sz.bialek@wp.pl>
Message-ID: <h8pvoa$pn8$1@node1.news.atman.pl>
Source record: 13053

"Richard Clark" <kb7qhc@comcast.net> wrote
news:80b0b5h7ttbtkn0mkaiu2o7pm7alafeg3s@4ax.com...
> On Tue, 15 Sep 2009 16:53:55 -0700 (PDT), Richard Fry <rfry@adams.net>
> wrote:
>
>>On Sep 15, 5:44 pm, Richard Clark <kb7...@comcast.net> wrote:
>>> To cut to the chase: The full length of the radiator contributes to
>>> radiation and the evidence of this is found in any characteristic lobe
>>> displayed in the far field.
>>
>>In practical and provable terms, how much of that characteristic, far-
>>field radiation pattern can be attributed to the linear, unloaded,
>>center-fed dipole radiator lengths as exist less than ~10% distant
>>from the endpoints of that dipole?
>
> The math behind this has been terribly abused by Cecil in the past,
> but we shouldn't let that poison the well. It is based in optics, a
> field that predates RF by several centuries.
>
> "... S1 and S2 are two point sources of light each
> emitting a sinusoidal wave of the same angular
> frequency omega. They have position vectors r1
> and r2. The field point P where we evaluate the
> intensity [flux density] has position r. The electric
> field at P resulting from the two sources is assumed
> to be of the form....
> "The total relative phase Psi0 between the two waves
> at P thus consists of two parts: a part Phi2 - Phi1
> coming from the relative phases at the two sources,
> and a part -Dell coming from the different
> retardation in phase suffered by the two
> beams resulting from the propagation
> from S2 to P and from S1 to P.
> "An important special case occurs when
> A1 == A2. Then we can write
> I = 2ďż˝I1ďż˝(1 + cos(phi2 - phi1 - Dell))"
>
> Every point along the radiator is considered to be a point source with
> the same frequency. However, each point is not at the same phase by
> virtue of its distance from the feedpoint and its distance from other
> points. Each point is not at the same distance from P (a point in the
> far field) which gives rise to a retardation of that altered phase.
> Thus the phase accumulates over two distances: one from the excitation
> source to the point on the radiator; and, two, from the point on the

> radiator to the point of the lobe where we are observing all of the
> effects of the combined illumination from all point sources along the
> length of the radiator. The extract above speaks to the contributions
> of only two points, an antenna comprises many, many more.

"Every point along the radiator is considered to be a point source with
the same frequency".
But the intesity of radiation is not the same. Electron at the end of the
open circuit are extremally compressed. Intensity of radiation is
compression dependent. Of course radiation means alternate electric field
(Art's "Gauss law with time").
>
> I will add here that the intensity variable now draws in the
> discussion of the superposed forward and reflected currents. This is
> the remaining part of the analysis which is more instructive for your
> very simple example. Clearly, from a very small dipole to a half
> wave, there is little variation in the far field pattern

Antenna is the last part of the open circuit. If it has the half wave or
less such dipole antenna has only one intesive source of radiation on one
radiator.

>and it is
> appealing to infer that the differences in length suggest that that
> additional length suggests nothing is going on in the ends.

See abowe.

> However,
> when we add only a slightly longer length (by proportion*), this
> negates the appealing suggestion.

If "visible" part of an antanna is longer than the 1/4 WL the next source
appears.

> The superposed current distribution
> change accounts for this and we are still talking about simple linear
> elements (and there is still zero current at the ends).
>
> If we were to succumb to the argument of "length efficiency" as
> offered in the practice and Art of Antenna Bris, then the additional
> gain of that proportionate smaller length addition would have been
> lost to that invalid proposition.
>
> The NEC method of moments is by definition the application of the
> formula above to the middle of EVERY segment to EVERY point in three
> space. The resulting curve is an abstraction of that fog of numbers
> that is reduced to a planar curve (or to a solid model in the 3D
> representation).
>
> [* What is this proportional and proportionate mean? For a dipole of
> 0.05 WL to a dipole of 0.5WL, the far field change for that 10:1

> variation is negligible.

The both (0.05 WL to a dipole of 0.5WL have only the two sources at the both ends.

> However, for a dipole of 0.5WL to a dipole
> of 1.25WL, the far field change for that 2.5:1 (a smaller proportion)
> variation is very noticeable.]

Each "long wire antenna" has additional sources for each 0.5WL.

"The full length of the radiator" means the "vissible" and spaced part of feeding line. Yor: "If you ran a twin line up into the air to an open connection, then you would have two closely space radiators."

Step by step and the discussion should end with the full agreement (I am sure).
S*

2092. Re: Spherical radiation pattern

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-16 09:40:29 UTC
From: Szczepan Białek <sz.bialek@wp.pl>
Message-ID: <h8q0mmprr1@node1.news.atman.pl>
Source record: 13054

Uďż˝ytkownik "christofire" <christofire@btinternet.com> napisaďż˝ w wiadomoďż˝ci
news:Eo-dnZdWC_CGZzLXnZ2dnUVZ8rednZ2d@bt.com...
>
> "Szczepan Biaďż˝ek" <sz.bialek@wp.pl> wrote in message
> news:h8o7a9hna1@node1.news.atman.pl...
>>
>> Uďż˝ytkownik "christofire" <christofire@btinternet.com> napisaďż˝ w
>> wiadomoďż˝ci news:iJednUlwYe276DLXnZ2dnUVZ8tydnZ2d@bt.com...
>>>
>>> "Szczepan Biaďż˝ek" <sz.bialek@wp.pl> wrote in message
>>> news:h8n46abmo1@node1.news.atman.pl...
>>>>
>>>> "Richard Clark" <kb7qhc@comcast.net>wrote
>>>> news:830ta5hk96s85uscd4b2b3p24iv6o18mtm@4ax.com...
>>>>> >
>>>>> As I stand on the corner waving goodbye to that bus, I fondly recall
>>>>> how the logic stood that no current could be found on the tips of
>>>>> radiators, thus trim them off to no loss of radiation. It took very
>>>>> few decades before Art had then recognized that his new antenna's tips
>>>>> had no more current than the full-length one, and he trimmed that one
>>>>> once again! New and improved (as the saying goes). Another decade
>>>>> passed into the new millennium and he observed that he could extend
>>>>> this logic once again to the point where his last design encompassed a
>>>>> 160M full sized antenna in the space of two shoe boxes. The TRIUMPH
>>>>> OF TITANIC PROPORTIONS.
>>>>
>>>> Is any simillarity between Art and Tesla?
>>>> Bill Miller wrote: "*But* Tesla's "antennas" were similar physically to
>>>> the well-known "Tesla
>>>> Coil." These antennas, in spite of their enormous size, were
>>>> electrically
>>>> "small" when compared with a wavelength. They were essentially a
>>>> metallic
>>>> ball that was fed from the secondary of a resonant transformer. But
>>>> they
>>>> appear to have had fairly large effective bandwidths in spite of their
>>>> electrically small size,"
>>>> S*
>>>
>>>
>>> Tesla created HF transformers. He didn't design them as antennas but,
>>> because of their significant length at the operating wavelength, they
>>> did act that way to some extent. The metallic ball (often a torus
>>> nowadays) is a means of terminating the secondary in a way that reduces

>>> spurious discharges - its radius of curvature is large.
>>
>> It is than "tipping".
>
>
> * No, it has nothing to do with tipping. The electrostatic field strength
> close to a conductor is reduced by giving the conductor a large radius of
> curvature: it's greatest between points and least between parallel plates.
> Read Kraus; Electromagnetics!

Thanks large radius we have radiation not sparks. The electrostatic field
strength may be much stronger because we can use very high voltage.
>
>
>>> His ideas to distribute electrical power using Tesla coils were crazy
>>> and dangerous, but some argue he was the inspiration for AC distribution
>>> at much lower voltages, which is a good thing.
>>>
>>> There is very little apparent similarity between Nicola Tesla and that
>>> 'Art Unwin' character. Tesla was an inventor who realised amazing feats
>>> of hardware construction, some of which worked as intended. 'Professor
>>> Unwin' doesn't appear to create anything in hardware - he just talks
>>> about his own, paraphysical theories and expects others to believe what
>>> he says.
>>>
>>> Again, don't believe what I write - go to a technical library and read
>>> the stuff that made it into books. You can't rely on what people write
>>> on the internet; there are too many 'Unwins' out there.
>>
>> In library are very old things. Will be there about tipping?
>> S*
>
>
> * Probably in the section about waste disposal ... where it belongs!

R. Clark wrote: "Clearly, from a very small dipole to a half
wave, there is little variation in the far field pattern "

Now is time for the very small dipole with tipping. Now is also time to
prepare a shelf in library for the new books.
S*

2093. Re: Spherical radiation pattern

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-16 11:46:49 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <Te4sm.193554$0e4.82772@newsfe19.iad>
Source record: 13055

Art Unwin wrote:
> Skin effect refers to current flow along the aluminum.

Actually, it is more complicated than that. Since
the current impulse travels at the speed of light,
the current impulse energy transfer necessarily involves
photons. Note there is no current impulse traveling at
the speed of light under steady-state DC conditions
which is the only kind of current being carried 100% by
electrons. Any current, e.g. RF current, traveling at
the speed of light, involves photons, even the DC impulse
current.

> When you get to
> the point when the impedance is zero it shows that all applied
> current has been applied outside the aluminum which is now not
> carrying ANY of the applied current. WOW!

It is true that one can set EZNEC to lossless conditions but
one cannot do that in the real world. Aluminum and copper
are only ever lossless at superconductor temperatures.

> You also stated that applying a time varying field
> is an example of typical failures! No idea where that comes from.

Me either since I don't remember anything about "typical
failures". What I said is that the electrons excited by
HF+ RF energy move hardly at all. It is akin to tossing
a stone into a still pond - the water molecules (carriers)
move hardly at all except up and down.

> Another brou har ensued with the implication was that
> both the upward and downward travels of the applied current was on the
> same skin deep surfaces! Very wierd.

Again consider tossing a stone into a still pond. When the
waves reach the shore, they are reflected thus forming
standing waves on the water. Again the water molecules
move primarily up and down, moving hardly at all in the
direction of propagation of the forward and reflected waves.
--
73, Cecil, IEEE, OOTC, http://www.w5dxp.com

2094. Re: Spherical radiation pattern

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-16 11:56:49 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <eo4sm.193555$0e4.8298@newsfe19.iad>
Source record: 13056

Richard Fry wrote:
> In practical and provable terms, how much of that characteristic, far-
> field radiation pattern can be attributed to the linear, unloaded,
> center-fed dipole radiator lengths as exist less than ~10% distant
> from the endpoints of that dipole?

For the MOM calculations inside NEC, the net segment
current determines the incremental far-field.
--
73, Cecil, IEEE, OOTC, http://www.w5dxp.com

2095. Re: Spherical radiation pattern

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-16 11:58:54 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <aq4sm.193556$0e4.5722@newsfe19.iad>
Source record: 13057

Richard Clark wrote:
> The math behind this has been terribly abused by Cecil in the past,
> but we shouldn't let that poison the well.

NEC would be interested in your proof that the
method of moments is abuse and poison.
--
73, Cecil, IEEE, OOTC, http://www.w5dxp.com

2096. Re: Spherical radiation pattern

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-16 14:16:27 UTC
From: Art Unwin <arthurunwin@gmail.com>
Message-ID: <117214cb-1c1b-471e-94c0-becae3af2907@y20g2000vbk.googlegroups.com>
Source record: 13058

On Sep 16, 6:46 am, Cecil Moore <nos...@w5dxp.com> wrote:
> Art Unwin wrote:
> > Skin effect refers to current flow along the aluminum.
>
> Actually, it is more complicated than that. Since
> the current impulse travels at the speed of light,
> the current impulse energy transfer necessarily involves
> photons. Note there is no current impulse traveling at
> the speed of light under steady-state DC conditions
> which is the only kind of current being carried 100% by
> electrons. Any current, e.g. RF current, traveling at
> the speed of light, involves photons, even the DC impulse
> current.
>
> > When you get to
> > the point when the impedance is zero it shows that all applied
> > current has been applied outside the aluminum which is now not
> > carrying ANY of the applied current. WOW!
>
> It is true that one can set EZNEC to lossless conditions but
> one cannot do that in the real world. Aluminum and copper
> are only ever lossless at superconductor temperatures.
>

> 73, Cecil, IEEE, OOTC, http://www.w5dxp.com
Let me make myself quite clear on this point before the thread closes.
My position is that a radiator must be 1WL to achieve equilibrium.
When considering a
1/2 wave vertical one can only make it a closed circuit of 1 WL is by
adding a ground plane
rather than assuming that we have conflicting charge directions on the
surface of the 1/2 WL.
We now review the circuit (tank circuit) that applies to radiation. We
now accept that particles do rest on diamagnetic surfaces per the
Gauss extension. In fact, this surface or sleeve of particles is so
tightly formed that it has the hoop stress of a arbitrary boundary
such that nothing is removed from the diamagnetic material itself. In
the case where a particle is driven away from this border its place is
immediately taken up by one of the billions of particles floating
around looking for a diamagnetic place to rest.
We can now see that current applied to a radiating element splits into
two paths in parallel
One leg is in the intervening space between the particles and the
diamagnetic material and the other leg IN the surface of the

diamagnetic material called skin effect.
A computer program only recognizes the diamagnetic element such that it only points to the impedance presented by that separate current track .
Thus with increase in radiation the impedance referred to by the computer is SOLELY
of that presented by the diamagnetic material. Thus when the program states zero impedance it is stating that no current is being applied to the diamagnetic material
and where all current is routed to the arbitrary boundary consisting of tightly bound particles.
The concept of extreme cooling for zero resistance is not required when no current is applied! All the current is now being carried by the arbitrary border where all forces can be accounted for since there are no losses incurred! Of-course the program itself leaves the operator to sort this out because it did not supply a complete circle of energy flow by ignoring the current applied to the particle sleeve or boundary, where the energy lost in the
programs element is not supplanted with the energy gain of the arbitrary border! This suggests that somewhere in the program the positive and the minus signs were accidently interchanged. If the programmer had recognised the existance of the Gaussian border
he would have the provided the means of energy transfer to it and thus fully abided with the concept of equilibrium.
Art

2097. Re: Spherical radiation pattern

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-16 14:19:58 UTC
From: christofire <christofire@btinternet.com>
Message-ID: <kf-dnez7v9iHaS3XnZ2dnUVZ8kudnZ2d@bt.com>
Source record: 13059

"Szczepan Bia&#65533;ek" <sz.bialek@wp.pl> wrote in message
news:h8q0mmprr1@node1.news.atman.pl...
>
- - almighty great snip - -

>
> R. Clark wrote: "Clearly, from a very small dipole to a half
> wave, there is little variation in the far field pattern "
>
> Now is time for the very small dipole with tipping. Now is also time to
> prepare a shelf in library for the new books.
> S*

Doesn't seem like you visit a library very often, on the basis of what
you've posted, so why change the habit of a lifetime?

Chris

2098. Re: Spherical radiation pattern

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-16 14:49:34 UTC
From: Richard Fry <rfry@adams.net>
Message-ID: <e2d9a311-73b4-42e7-810b-934f5958b4da@m11g2000vbl.googlegroups.com>
Source record: 13060

On Sep 16, 9:16 am, Art Unwin <arthurun...@gmail.com> wrote:
> Let me make myself quite clear on this point before the thread closes.
> My position is that a radiator must be 1WL to achieve equilibrium.

And why is your "equilibrium" needed?

Note that antennas of every length produce very efficient radiation
from all of the r-f current that can be made to flow on them.

For a given r-f source and antenna, maximizing that current is a
matter of providing a non-reactive match of the antenna feedpoint
impedance to whatever is connected there.

There are good reasons to prefer one antenna length over others, such
as the radiation pattern produced, or the ease of providing a good
match to a transmission line.

But "equilibrium" is not one of them.

RF

2099. Re: Spherical radiation pattern

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-16 16:26:36 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <ed42b51pr6rjnlt27ancrma5p4jaa4us7v@4ax.com>
Source record: 13061

On Wed, 16 Sep 2009 11:24:16 +0200, Szczepan Bia?ek <sz.bialek@wp.pl>
wrote:

>S*

Can you read English?

73's
Richard Clark, KB7QHC

2100. Re: Spherical radiation pattern

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-16 16:29:59 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <nh42b5t55dm32f3jnmdi7ut73bgn23l4bb@4ax.com>
Source record: 13062

On Wed, 16 Sep 2009 15:19:58 +0100, "christofire"
<christofire@btinternet.com> wrote:

>
>"Szczepan Biaï¿½ek" <sz.bialek@wp.pl> wrote in message
>news:h8q0mmprr1@node1.news.atman.pl...
>>
>- - almighty great snip - -
>
>>
>> R. Clark wrote: "Clearly, from a very small dipole to a half
>> wave, there is little variation in the far field pattern "
>>
>> Now is time for the very small dipole with tipping. Now is also time to
>> prepare a shelf in library for the new books.
>> S*
>
>
>Doesn't seem like you visit a library very often, on the basis of what
>you've posted, so why change the habit of a lifetime?

I wonder if he saw a car at a great distance, would he presume it was
driven by a pygmy? A new shelf for anthropology needs to be opened in
the library.

73's
Richard Clark, KB7QHC

2101. Re: Spherical radiation pattern

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-16 17:15:37 UTC
From: Szczepan Białek <sz.bialek@wp.pl>
Message-ID: <h8qrbutsr1@node1.news.atman.pl>
Source record: 13063

"Cecil Moore" <nospam@w5dxp.com> wrote
news:Te4sm.193554$0e4.82772@newsfe19.iad...
> Art Unwin wrote:
>
> Me either since I don't remember anything about "typical
> failures". What I said is that the electrons excited by
> HF+ RF energy move hardly at all. It is akin to tossing
> a stone into a still pond - the water molecules (carriers)
> move hardly at all except up and down.

They move along the eliptic trajectory. The longitudinal component is large
than the transversal.
>
>> Another brou har ensued with the implication was that
>> both the upward and downward travels of the applied current was on the
>> same skin deep surfaces! Very wierd.
>
> Again consider tossing a stone into a still pond. When the
> waves reach the shore, they are reflected thus forming
> standing waves on the water. Again the water molecules
> move primarily up and down, moving hardly at all in the
> direction of propagation of the forward and reflected waves.

See above.
S*

2102. Re: Spherical radiation pattern

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-16 17:27:31 UTC
From: Art Unwin <arthurunwin@gmail.com>
Message-ID: <231b9e67-a8bd-49ff-8a82-234ca888b35f@d34g2000vbm.googlegroups.com>
Source record: 13064

On Sep 16, 12:15 pm, Szczepan Białek <sz.bia...@wp.pl> wrote:
> "Cecil Moore" <nos...@w5dxp.com> wrotenews:Te4sm.193554$0e4.82772@newsfe19.iad...
>
> > Art Unwin wrote:
>
> > Me either since I don't remember anything about "typical
> > failures". What I said is that the electrons excited by
> > HF+ RF energy move hardly at all. It is akin to tossing
> > a stone into a still pond - the water molecules (carriers)
> > move hardly at all except up and down.
>
> They move along the eliptic trajectory. The longitudinal component is large
> than the transversal.
>
>
>
> >> Another brou har ensued with the implication was that
> >> both the upward and downward travels of the applied current was on the
> >> same skin deep surfaces! Very wierd.
>
> > Again consider tossing a stone into a still pond. When the
> > waves reach the shore, they are reflected thus forming
> > standing waves on the water. Again the water molecules
> > move primarily up and down, moving hardly at all in the
> > direction of propagation of the forward and reflected waves.
>
> See above.
> S*

You mentioned an article in Radio World about the construction of NEC
Could you send me a copy?
Art

2103. Re: Coax Connectors Question

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-16 21:14:51 UTC
From: PH5E <callsign.ph5e-nospam-@gmail.com>
Message-ID: <4ab15547$0$20219$703f8584@news.kpn.nl>
Source record: 13065

Richard Clark wrote:
> On Mon, 7 Sep 2009 09:23:40 -0400, "Robert11" <rgsros@xnotme.invalid>
> wrote:
>
>> I was wondering about just forgetting the switches and just make a
>> simple plug panel using, I imagine, BNC connectors and coax.
>
> This is your best option offering the greatest flexibility, best
> isolation, lowest loss, and lowest cost.
>
>> So, what kind of life might I expect with BNC's, plugging and unplugging
>> them ?
>
> They will last forever at your described usage.
>
> 73's
> Richard Clark, KB7QHC

Just my thoughts...

--
RigReference.com - Reference guide for ham radio equipment
http://rigreference.com/

2104. Re: Spherical radiation pattern

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-16 21:55:55 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <U9dsm.11454$j34.5884@newsfe01.iad>
Source record: 13066

Szczepan Białż˝ek wrote:
> (Electrons) move along the eliptic trajectory. The longitudinal
> component is large(r) than the transversal.

The electrons are NOT the EM photonic waves. The electrons
are the carriers for the EM photonic waves. It is NOT the
electrons that have the transversal wave characteristics.
The movement of the electrons in the conductor is indeed
longitudinal but that movement is close to infinitesimally
small at RF frequencies. The movement is more like an
oscillation in place.
--
73, Cecil, IEEE, OOTC, http://www.w5dxp.com

2105. Re: Spherical radiation pattern

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-16 22:33:42 UTC
From: richardharrison@webtv.net
Message-ID: <20335-4AB167C6-490@storefull-3172.bay.webtv.net>
Source record: 13067

Richard Clark. KB7QHC wrote:
"Several were astonished (as I have already mentioned) to find that his antenna design had reflector (the new and improved model had two) elements that were shorter than the driven element and the director elements longer."

Of course no one could prove for Art how his antenna worked. They weren`t gifted with his type of genius.

As Terman says on page 906 0f his 1955 opus:
"The fact that a parasitic antenna placed close to a radiaring antenna can be used either to reflect or to direct the radiated energy can be taken advantage of to obtain a compact directional antenna system. A simple example is shown in Fig. 23-39 where the reflector length is such that it is resonant at a lower frequency than that being transmitted, while the the director length is chosen so that it is resonant at a higher frequency than is being transmitted."

Most everyone in this newsgroup has tried the classic Yagi arrangement and knows that Terman has it right.

Art`s patent does not prove Terman wrong.

Best regards, Richard Harrison, KB5WZI

2106. Re: Spherical radiation pattern

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-16 23:39:59 UTC
From: Dave <noone@nowhere.com>
Message-ID: <jHesm.2494$Jd7.305@nwrddc02.gnilink.net>
Source record: 13068

"tom" <news4792@taring.org> wrote in message
news:4ab047d3$0$28124$8046368a@newsreader.iphouse.net...
> Art Unwin wrote:
>>> Your claims of diamagnetic levitating neutrinos and other nonsense has
>>> nothing to do with reality. If it's true, prove it.
>>>
>>> You are a FRAUD. Prove you are not.
>>>
>>> And I will predict your answer, if you give one, will be equivalent to
>>> "You need to prove I'm wrong".
>>>
>>> tom
>>> K0TAR
>>
>> Gimmi,Gimmi, Gimme. Eat your heart out or get a nights sleep.
>
> Just what I expected. Art's normal non-answer.
>
> Tell you what, I'll get a night's sleep (it's possessive stupid), and you
> try and get a dose of reality.

its going to take something MUCH stronger than a dose of reality to get art
up to speed.

2107. Re: Spherical radiation pattern

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-16 23:45:26 UTC
From: Dave <noone@nowhere.com>
Message-ID: <qMesm.2495$Jd7.741@nwrddc02.gnilink.net>
Source record: 13069

"Art Unwin" <arthurunwin@gmail.com> wrote in message
news:117214cb-1c1b-471e-94c0-becae3af2907@y20g2000vbk.googlegroups.com...
On Sep 16, 6:46 am, Cecil Moore <nos...@w5dxp.com> wrote:
>We
>now accept that particles do rest on diamagnetic surfaces per the
>Gauss extension. In fact, this surface or sleeve of particles is so
>tightly formed that it has the hoop stress of a arbitrary boundary
>such that nothing is removed from the diamagnetic material itself.

he still hasn't figured out how my ferromagnetic antennas work without his
magical levitating diamagnetic neutrino hoops around them all jumping off in
response to his current pulses.

2108. Re: Spherical radiation pattern

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-16 23:51:01 UTC
From: richardharrison@webtv.net
Message-ID: <22800-4AB179E5-66@storefull-3171.bay.webtv.net>
Source record: 13070

Chtistofire wrote:
"I`d be willing to bet, say, 100 UK pounds that Professor Unwin can`t create an antenna in hardware that radiates isotropically, that is over the whole sphere within let`s say +/- 1 dB with respect to any chosen (but constant) polarisation."

Many would bet just as Christofire.

An isotropic may fit Art`s definition of "equilibrium" but according to Terman it is impossible. Terman`s footnite on page 871 of hid 1955 opus says:

"An isotropic antenna produces waves that are of equal strength in all directions. Although an isotropic radiator of coherent waves does not exist because it cannot satisfy Maxwell`s equations, the properties of such an imaginary antenna are easily visualized, and the concept of an isotropic radiator is often found useful to the analysis of antenna systems."

My money is on professor Terman.

Best regards, Richard Harrison, KB5WZI

2109. Re: Spherical radiation pattern

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-17 07:28:32 UTC
From: Szczepan Białek <sz.bialek@wp.pl>
Message-ID: <h8sdaq$5pl$1@node1.news.atman.pl>
Source record: 13071

"Cecil Moore" <nospam@w5dxp.com> news:U9dsm.11454$j34.5884@newsfe01.iad...
> Szczepan Biaďż˝ek wrote:
>> (Electrons) move along the eliptic trajectory. The longitudinal
>> component is large(r) than the transversal.

To be precise: Art wrote: "the water molecules (carriers)
> move hardly at all except up and down".

Next I wrote: "They move along the eliptic trajectory. The longitudinal
>> component is large(r) than the transversal"

So "They" The water molecules not "Electrons"

It is very important to know that the water waves are not transversal.
Everybody who know that understand that in reality no pure transversal
waves. In reality are waves which interfere.
>
> The electrons are NOT the EM photonic waves. The electrons
> are the carriers for the EM photonic waves. It is NOT the
> electrons that have the transversal wave characteristics.
> The movement of the electrons in the conductor is indeed
> longitudinal but that movement is close to infinitesimally
> small at RF frequencies. The movement is more like an
> oscillation in place.

I do not know what are movements of elecrtons in conductor but in air
(lightning) they oscillate with RF frequences and that movement is not close
to infinitesimally small (kilometers).
S*

2110. Re: Spherical radiation pattern

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-17 07:48:30 UTC
From: Szczepan Białek <sz.bialek@wp.pl>
Message-ID: <h8seg7$5uk$1@node1.news.atman.pl>
Source record: 13072

"christofire" <christofire@btinternet.com> wrote
news:BNKdnVtM_K6gZTLXnZ2dnUVZ8lmdnZ2d@bt.com...
>
> "Richard Clark" <kb7qhc@comcast.net> wrote in message
> news:ioiva5dvb5a388i0opgjk3vmbckl3hlavp@4ax.com...
>> On Tue, 15 Sep 2009 11:52:19 +0100, "christofire"
>> <christofire@btinternet.com> wrote:
>>
>>>No, you have it wrong again - the current must be zero at the ends, there
>>>is
>>>nowhere for it to go, and there cannot be acceleration of charge is
>>>there's
>>>no current. Please go away and read some books and the NEETS module to
>>>which I provided the link.
>>>
>>>Chris
>>
>> Hi Chris,
>>
>> This mistake is being compounded daily, so it seems. The "absence" of
>> current on any particular portion of the antenna is the superposition
>> of two currents flowing - hence the term "standing wave antenna."
>> Hence there is something of a paradox that where two currents reside
>> (the metal elements are continuous and conductive) it is said no
>> current flows. There is a correlation between this superposed
>> solution and the pattern of the far-field pattern but that does not
>> lead to the conclusion that there is no "acceleration" of charge at
>> the ends. After-all, the abundant alternating voltage at those same
>> ends is also charge, n'est pas? It could be as easily argued that
>> superposed voltage nodes also define the pattern of the far-field
>> pattern.
>>
>> 73's
>> Richard Clark, KB7QHC
>
>
> Well, the moment of a section of a dipole is proportional to the average
> net current on it and it's the integral of the moments at a point of
> inspection that yields the radiation pattern. In my simplistic way of
> thinking, if the moment of the end sections is zero, or as close as makes
> no difference, then there's no contribution to the pattern from there, so
> there's no radiation from there. Someone else who posted here a while ago
> used the term 'unopposed' current which is useful because it's the basis
> of why twin-wire transmission line, driven differentially, is a poor

> radiator - put another way, the moment at any point is close to zero.
> Alternatively, if there's no radiation from a 'source' then there can't be
> any unopposed current there.
>
> I wouldn't contradict what you say about there being a collection of
> charge at the ends of a dipole during each cycle, especially when it has
> added capacitance (e.g. a 'hat' or the top of a 'Tee'), but the current in
> a symmetrical hat is fully opposed and, as I noted before, the current at
> the end of the conductor must be zero - by the definition of conduction.
>
> I believe there is danger in trying to relate radiation to voltages rather
> than currents, arguing that displacement current causes radiation.
> Therein lies the fallacy of the CFA, E-H antennas, and associated efforts
> at re-writing of Maxwell's equations, which are all being demonstrated as
> bunk. Also, this appears to be the basis of Mr. Bialek's lecture series.
> If you wish to argue 'that superposed voltage nodes also define the
> (pattern of the...sic) far-field pattern' then I won't stand in your way
> ... but I probably won't believe you.

So I will start "Mr. Bialek's lecture series" as a new topic.
The first will be on a "standing waves". A will try to explain the paradox:
"Hence there is something of a paradox that where two currents reside (the
metal elements are continuous and conductive) it is said no current flows
(R. Clark).
S*

>
> Chris
>

2111. Re: Spherical radiation pattern

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-17 07:54:48 UTC
From: Szczepan Białek <sz.bialek@wp.pl>
Message-ID: <h8ses1$605$1@node1.news.atman.pl>
Source record: 13073

"Art Unwin" <arthurunwin@gmail.com> wrote
news:231b9e67-a8bd-49ff-8a82-234ca888b35f@d34g2000vbm.googlegroups.com...

>You mentioned an article in Radio World about the construction of NEC
Could you send me a copy?

It was not me. I do not know who.
S*

2112. Re: Spherical radiation pattern

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-17 11:36:21 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <3bpsm.7010$tG1.4168@newsfe22.iad>
Source record: 13074

Szczepan Białż˝ek wrote:
> I do not know what are movements of elecrtons in conductor but in air
> (lightning) they oscillate with RF frequences and that movement is not
> close to infinitesimally small (kilometers).

Unfortunately, the discussion is not about lightning
but is instead about the "movements of electrons" in
an antenna "conductor" about which you "do not know".

Incidentally, the electrons energized by lightning do
indeed emit broad spectrum photons, i.e. EM waves.
--
73, Cecil, IEEE, OOTC, http://www.w5dxp.com

2113. Re: Spherical radiation pattern

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-17 12:08:17 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <1Fpsm.182031$cf6.79113@newsfe16.iad>
Source record: 13075

Szczepan Biaďż˝ek wrote:
> So I will start "Mr. Bialek's lecture series" as a new topic.
> The first will be on a "standing waves". A will try to explain the
> paradox: "Hence there is something of a paradox that where two currents
> reside (the metal elements are continuous and conductive) it is said no
> current flows (R. Clark).

No NET current flows. The forward current associated with the
forward EM wave is moving forward at the speed of light in
the medium. The reverse current associated with the reverse
EM wave is moving backwards at the speed of light in the
medium. When the forward current amplitude equals the reverse
current amplitude and is 180 degrees out of phase, the net
current flow is zero. 1/4WL away, those equal currents are in
phase and add. If the net current is measured at the maximum
(anti-node) point, it can be divided by two to obtain an estimate
of the magnitude of the forward current at the node point where
the net current is zero.

The forward current at the ends of a 1/2WL copper dipole is
approximately 95% of the forward current at the feedpoint.
The reverse current at the feedpoint is approximately 95%
of the reverse current at the ends of the dipole. It's a
STANDING WAVE ANTENNA! That ~10% decrease between forward
current and reverse current at the feedpoint is caused by
radiation "loss" and I^2*R loss in the antenna.

The SWR on the antenna element is approximately 20:1 at the
feedpoint. It is a STANDING WAVE ANTENNA! Most of the net
current on the antenna is in the standing wave and cannot
be used to measure the delay through the wire or through a
loading coil because the current phase changes by only about
2-3 degrees in 90 degrees of wire. The standing wave contains
about 80% of the steady-state energy on the antenna. Only about
20% of the steady-state energy/sec is lost to radiation and
ohmic losses.

One can prove such for oneself. Set up a low 10m 1/2WL dipole
with current probes at the 30 deg (x) and 60 deg (y) points.
One will not be able to detect more than about a degree of
phase shift in that 30 degrees of standing wave antenna.

8ft 2ft 2ft 2ft
------------------------fp-------x-------y--------

Why would anyone expect that if the 30 degrees of antenna
is replaced by a loading coil that the delay through the
loading coil could be measured using standing wave current
phase on a standing wave antenna?
--
73, Cecil, IEEE, OOTC, http://www.w5dxp.com

2114. Re: Spherical radiation pattern

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-17 12:11:19 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <PHpsm.182037$cf6.113805@newsfe16.iad>
Source record: 13076

Szczepan Białż˝ek wrote:
>
> "Art Unwin" <arthurunwin@gmail.com> wrote
>> You mentioned an article in Radio World about the construction of NEC
> Could you send me a copy?
>
> It was not me. I do not know who.

There are discussions of the method of moments (MOM)
in "Antenna Theory", by Balanis and "Antennas ..." by
Kraus and Marhefka.
--
73, Cecil, IEEE, OOTC, http://www.w5dxp.com

2115. Re: Spherical radiation pattern

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-17 16:41:47 UTC
From: christofire <christofire@btinternet.com>
Message-ID: <uaednU_eDLxN-y_XnZ2dnUVZ8vidnZ2d@bt.com>
Source record: 13077

"Cecil Moore" <nospam@w5dxp.com> wrote in message
news:1Fpsm.182031$cf6.79113@newsfe16.iad...

- - major snip - -

> One can prove such for oneself. Set up a low 10m 1/2WL dipole
> with current probes at the 30 deg (x) and 60 deg (y) points.
> One will not be able to detect more than about a degree of
> phase shift in that 30 degrees of standing wave antenna.
>
> 8ft 2ft 2ft 2ft
> ----------fp-------x-------y--------

Do you really mean relative phase of the outward-travelling currents at x and y? If so that sounds terribly hard to measure: you'd need a pair of directional probes that you could hang on the antenna without affecting its current distribution. Or do you mean the amplitude of the standing wave pattern of current, in comparison with an idealiesd sinusoidal distribution which has zero at the end? If the latter, 'phase shift' is probably not the correct term.

If you really do mean the relative phases, but as measured with non-directional probes then even that would be hard to interpret given that there are superposed outward- and inward-directed (i.e. reflected) components of current on the dipole limb.

Or am I missing something?

Chris

> Why would anyone expect that if the 30 degrees of antenna
> is replaced by a loading coil that the delay through the
> loading coil could be measured using standing wave current
> phase on a standing wave antenna?
> --
> 73, Cecil, IEEE, OOTC, http://www.w5dxp.com

2116. Standing waves

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-17 17:15:56 UTC
From: Szczepan Białek <sz.bialek@wp.pl>
Message-ID: <h8tfnv$b45$1@node1.news.atman.pl>
Source record: 13078

Frankly speaking no standing waves. Waves always travel. In air travel the pressure pulse. When the two waves travel in opposite directions they interfere. See: http://en.wikipedia.org/wiki/Kundt's_tube
"The sound generator is turned on and the piston is adjusted until the sound from the tube suddenly gets much louder. This indicates that the tube is at resonance, which means its length is a multiple of the wavelength of the sound wave. At this point the sound waves in the tube are in the form of standing waves, and the amplitude of vibrations of air are zero at equally spaced intervals along the tube, called the nodes."

Between the nodes are places where the amplitude is doubled. So the places with doubled amplitude are standing. Pressure pulse travel.
In antennas is electron gas. The first place where the doubled amplitude (amplitude means voltage or electron density) appear is end of the radials. The next is halve wave apart from the end. Such places radiate strong electric waves. They are the source of radiation.
Of course the next source is weaker because some part of energy is radiated. But such is stronger than the trawled source (normal voltage pulse)

If antenna has only one source it is omnidirectional. If two or more is directional because the waves from different sources interfere.

The halve wave dipole has the two sources. The next two appear than a dipole is longer than the wave length.
So that what R. Clark wrote is obvious: "[* What is this proportional and proportionate mean? For a dipole of
0.05 WL to a dipole of 0.5WL, the far field change for that 10:1 variation is negligible. However, for a dipole of 0.5WL to a dipole of 1.25WL, the far field change for that 2.5:1 (a smaller proportion) variation is very noticeable.]

The above is the antenna with the Helmholtz' pressure wave.
Could anybody describe the antenna with the Heavisde's TEM waves?
In a few words. Do not send mi to library.
S*

2117. Re: Spherical radiation pattern

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-17 17:16:15 UTC
From: Szczepan Białek <sz.bialek@wp.pl>
Message-ID: <h8tfoi$b48$1@node1.news.atman.pl>
Source record: 13079

"Cecil Moore" <nospam@w5dxp.com>
wrotenews:1Fpsm.182031$cf6.79113@newsfe16.iad...
> Szczepan Biaďż˝ek wrote:
>> So I will start "Mr. Bialek's lecture series" as a new topic.
>> The first will be on a "standing waves". A will try to explain the
>> paradox: "Hence there is something of a paradox that where two currents
>> reside (the metal elements are continuous and conductive) it is said no
>> current flows (R. Clark).
>
> No NET current flows. The forward current associated with the
> forward EM wave is moving forward at the speed of light in
> the medium. The reverse current associated with the reverse
> EM wave is moving backwards at the speed of light in the
> medium. When the forward current amplitude equals the reverse
> current amplitude and is 180 degrees out of phase, the net
> current flow is zero. 1/4WL away, those equal currents are in
> phase and add. If the net current is measured at the maximum
> (anti-node) point, it can be divided by two to obtain an estimate
> of the magnitude of the forward current at the node point where
> the net current is zero.
>
> The forward current at the ends of a 1/2WL copper dipole is
> approximately 95% of the forward current at the feedpoint.
> The reverse current at the feedpoint is approximately 95%
> of the reverse current at the ends of the dipole. It's a
> STANDING WAVE ANTENNA! That ~10% decrease between forward
> current and reverse current at the feedpoint is caused by
> radiation "loss" and I^2*R loss in the antenna.
>
> The SWR on the antenna element is approximately 20:1 at the
> feedpoint. It is a STANDING WAVE ANTENNA! Most of the net
> current on the antenna is in the standing wave and cannot
> be used to measure the delay through the wire or through a
> loading coil because the current phase changes by only about
> 2-3 degrees in 90 degrees of wire. The standing wave contains
> about 80% of the steady-state energy on the antenna. Only about
> 20% of the steady-state energy/sec is lost to radiation and
> ohmic losses.
>
> One can prove such for oneself. Set up a low 10m 1/2WL dipole
> with current probes at the 30 deg (x) and 60 deg (y) points.
> One will not be able to detect more than about a degree of
> phase shift in that 30 degrees of standing wave antenna.
>

> 8ft 2ft 2ft 2ft
> ------------------------fp-------x-------y--------
>
> Why would anyone expect that if the 30 degrees of antenna
> is replaced by a loading coil that the delay through the
> loading coil could be measured using standing wave current
> phase on a standing wave antenna?

See new thread "Standing waves".
S*

2118. Re: Standing waves

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-17 17:27:36 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <c9s4b5l6rarmdou19b8ghrl0ahaql1n26q@4ax.com>
Source record: 13080

On Thu, 17 Sep 2009 19:15:56 +0200, Szczepan Bia?ek <sz.bialek@wp.pl>
wrote:

>If antenna has only one source it is omnidirectional. If two or more is
>directional because the waves from different sources interfere.
>
>The halve wave dipole has the two sources. The next two appear than a
>dipole is longer than the wave length.
>So that what R. Clark wrote is obvious: "[* What is this proportional and
>proportionate mean? For a dipole of
>0.05 WL to a dipole of 0.5WL, the far field change for that 10:1
>variation is negligible. However, for a dipole of 0.5WL to a dipole
>of 1.25WL, the far field change for that 2.5:1 (a smaller proportion)
>variation is very noticeable.]

In the space of two sentences you contradict yourself. You don't get
it, do you?

73's
Richard Clark, KB7QHC

2119. Re: Spherical radiation pattern

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-17 18:39:26 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <Invsm.10422$944.414@newsfe09.iad>
Source record: 13081

christofire wrote:
> If you really do mean the relative phases, but as measured with
> non-directional probes then even that would be hard to interpret given that
> there are superposed outward- and inward-directed (i.e. reflected)
> components of current on the dipole limb.

Exactly!

> Or am I missing something?

Nope, you are not missing something. But some reasonably
intelligent and educated people have used non-directional
current probes on loading coils in standing wave antennas
to "prove" that, e.g. the delay through a 10" long, 2" dia,
10 TPI 100 uH 75m loading coil is only 3 nS with a VF of
about 0.3.

http://www.w8ji.com/inductor_current_time_delay.htm

http://www.w8ji.com/mobile_and_loaded_antenna.htm

"Both W7EL and myself made independent measurements of current
in small loaded antennas. These measurements demonstrate the
'missing electrical degrees' in an antenna has nothing to do
with current distribution in the coil."

http://www.w8ji.com/inductor_operation.htm

http://www.w8ji.com/RRAA_post.htm

W7EL wrote: "and this one, posted by Cecil on that same
group on Jan. 12:"

W5DXP wrote: "Roy's data clearly illustrates
the phase shift through the coil. ARCCOS(Iout/Iin) gives an
estimate of the phase shift (assuming forward current and
reflected current are of equal magnitude). In Roy's experiment,
Iout/Iin was about 0.95. ARCCOS(0.95) equals 18 degrees, an
approximation for the phase shift through the coil."

W7EL goes on to try to discredit my above argument.

However, the following web page indicates that the 3 nS
"measurement" is off by a magnitude and that the actual
delay through the above coil is closer to 30 nS
calculated from the "axial propagation factor" and has
a VF of about 0.03, 10 times slower than the 3 nS assertion.

http://hamwaves.com/antennas/inductance.html

P.S. This argument has been going on for about 6 years.
--
73, Cecil, IEEE, OOTC, http://www.w5dxp.com

2120. EZ-NEC seems not to match the Antenna Book?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-17 18:59:39 UTC
From: Antonio Vernucci <vernucci@tin.it>
Message-ID: <4ab2871a$0$1108$4fafbaef@reader1.news.tin.it>
Source record: 13082

In the 1976 edition of the ARRL Antenna book, at page 147 I see a graph (Fig. 4-37) showing the gain of a two-element array consisting of a driven element and a self-resonant parasitic element (i.e. same length as driven element, no de-tuning).

The graph shows gain (in the two orthogonal directions) as a function of spacing. For spacing = 0.14 wavelength, the graph shows a bi-directional gain of about 4 dB (and then a front-to-back ratio of 0 dB).

Unless I did something wrong, on EZ-NEC the same array with 0.14 WL spacing shows a free-space zero-elevation gain of about 6.4 dB in one of the two directions, with a front-to-back ratio of about 10.5 dB.

Which of the three is wrong: Antenna Book, EZ-NEC or me?

BTW: as far as radiation resistance is concerned, EZ-NEC gives about 17.9 ohm at resonance, against the nearly 21 ohm shown by the Antenna Book.

Tony I0JX

Rome, Italy

2121. Re: EZ-NEC seems not to match the Antenna Book?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-17 19:53:21 UTC
From: Antonio Vernucci <vernucci@tin.it>
Message-ID: <4ab293b0$0$1109$4fafbaef@reader1.news.tin.it>
Source record: 13083

> The graph shows gain (in the two orthogonal directions) as a function of
> spacing. For spacing = 0.14 wavelength, the graph shows a bi-directional gain
> of about 4 dB (and then a front-to-back ratio of 0 dB).
>
> Unless I did something wrong, on EZ-NEC the same array with 0.14 WL spacing
> shows a free-space zero-elevation gain of about 6.4 dB in one of the two
> directions, with a front-to-back ratio of about 10.5 dB.

Re-thinking on the results, the gain difference is probably due to the fact that the ARRL Antenna Book graph gives dBd, whilst EZ-NEC gives dBi.

But what about the great difference in front-to-back?

Tony I0JX

2122. Re: Standing waves

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-17 20:37:19 UTC
From: K7ITM <k7itm@msn.com>
Message-ID: <d4c3bb73-431a-495a-a85d-c4c078ff7458@d9g2000prh.googlegroups.com>
Source record: 13084

On Sep 17, 10:15 am, Szczepan Białek <sz.bia...@wp.pl> wrote:
> Frankly speaking no standing waves. Waves always travel. In air travel the
> pressure pulse. When the two waves travel in opposite directions they
> interfere. See:http://en.wikipedia.org/wiki/Kundt's_tube
> "The sound generator is turned on and the piston is adjusted until the sound
> from the tube suddenly gets much louder. This indicates that the tube is at
> resonance, which means its length is a multiple of the wavelength of the
> sound wave. At this point the sound waves in the tube are in the form of
> standing waves, and the amplitude of vibrations of air are zero at equally
> spaced intervals along the tube, called the nodes."
>
> Between the nodes are places where the amplitude is doubled. So the places
> with doubled amplitude are standing. Pressure pulse travel.
> In antennas is electron gas. The first place where the doubled amplitude
> (amplitude means voltage or electron density) appear is end of the radials.
> The next is halve wave apart from the end. Such places radiate strong
> electric waves. They are the source of radiation.

The problem I immediately see here is that you're probably interested
in electromagnetic radiation, not just the electric field. The
result, as I see it, is that the rest of your discussion is based on a
completely false premise. But see below.
...
> The above is the antenna with the Helmholtz' pressure wave.
> Could anybody describe the antenna with the Heavisde's TEM waves?
> In a few words. Do not send mi to library.
> S*

Others have tried to describe radiation from linear antennas in
reasonably simple terms. One of the best I know is Joseph Boyer's
pair of articles from May and June, I think it was, 1978 "Ham Radio"
magazine: "The Antenna-Transmission Line Analog." It's a non-
mathematical work; it will leave you with answers with not a lot to
back them up, but they do match what we observe, as far as I
understand it. I have these as a PDF, along with a fairly important
section from a book referenced by the articles.

Cheers,
Tom

2123. Re: EZ-NEC seems not to match the Antenna Book?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-17 21:02:33 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <Ltxsm.180402$O23.156718@newsfe11.iad>
Source record: 13085

Antonio Vernucci wrote:
> But what about the great difference in front-to-back?

A later edition of The ARRL Antenna Book shows that
equal bilateral gain occurs at a little over 0.1WL
spacing. EZNEC agrees.
--
73, Cecil, IEEE, OOTC, http://www.w5dxp.com

2124. Re: Standing waves

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-17 22:27:18 UTC
From: Richard Fry <rfry@adams.net>
Message-ID: <51205169-be41-45cc-a2dc-7f8e3978cd25@q14g2000vbi.googlegroups.com>
Source record: 13086

On Sep 17, 12:15 pm, Szczepan Białek <sz.bia...@wp.pl> wrote:
> If antenna has only one source it is omnidirectional. If two or more is
> directional because the waves from different sources interfere.

More study is needed on your part, S*. Consult the textbooks of the authors that already have been listed, and quoted here.

Your unproven, personal opinions are not sufficient to support some of the statements you post-- which accounts for the "negative" comments responding to them.

Every single real-world antenna in existence has more than one source along its length that contributes to its radiation pattern, and therefore has some directionality.

Your study and accurate understanding of the works of the authors mentioned will prove this.

RF

2125. Re: Spherical radiation pattern

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-17 23:24:13 UTC
From: christofire <christofire@btinternet.com>
Message-ID: <xludnT1PBtm_WC_XnZ2dnUVZ8iqdnZ2d@bt.com>
Source record: 13087

"Szczepan Bia&#65533;ek" <sz.bialek@wp.pl> wrote in message
news:h8tfoi$b48$1@node1.news.atman.pl...
>
> "Cecil Moore" <nospam@w5dxp.com>
> wrotenews:1Fpsm.182031$cf6.79113@newsfe16.iad...
>> Szczepan Bia&#65533;ek wrote:
>>> So I will start "Mr. Bialek's lecture series" as a new topic.
>>> The first will be on a "standing waves". A will try to explain the
>>> paradox: "Hence there is something of a paradox that where two currents
>>> reside (the metal elements are continuous and conductive) it is said no
>>> current flows (R. Clark).
>>
>> No NET current flows. The forward current associated with the
>> forward EM wave is moving forward at the speed of light in
>> the medium. The reverse current associated with the reverse
>> EM wave is moving backwards at the speed of light in the
>> medium. When the forward current amplitude equals the reverse
>> current amplitude and is 180 degrees out of phase, the net
>> current flow is zero. 1/4WL away, those equal currents are in
>> phase and add. If the net current is measured at the maximum
>> (anti-node) point, it can be divided by two to obtain an estimate
>> of the magnitude of the forward current at the node point where
>> the net current is zero.
>>
>> The forward current at the ends of a 1/2WL copper dipole is
>> approximately 95% of the forward current at the feedpoint.
>> The reverse current at the feedpoint is approximately 95%
>> of the reverse current at the ends of the dipole. It's a
>> STANDING WAVE ANTENNA! That ~10% decrease between forward
>> current and reverse current at the feedpoint is caused by
>> radiation "loss" and I^2*R loss in the antenna.
>>
>> The SWR on the antenna element is approximately 20:1 at the
>> feedpoint. It is a STANDING WAVE ANTENNA! Most of the net
>> current on the antenna is in the standing wave and cannot
>> be used to measure the delay through the wire or through a
>> loading coil because the current phase changes by only about
>> 2-3 degrees in 90 degrees of wire. The standing wave contains
>> about 80% of the steady-state energy on the antenna. Only about
>> 20% of the steady-state energy/sec is lost to radiation and
>> ohmic losses.
>>
>> One can prove such for oneself. Set up a low 10m 1/2WL dipole

>> with current probes at the 30 deg (x) and 60 deg (y) points.
>> One will not be able to detect more than about a degree of
>> phase shift in that 30 degrees of standing wave antenna.
>>
>> 8ft 2ft 2ft 2ft
>> ----------fp-------x-------y--------
>>
>> Why would anyone expect that if the 30 degrees of antenna
>> is replaced by a loading coil that the delay through the
>> loading coil could be measured using standing wave current
>> phase on a standing wave antenna?
>
> See new thread "Standing waves".
> S*

What for? It doesn't explain anything. Please go away.

Chris

2126. Re: Spherical radiation pattern

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-18 00:02:33 UTC
From: Art Unwin <arthurunwin@gmail.com>
Message-ID: <2c7698c5-9952-47a9-815e-c759b91ea474@d34g2000vbm.googlegroups.com>
Source record: 13088

On Sep 11, 6:36 pm, "Dave" <no...@nowhere.com> wrote:
> "Art Unwin" <arthurun...@gmail.com> wrote in message
>
> news:68903947-0109-4020-b4e5-69fb80d9e07f@a7g2000yqo.googlegroups.com...
> On Sep 11, 2:37 pm, Art Unwin <arthurun...@gmail.com> wrote:
>
> > On Sep 11, 1:04 pm, "Dave" <no...@nowhere.com> wrote:
>
> >David
> >Forgot to mention.
> >Current would not be applied to the radiator itself but only to the
> >sheathing of homogenous particles at rest.(ie neutrinos who are part of
> >the
> >family of Leptons but still remain as particles) This way with
> >opposing forces in shear which includes the bending moment or twist
> >of the Standard Force, the chemical adhesion is broken and the
> >particle is elevated to achieve a straight line projection with spin.
> >In this event all electrical laws lie
> > intact and where the resistance is solely of that of radiation to
> >which current is applied.
>
> ahhhh, thank you for a good laugh art... now you can go enjoy your vacation.
> i couldn't see you go without mentioning your magical levitating diamagnetic
> neutrinos just one more time. while you are gone try to figure out how my
> ferromagnetic antennas happen to work so well without your diamagnetic
> neutrinos to do their magical levitating and twisting for me.

The problem is that all forces are not accounted for per Maxwell
requirements!
In your case magnetic energy remains with the radiator which is a loss
that is unaccounted for ! This loss does not occur with a diamagnetic
materials. Very simple my dear Watson.
When you use computer programs in conformance with Maxwell's equations
you can expect 100% efficiencies not the "close enough for horse
shoes" type responses.
If a design is planar it just cannot be 100% efficient as when all
forced are accounted for.
When you obtain 100% efficiencies then other surprises enter the
picture which allows the use of smaller volume antennas than those
known to the present state of the art. Not to be seen in books by
Krauss, Balmain, Terman and others because they were not just aware of
it and not that it is an error. There is no real volume restriction
with respect to antennas with today's knowledge. I found that out by
making a resonant directional antenna for all the TOP band that fits

into my rotor on the tower. It is very rare in Classical Physics that statements made are not subject to revision by following generations who are able to climb on the shoulders of others such that hidden things can be seen when the vision of prior generations begin to dim.

2127. Re: Spherical radiation pattern

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-18 00:08:20 UTC
From: christofire <christofire@btinternet.com>
Message-ID: <QeadnUfsLovkUi_XnZ2dnUVZ8vWdnZ2d@bt.com>
Source record: 13089

"Cecil Moore" <nospam@w5dxp.com> wrote in message
news:Invsm.10422$944.414@newsfe09.iad...
> christofire wrote:
>> If you really do mean the relative phases, but as measured with
>> non-directional probes then even that would be hard to interpret given
>> that there are superposed outward- and inward-directed (i.e. reflected)
>> components of current on the dipole limb.
>
> Exactly!
>
>> Or am I missing something?
>
> Nope, you are not missing something. But some reasonably
> intelligent and educated people have used non-directional
> current probes on loading coils in standing wave antennas
> to "prove" that, e.g. the delay through a 10" long, 2" dia,
> 10 TPI 100 uH 75m loading coil is only 3 nS with a VF of
> about 0.3.
>
> http://www.w8ji.com/inductor_current_time_delay.htm
>
> http://www.w8ji.com/mobile_and_loaded_antenna.htm
>
> "Both W7EL and myself made independent measurements of current
> in small loaded antennas. These measurements demonstrate the
> 'missing electrical degrees' in an antenna has nothing to do
> with current distribution in the coil."
>
> http://www.w8ji.com/inductor_operation.htm
>
> http://www.w8ji.com/RRAA_post.htm
>
> W7EL wrote: "and this one, posted by Cecil on that same
> group on Jan. 12:"
>
> W5DXP wrote: "Roy's data clearly illustrates
> the phase shift through the coil. ARCCOS(Iout/Iin) gives an
> estimate of the phase shift (assuming forward current and
> reflected current are of equal magnitude). In Roy's experiment,
> Iout/Iin was about 0.95. ARCCOS(0.95) equals 18 degrees, an
> approximation for the phase shift through the coil."
>
> W7EL goes on to try to discredit my above argument.
> --

> However, the following web page indicates that the 3 nS
> "measurement" is off by a magnitude and that the actual
> delay through the above coil is closer to 30 nS
> calculated from the "axial propagation factor" and has
> a VF of about 0.03, 10 times slower than the 3 nS assertion.
>
> http://hamwaves.com/antennas/inductance.html
>
> P.S. This argument has been going on for about 6 years.
> --
> 73, Cecil, IEEE, OOTC, http://www.w5dxp.com

OK Cecil, I can see there's plenty of scope for argument in this field of endeavour. It must be difficult to avoid influencing the current distribution when any sort of current probe (e.g. torroidal transformer) is placed around a dipole limb but I suppose it is possible with adequate choking of its secondary connections. I'm not sure a 'grab test' is sufficient to prove no influence on the current distribution, even if it does suggest the secondary connection isn't 'hot' to RF. Then the assumption of equal forward and reflected travelling waves of current can't be right, because that would imply no radiation (it would be true inside a co-axial cavity resonator) - but you probably have that covered by now.

As for the precise behaviour of inductors in respect of coupling between turns and its effect on velocity of propagation through the device, I can see there's endless scope for variation/argument there as well. I have encountered something similar in my work, in respect of Litz wire/cable - I reached the conclusion that inhibition of transverse current was the only reliable benefit; all the other stuff about skin effect in individual conductors (when they're coupled to one another inductively and capacitively) seems questionable!

I certainly wish you good luck in getting to the truth about these matters.

Chris

2128. Re: Spherical radiation pattern

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-18 00:49:53 UTC
From: Richard Fry <rfry@adams.net>
Message-ID: <5496fdb2-e2ae-475a-bc30-907878535a61@p15g2000vbl.googlegroups.com>
Source record: 13090

On Sep 17, 7:02 pm, Art Unwin <arthurun...@gmail.com> wrote:
> ... I found that out by making a resonant directional antenna
> for all the TOP band that fits into my rotor on the tower.

What do you mean by (self) resonant?

Physics shows that NO radiator as small as fits into the rotor on your tower, by itself, could possibly be self-resonant at "TOP band."

RF

2129. Re: Spherical radiation pattern

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-18 01:12:31 UTC
From: Art Unwin <arthurunwin@gmail.com>
Message-ID: <48616419-50cc-439c-8ff2-eda2cbff68c2@l35g2000vba.googlegroups.com>
Source record: 13091

On Sep 17, 7:49 pm, Richard Fry <r...@adams.net> wrote:
> On Sep 17, 7:02 pm, Art Unwin <arthurun...@gmail.com> wrote:> ... I found that out by making a resonant directional antenna
> > for all the TOP band that fits into my rotor on the tower.
>
> ----------
>
> What do you mean by (self) resonant?
>
> Physics shows that NO radiator as small as fits into the rotor on your
> tower, by itself, could possibly be self-resonant at "TOP band."
>
> RF

Watch the PTO print outs. No statements last for ever in physics
I'm done

2130. Re: Spherical radiation pattern

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-18 01:51:24 UTC
From: tom <news4792@taring.org>
Message-ID: <4ab2e7e4$0$42846$8046368a@newsreader.iphouse.net>
Source record: 13092

Art Unwin wrote:
> On Sep 17, 7:49 pm, Richard Fry <r...@adams.net> wrote:
>> On Sep 17, 7:02 pm, Art Unwin <arthurun...@gmail.com> wrote:> ... I found that out by making a resonant directional antenna
>>> for all the TOP band that fits into my rotor on the tower.
>> _____
>>
>> What do you mean by (self) resonant?
>>
>> Physics shows that NO radiator as small as fits into the rotor on your
>> tower, by itself, could possibly be self-resonant at "TOP band."
>>
>> RF
>
> Watch the PTO print outs. No statements last for ever in physics
> I'm done

You've been done for a looong time, Art. You just don't realize it yet.

Your patent attempt proves nothing. It's bad physics, and even with the clueless dips that work in the patent office you are still being rejected. It's gotta be pretty useless if they won't approve it.

tom
K0TAR

2131. Re: Spherical radiation pattern

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-18 02:00:49 UTC
From: Art Unwin <arthurunwin@gmail.com>
Message-ID: <a4b47e2a-1a88-44c6-841e-dcd182e0f87f@o36g2000vbl.googlegroups.com>
Source record: 13093

On Sep 17, 7:49 pm, Richard Fry <r...@adams.net> wrote:
> On Sep 17, 7:02 pm, Art Unwin <arthurun...@gmail.com> wrote:> ... I found that out by making a resonant directional antenna
> > for all the TOP band that fits into my rotor on the tower.
>
> ----------
>
> What do you mean by (self) resonant?
>
> Physics shows that NO radiator as small as fits into the rotor on your
> tower, by itself, could possibly be self-resonant at "TOP band."
>
> RF

With "David" being barred from the group there should be no obstacle
to closing this thread
It really was all for his benefit so he could provide insults and now
there is no need for it.

2132. Re: Spherical radiation pattern

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-18 02:16:08 UTC
From: Art Unwin <arthurunwin@gmail.com>
Message-ID: <4bba6fce-1b31-4eae-a5cb-5adb4d486b30@g6g2000vbr.googlegroups.com>
Source record: 13094

On Sep 17, 8:51 pm, tom <news4...@taring.org> wrote:
> Art Unwin wrote:
> > On Sep 17, 7:49 pm, Richard Fry <r...@adams.net> wrote:
> >> On Sep 17, 7:02 pm, Art Unwin <arthurun...@gmail.com> wrote:> ... I found that out by making a resonant directional antenna
> >>> for all the TOP band that fits into my rotor on the tower.
> >> _____
>
> >> What do you mean by (self) resonant?
>
> >> Physics shows that NO radiator as small as fits into the rotor on your
> >> tower, by itself, could possibly be self-resonant at "TOP band."
>
> >> RF
>
> > Watch the PTO print outs. No statements last for ever in physics
> > I'm done
>
> You've been done for a looong time, Art. You just don't realize it yet.
>
> Your patent attempt proves nothing. It's bad physics, and even with the
> clueless dips that work in the patent office you are still being
> rejected. It's gotta be pretty useless if they won't approve it.
>
> tom
> K0TAR

It is very normal for them to request changes. Obviously you have
never filed a patent
or done anything that would warrant one. Why not pair up with David
and write one yourself
or do you have some already? No that can't be, otherwise you would be
aware of office actions as it goes on all the time. So is it you who
is now Master of the group and self esteemed expert that we all now
have to follow? Your insults are as good as Davids was!
Either way I'm done for a while.

2133. Re: Spherical radiation pattern

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-18 02:17:13 UTC
From: tom <news4792@taring.org>
Message-ID: <4ab2ed89$0$28117$8046368a@newsreader.iphouse.net>
Source record: 13095

Art Unwin wrote:
> On Sep 17, 7:49 pm, Richard Fry <r...@adams.net> wrote:
>> On Sep 17, 7:02 pm, Art Unwin <arthurun...@gmail.com> wrote:> ... I found that out by making a resonant directional antenna
>>> for all the TOP band that fits into my rotor on the tower.
>> _____
>>
>> What do you mean by (self) resonant?
>>
>> Physics shows that NO radiator as small as fits into the rotor on your
>> tower, by itself, could possibly be self-resonant at "TOP band."
>>
>> RF
>
> With "David" being barred from the group there should be no obstacle
> to closing this thread
> It really was all for his benefit so he could provide insults and now
> there is no need for it.

"David" had nothing to do with the last 4 exchanges anyway. What the hell are you blabbering about?

And who "barred" him? You? If you think that's the case, you carry no weight with the group to begin with, and no one, no matter how much respect they get from the group, can bar anyone.

This is an open newsgroup, and anyone can post, even loonies like you.

tom
K0TAR

2134. Re: Spherical radiation pattern

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-18 02:24:19 UTC
From: tom <news4792@taring.org>
Message-ID: <4ab2ef9a$0$42849$8046368a@newsreader.iphouse.net>
Source record: 13096

Art Unwin wrote:
> It is very normal for them to request changes. Obviously you have
> never filed a patent
> or done anything that would warrant one. Why not pair up with David
> and write one yourself
> or do you have some already? No that can't be, otherwise you would be
> aware of office actions as it goes on all the time. So is it you who
> is now Master of the group and self esteemed expert that we all now
> have to follow? Your insults are as good as Davids was!
> Either way I'm done for a while.

Wonderful!! But I doubt you will keep the promise.

And you have no idea of how many patents I've been involved with. But I can safely say the companies I have worked for have made more money from our patents than you have.

tom
K0TAR

2135. Re: Spherical radiation pattern

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-18 03:05:01 UTC
From: tom <news4792@taring.org>
Message-ID: <4ab2f8bc$0$28123$8046368a@newsreader.iphouse.net>
Source record: 13097

```
tom wrote:
>
> And you have no idea of how many patents I've been involved with. But I
> can safely say the companies I have worked for have made more money from
> our patents than you have.

Which should have been "than you have from yours."

tom
K0TAR
```

2136. Re: Spherical radiation pattern

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-18 03:06:00 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <BOCsm.58409$nQ6.40468@newsfe07.iad>
Source record: 13098

christofire wrote:
> Then the
> assumption of equal forward and reflected traveling waves of current can't
> be right, because that would imply no radiation ...

Of course you are right. But the forward and reflected waves
are equal at the ends of the dipole. At the feedpoint of a
1/2WL dipole the reflected current is only ~10% down from
the forward current so the equal current assumption through
the center loading coil is definitely only an approximation.

The question remains: How can the current on a standing wave
antenna, known to change by only 2-3 degrees in 90 degrees
of antenna, be used to measure the delay through a loading
coil installed in the standing wave antenna?

Incidentally, the equal amplitude and opposite phase of the
forward current and reflected current at the ends of a 1/2WL
dipole is the reason that the ends don't radiate much. The
two currents are acting like transmission line currents and
thus any radiated fields tend to cancel because of destructive
interference.

The forward current and reflected current are in phase at
the feedpoint. Their fields interfere constructively and
thus radiation is maximum at that maximum current point.
--
73, Cecil, IEEE, OOTC, http://www.w5dxp.com

2137. Re: Standing waves

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-18 06:51:04 UTC
From: Szczepan Białek <sz.bialek@wp.pl>
Message-ID: <h8uvg1$i0h$1@node1.news.atman.pl>
Source record: 13099

"Richard Clark" <kb7qhc@comcast.net>wrote
news:c9s4b5l6rarmdou19b8ghrl0ahaql1n26q@4ax.com...
> On Thu, 17 Sep 2009 19:15:56 +0200, Szczepan Bia?ek <sz.bialek@wp.pl>
> wrote:
>
>>If antenna has only one source it is omnidirectional. If two or more is
>>directional because the waves from different sources interfere.
>>
>>The halve wave dipole has the two sources. The next two appear than a
>>dipole is longer than the wave length.
>>So that what R. Clark wrote is obvious: "[* What is this proportional and
>>proportionate mean? For a dipole of
>>0.05 WL to a dipole of 0.5WL, the far field change for that 10:1
>>variation is negligible. However, for a dipole of 0.5WL to a dipole
>>of 1.25WL, the far field change for that 2.5:1 (a smaller proportion)
>>variation is very noticeable.]
>
> In the space of two sentences you contradict yourself. You don't get
> it, do you?

"If antenna has only one source" means the monopole antena (the second
source is "graved")
"The halve wave dipole has the two sources" means "dipole has visible the
both ends".
O.K now?
S*

2138. Re: Standing waves

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-18 06:59:45 UTC
From: Szczepan Białek <sz.bialek@wp.pl>
Message-ID: <h8v009$i1o$1@node1.news.atman.pl>
Source record: 13100

"K7ITM" <k7itm@msn.com> wrote
news:d4c3bb73-431a-495a-a85d-c4c078ff7458@d9g2000prh.googlegroups.com...
On Sep 17, 10:15 am, Szczepan Biaďż˝ek <sz.bia...@wp.pl> wrote:
>...
>> The above is the antenna with the Helmholtz' pressure wave.
> Could anybody describe the antenna with the Heavisde's TEM waves?
> In a few words. Do not send mi to library.
> S*

>Others have tried to describe radiation from linear antennas in
reasonably simple terms. One of the best I know is Joseph Boyer's
pair of articles from May and June, I think it was, 1978 "Ham Radio"
magazine: "The Antenna-Transmission Line Analog." It's a non-
mathematical work; it will leave you with answers with not a lot to
back them up, but they do match what we observe, as far as I
understand it. I have these as a PDF, along with a fairly important
section from a book referenced by the articles.

You send me to library. Try use his own words. Christofire do it (in
"Spherical radiation patern"):

">> Szczepan Biaďż˝ek wrote:
>>> So I will start "Mr. Bialek's lecture series" as a new topic.
>>> The first will be on a "standing waves". A will try to explain the
>>> paradox: "Hence there is something of a paradox that where two currents
>>> reside (the metal elements are continuous and conductive) it is said no
>>> current flows (R. Clark).
>>
>> No NET current flows. The forward current associated with the
>> forward EM wave is moving forward at the speed of light in
>> the medium. The reverse current associated with the reverse
>> EM wave is moving backwards at the speed of light in the
>> medium. When the forward current amplitude equals the reverse
>> current amplitude and is 180 degrees out of phase, the net
>> current flow is zero. 1/4WL away, those equal currents are in
>> phase and add. If the net current is measured at the maximum
>> (anti-node) point, it can be divided by two to obtain an estimate
>> of the magnitude of the forward current at the node point where
>> the net current is zero.
>>
>> The forward current at the ends of a 1/2WL copper dipole is
>> approximately 95% of the forward current at the feedpoint.
>> The reverse current at the feedpoint is approximately 95%
>> of the reverse current at the ends of the dipole. It's a
>> STANDING WAVE ANTENNA! That ~10% decrease between forward

>> current and reverse current at the feedpoint is caused by
>> radiation "loss" and I^2*R loss in the antenna.
>>
>> The SWR on the antenna element is approximately 20:1 at the
>> feedpoint. It is a STANDING WAVE ANTENNA! Most of the net
>> current on the antenna is in the standing wave and cannot
>> be used to measure the delay through the wire or through a
>> loading coil because the current phase changes by only about
>> 2-3 degrees in 90 degrees of wire. The standing wave contains
>> about 80% of the steady-state energy on the antenna. Only about
>> 20% of the steady-state energy/sec is lost to radiation and
>> ohmic losses.
>>
>> One can prove such for oneself. Set up a low 10m 1/2WL dipole
>> with current probes at the 30 deg (x) and 60 deg (y) points.
>> One will not be able to detect more than about a degree of
>> phase shift in that 30 degrees of standing wave antenna.
>>
>> 8ft 2ft 2ft 2ft
>> ------------------------fp-------x-------y--------
>>
>> Why would anyone expect that if the 30 degrees of antenna
>> is replaced by a loading coil that the delay through the
>> loading coil could be measured using standing wave current
>> phase on a standing wave antenna?
Chris "

S*

2139. Re: Standing waves

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-18 07:08:52 UTC
From: Szczepan Białek <sz.bialek@wp.pl>
Message-ID: <h8v0ha$i5i$1@node1.news.atman.pl>
Source record: 13001

"Richard Fry" <rfry@adams.net>
news:51205169-be41-45cc-a2dc-7f8e3978cd25@q14g2000vbi.googlegroups.com...
On Sep 17, 12:15 pm, Szczepan Biaďž˝ek <sz.bia...@wp.pl> wrote:
>> If antenna has only one source it is omnidirectional. If two or more is
> directional because the waves from different sources interfere.

>More study is needed on your part, S*. Consult the textbooks of the
authors that already have been listed, and quoted here.

>Your unproven, personal opinions are not sufficient to support some of
the statements you post-- which accounts for the "negative" comments
responding to them.

I wrote: "Do not send me to librery".

>Every single real-world antenna in existence has more than one source
along its length that contributes to its radiation pattern, and
therefore has some directionality.

I wrote" "Pressure pulse travel" > I means that in monopole antena is one
strong source on the and and traveling source "along its length" .

>Your study and accurate understanding of the works of the authors
mentioned will prove this.

Tell me who is right: Helmholtz or Heaviside?
S*

2140. Re: Standing waves

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-18 10:47:19 UTC
From: Richard Fry <rfry@adams.net>
Message-ID: <02a29a16-1f81-4099-8a4e-e624f82311c0@g6g2000vbr.googlegroups.com>
Source record: 13002

On Sep 18, 2:08 am, Szczepan Białek <sz.bia...@wp.pl> wrote:
> I wrote" "Pressure pulse travel" I means that in monopole
> antena is one strong source on the and and traveling
> source "along its length" .

I assume from what you posted before that you meant to write
"in a monopole antenna there is one strong source on the END..."

Could you please post the reason(s) you think so?

Note that only the change in current and charge, over time,
produces EM radiation. At the top of a monopole, and at the ends
of a dipole the net current is almost zero -- so those locations
generate very little of the total EM radiation from these antennas.

RF

2141. Re: Standing waves

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-18 11:15:27 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <sZJsm.42132$JG1.33130@newsfe24.iad>
Source record: 13003

Szczepan Białż˝ek wrote:
> "The halve wave dipole has the two sources" means "dipole has visible
> the both ends".

A 1/2WL dipole is a standing wave antenna.
Are you saying that the forward energy is one source
and the energy reflected from the ends is a second
source?
--
73, Cecil, IEEE, OOTC, http://www.w5dxp.com

2142. Re: Standing waves

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-18 11:28:52 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <1aKsm.42133$JG1.31651@newsfe24.iad>
Source record: 13004

K7ITM wrote:
> "The Antenna-Transmission Line Analog."

It's a good analog. For instance a 1/4WL open-wire
open-circuit stub made with resistance wire with
a resistivity of 0.0000021 ohms-m has a feedpoint
impedance of 35 ohms according to EZNEC.

The current distribution is a close approximation
to a 1/4WL monopole. The additional resistance
over copper approximates the energy lost to
radiation in a 1/4WL monopole.
--
73, Cecil, IEEE, OOTC, http://www.w5dxp.com

2143. Re: Standing waves

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-18 11:34:03 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <UeKsm.42134$JG1.24325@newsfe24.iad>
Source record: 13005

Richard Fry wrote:
> At the top of a monopole, and at the ends
> of a dipole the net current is almost zero -- so those locations
> generate very little of the total EM radiation from these antennas.

Since the forward current and reflected current are equal
in magnitude and opposite in phase at the ends, they act
like transmission line currents and the magnetic fields
cancel at the ends. They are in phase at the feedpoint -
hence the maximum radiation at that point.
--
73, Cecil, IEEE, OOTC, http://www.w5dxp.com

2144. Re: Standing waves

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-18 14:46:26 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <c877b5hq7pebddl6ke0v37dvukavkm8v8j@4ax.com>
Source record: 13006

On Fri, 18 Sep 2009 08:51:04 +0200, Szczepan Bia?ek <sz.bialek@wp.pl>
wrote:

>> In the space of two sentences you contradict yourself. You don't get
>> it, do you?
>
>"If antenna has only one source"

Thank you for confirming that in spite of quoting me, you just don't
get it.

73's
Richard Clark, KB7QHC

2145. Re: Radio Shack SWR meter FA - Re-listed

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-18 16:21:36 UTC
From: Arky Bob <Arky_Bob_Rules@yahoo.com>
Message-ID: <57809deb-534e-4fcc-9799-4679be2024d0@f10g2000vbf.googlegroups.com>
Source record: 13007
Cross-posted to: rec.radio.swap,rec.radio.amateur.equipment,rec.radio.amateur.antenna

On Sep 15, 6:04 pm, Arky Bob <Arky_Bob_Ru...@yahoo.com> wrote:

Sold - thanks.

2146. HP-42S RPN Calculator - FA

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-18 16:23:48 UTC
From: Arky Bob <Arky_Bob_Rules@yahoo.com>
Message-ID: <21b3d7a2-dc5e-410a-9981-db3d25cba35f@m11g2000vbl.googlegroups.com>
Source record: 13008
Cross-posted to: rec.radio.swap,rec.radio.amateur.equipment,rec.radio.amateur.antenna,rec.radio.shortwave

HP-42S - Scientific Calculator - RPN keystroke - excellent condition -
with manual
http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=190334697354

2147. Re: Standing waves

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-18 16:26:01 UTC
From: Szczepan Białek <sz.bialek@wp.pl>
Message-ID: <h9015nnqb1@node1.news.atman.pl>
Source record: 13009

"Cecil Moore" <nospam@w5dxp.com>
news:sZJsm.42132$JG1.33130@newsfe24.iad...
> Szczepan Biaďż˝ek wrote:
>> "The halve wave dipole has the two sources" means "dipole has visible
>> the both ends".
>
> A 1/2WL dipole is a standing wave antenna.
> Are you saying that the forward energy is one source
> and the energy reflected from the ends is a second
> source?

Each dipole has visible the two radials (sometimes end parts of the
transmitting line). Each radials has the one strong source at the end like
the Kundt's tube. See: http://en.wikipedia.org/wiki/Kundt's_tube
A dipole has the two radials so it has at least the two strong sources.
Only the two if it is shorter then WL. If it is longer than WL then appear
the next sources on the both radials at each 1/2WL from the end.

I will be absent till Monday evening.
S*

2148. Re: Standing waves

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-18 16:33:00 UTC
From: Szczepan Białek <sz.bialek@wp.pl>
Message-ID: <h901iqnsl1@node1.news.atman.pl>
Source record: 13010

"Richard Clark" <kb7qhc@comcast.net> wrote
news:c877b5hq7pebddl6ke0v37dvukavkm8v8j@4ax.com...
> On Fri, 18 Sep 2009 08:51:04 +0200, Szczepan Bia?ek <sz.bialek@wp.pl>
> wrote:
>
>>> In the space of two sentences you contradict yourself. You don't get
>>> it, do you?
>>
>>"If antenna has only one source"
>
> Thank you for confirming that in spite of quoting me, you just don't
> get it.

You go into details.
In the Gas Analogy the monopole antena is exactly like the Kundt's tube.
See: http://en.wikipedia.org/wiki/Kundt's_tube
A dipole has the two Kundt's tubes.
S*

2149. Re: Standing waves

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-18 16:37:18 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <5od7b5d0l16mqlt03l14mbpedajvlsv73l@4ax.com>
Source record: 13011

On Fri, 18 Sep 2009 03:47:19 -0700 (PDT), Richard Fry <rfry@adams.net>
wrote:

>so those locations
>generate very little of the total EM radiation from these antennas.

Hi Richard,

The entire radiator radiates, not just portions of it. The phase,
time, distance relationships along the length contribute to a myriad
of characteristics, but they are not separable from the complete
contribution.

73's
Richard Clark, KB7QHC

2150. Re: Standing waves

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-18 16:40:03 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <frd7b5l5fa8vp973ipr8o9s9opmvkarj0h@4ax.com>
Source record: 13012

On Fri, 18 Sep 2009 18:33:00 +0200, Szczepan Bia?ek <sz.bialek@wp.pl>
wrote:

>You go into details.

Yes, I do go into the details.

>In the Gas Analogy the monopole antena is exactly like the Kundt's tube.

Analogy is a false arguement. In the car-seen-at-a-distance analogy,
this proves that only midgets or pygmies drive cars because we are too
big to fit into such small things seen in the distance.

73's
Richard Clark, KB7QHC

2151. Re: Standing waves

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-18 17:02:40 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <33Psm.57754$4t6.36550@newsfe06.iad>
Source record: 13013

Richard Clark wrote:
> The entire radiator radiates, not just portions of it. The phase,
> time, distance relationships along the length contribute to a myriad
> of characteristics, but they are not separable from the complete
> contribution.

Using the method of moments, each segment contributes
radiation proportional to the net current in the segment.
--
73, Cecil, IEEE, OOTC, http://www.w5dxp.com

2152. Re: Standing waves

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-18 17:13:17 UTC
From: Szczepan Białek <sz.bialek@wp.pl>
Message-ID: <h903ubopk1@node1.news.atman.pl>
Source record: 13014

"Richard Clark" <kb7qhc@comcast.net> wrote
news:frd7b5l5fa8vp973ipr8o9s9opmvkarj0h@4ax.com...
> On Fri, 18 Sep 2009 18:33:00 +0200, Szczepan Bia?ek <sz.bialek@wp.pl>
> wrote:
>
>>You go into details.
>
> Yes, I do go into the details.
>
>>In the Gas Analogy the monopole antena is exactly like the Kundt's tube.
>
> Analogy is a false arguement.

Heaviside did the Hydraulic Analogy. All is exactly the same like in the
fluids mechanics.
Next the electrons were discovered. Automatically Heaviside is a history and
the Gas Analogy is in power.

> In the car-seen-at-a-distance analogy,
> this proves that only midgets or pygmies drive cars because we are too
> big to fit into such small things seen in the distance.

But you, radio people, are very close to waves and should be easy for you to
work out the answer for the Question:
Which Analogy is right?

I will be absent till Monday evening.
S*

2153. Re: Standing waves

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-18 17:26:07 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <00g7b5hnd4530cn0rmu609gc326vko7nt3@4ax.com>
Source record: 13015

On Fri, 18 Sep 2009 19:13:17 +0200, Szczepan Bia?ek <sz.bialek@wp.pl>
wrote:

>All is exactly the same like in the fluids mechanics.

"Exactly" makes it very, very easy to show how an analogy fails:
Describe the laminar flow in terms of
the Reynolds number for
the interface between RF and a Biconical Antenna
and
the interface between RF and a thin wire Antenna.

If you do not understand
1. the terms of fluid mechanics and/or
2. cannot complete this request, then
your analogy has failed.

I won't wait for that obvious failure. This is several steps above
your pay-grade. So, you should really attempt to work on first
principles rather than rummaging in the attic for impressive artifacts
of science. The musty chestnuts you find would poison a dog.

73's
Richard Clark, KB7QHC

2154. Re: EZ-NEC seems not to match the Antenna Book?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-18 17:36:28 UTC
From: Antonio Vernucci <vernucci@tin.it>
Message-ID: <4ab3c51c$0$1101$4fafbaef@reader3.news.tin.it>
Source record: 13016

Thanks that's right.
73

Tony I0JX

"Cecil Moore" <nospam@w5dxp.com> ha scritto nel messaggio
news:Ltxsm.180402$O23.156718@newsfe11.iad...
> Antonio Vernucci wrote:
>> But what about the great difference in front-to-back?
>
> A later edition of The ARRL Antenna Book shows that
> equal bilateral gain occurs at a little over 0.1WL
> spacing. EZNEC agrees.
> --
> 73, Cecil, IEEE, OOTC, http://www.w5dxp.com

2155. Re: Standing waves

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-18 17:48:30 UTC
From: Dave <noone@nowhere.com>
Message-ID: <OJPsm.2659$Jd7.666@nwrddc02.gnilink.net>
Source record: 13017

"Szczepan Bialek" <sz.bialek@wp.pl> wrote in message
news:h903ubopk1@node1.news.atman.pl...
>
> "Richard Clark" <kb7qhc@comcast.net> wrote
> news:frd7b5l5fa8vp973ipr8o9s9opmvkarj0h@4ax.com...
>> On Fri, 18 Sep 2009 18:33:00 +0200, Szczepan Bia?ek <sz.bialek@wp.pl>
>> wrote:
>>
>>>You go into details.
>>
>> Yes, I do go into the details.
>>
>>>In the Gas Analogy the monopole antena is exactly like the Kundt's tube.
>>
>> Analogy is a false arguement.
>
> Heaviside did the Hydraulic Analogy. All is exactly the same like in the
> fluids mechanics.
> Next the electrons were discovered. Automatically Heaviside is a history
> and the Gas Analogy is in power.
>
>
>> In the car-seen-at-a-distance analogy,
>> this proves that only midgets or pygmies drive cars because we are too
>> big to fit into such small things seen in the distance.
>
> But you, radio people, are very close to waves and should be easy for you
> to work out the answer for the Question:
> Which Analogy is right?
>
> I will be absent till Monday evening.
> S*
>

neither analogy is 'right'. they are useful in limited circumstances to
demonstrate some basic pressure wave physics to young students. but neither
one properly reproduces electromagnetic waves.

2156. Re: Spherical radiation pattern

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-18 17:51:19 UTC
From: Dave <noone@nowhere.com>
Message-ID: <rMPsm.2660$Jd7.1070@nwrddc02.gnilink.net>
Source record: 13018

"Art Unwin" <arthurunwin@gmail.com> wrote in message
news:2c7698c5-9952-47a9-815e-c759b91ea474@d34g2000vbm.googlegroups.com...
On Sep 11, 6:36 pm, "Dave" <no...@nowhere.com> wrote:

>The problem is that all forces are not accounted for per Maxwell
>requirements!

maxwell made no such requirement. the strong, weak, and gravitational force
are not in his equations... never were and never will be.

>In your case magnetic energy remains with the radiator which is a loss
>that is unaccounted for ! This loss does not occur with a diamagnetic
>materials. Very simple my dear Watson.

then why do my ferromagnetic antennas work better than there diamagnetic
predecessor??

>If a design is planar it just cannot be 100% efficient as when all
>forced are accounted for.

nothing is 100%

2157. Re: Spherical radiation pattern

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-18 17:51:58 UTC
From: Dave <noone@nowhere.com>
Message-ID: <2NPsm.2661$Jd7.310@nwrddc02.gnilink.net>
Source record: 13019

"Art Unwin" <arthurunwin@gmail.com> wrote in message
news:48616419-50cc-439c-8ff2-eda2cbff68c2@l35g2000vba.googlegroups.com...
>I'm done

sure you are...

2158. Re: Spherical radiation pattern

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-18 17:55:33 UTC
From: Dave <noone@nowhere.com>
Message-ID: <pQPsm.2662$Jd7.2343@nwrddc02.gnilink.net>
Source record: 13020

"Art Unwin" <arthurunwin@gmail.com> wrote in message
news:a4b47e2a-1a88-44c6-841e-dcd182e0f87f@o36g2000vbl.googlegroups.com...
>With "David" being barred from the group there should be no obstacle
>to closing this thread

who is barred?? i've just been busy with real antennas getting ready for
winter. i will be gone in another week or so because verizon caved in and
will be dumping usenet. maybe i'll resurrect myself with some other
service, but none that i have to pay for, you aren't that much fun.

> It really was all for his benefit so he could provide insults and now
>there is no need for it.

awww, i'm sure there are others who get as much of a laugh at your rantings
and random phrases as i do! keep going!!

2159. Re: Spherical radiation pattern

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-18 20:08:44 UTC
From: Art Unwin <arthurunwin@gmail.com>
Message-ID: <0e65c8c8-e8cc-4079-b3fd-46c6c93e1c02@g1g2000vbr.googlegroups.com>
Source record: 13021

On Sep 18, 12:51 pm, "Dave" <no...@nowhere.com> wrote:
> "Art Unwin" <arthurun...@gmail.com> wrote in message
>
> news:2c7698c5-9952-47a9-815e-c759b91ea474@d34g2000vbm.googlegroups.com...
> On Sep 11, 6:36 pm, "Dave" <no...@nowhere.com> wrote:
>
> >The problem is that all forces are not accounted for per Maxwell
> >requirements!
>
> maxwell made no such requirement. the strong, weak, and gravitational force
> are not in his equations... never were and never will be.
>
> >In your case magnetic energy remains with the radiator which is a loss
> >that is unaccounted for ! This loss does not occur with a diamagnetic
> >materials. Very simple my dear Watson.
>
> then why do my ferromagnetic antennas work better than there diamagnetic
> predecessor??
>
> >If a design is planar it just cannot be 100% efficient as when all
> >forced are accounted for.
>
> nothing is 100%

This is when all current is transferred to the particle encapsulation
and no current travels
in the radiator carrier ie Radiation resistance is 52 ohms

2160. Re: Spherical radiation pattern

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-18 20:10:33 UTC
From: Art Unwin <arthurunwin@gmail.com>
Message-ID: <824f86ea-9701-4763-81e0-f782d6b7d276@p36g2000vbn.googlegroups.com>
Source record: 13022

On Sep 18, 12:55 pm, "Dave" <no...@nowhere.com> wrote:
> "Art Unwin" <arthurun...@gmail.com> wrote in message
>
> news:a4b47e2a-1a88-44c6-841e-dcd182e0f87f@o36g2000vbl.googlegroups.com...
>
> >With "David" being barred from the group there should be no obstacle
> >to closing this thread
>
> who is barred?? i've just been busy with real antennas getting ready for
> winter. i will be gone in another week or so because verizon caved in and
> will be dumping usenet. maybe i'll resurrect myself with some other
> service, but none that i have to pay for, you aren't that much fun.
>
> > It really was all for his benefit so he could provide insults and now
> >there is no need for it.
>
> awww, i'm sure there are others who get as much of a laugh at your rantings
> and random phrases as i do! keep going!!

Your profile states you are barred on all of your past postings!

2161. Re: Spherical radiation pattern

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-18 20:18:56 UTC
From: Dave <noone@nowhere.com>
Message-ID: <QWRsm.2672$Jd7.2553@nwrddc02.gnilink.net>
Source record: 13023

"Art Unwin" <arthurunwin@gmail.com> wrote in message
news:824f86ea-9701-4763-81e0-f782d6b7d276@p36g2000vbn.googlegroups.com...

>Your profile states you are barred on all of your past postings!
profile?? what profile?? we don't need no stinking profile! this is
usenet, i post via a news server, it has no profile of me, it just accepts
postings and sends them out to the world.

2162. Re: Spherical radiation pattern

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-18 20:21:01 UTC
From: Art Unwin <arthurunwin@gmail.com>
Message-ID: <e86f739a-fe7b-4518-a387-609ccff70b07@33g2000vbe.googlegroups.com>
Source record: 13024

On Sep 18, 3:18 pm, "Dave" <no...@nowhere.com> wrote:
> "Art Unwin" <arthurun...@gmail.com> wrote in message
>
> news:824f86ea-9701-4763-81e0-f782d6b7d276@p36g2000vbn.googlegroups.com...
>
> >Your profile states you are barred on all of your past postings!
>
> profile?? what profile?? we don't need no stinking profile! this is
> usenet, i post via a news server, it has no profile of me, it just accepts
> postings and sends them out to the world.

Well that is good news. I await your next insult

2163. Re: Spherical radiation pattern

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-18 20:22:02 UTC
From: richardharrison@webtv.net
Message-ID: <20335-4AB3EBEA-1942@storefull-3172.bay.webtv.net>
Source record: 13025

Cecil, W5DXP wrote:
"The forwerd and the reflected current sre in phase at the feedpoint and thus radiation is maximum at that maximum current point."

Exactly. The reflected current has made s round trip of 180 degrees plus the reflection has added another 180 degrees for a total of 360 degrees or back in phase with the forward current at the feedpoint.

At the open circuited ends of a resonant antenna there is almost double the forward voltage but zero total current due to cancellation of the dorward and reflected currents at the open circuit. At the open circuit in the wire, all the energy in the wave is transferred to the electric field.

The relationship between the input power of a given antenna and the strength of the far electromagnetic field which it will produce depends among other factors the length and shape of the antenna.

Best regards, Richard Harrison, KB5WZI

2164. Re: Standing waves

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-18 23:54:25 UTC
From: tom <news4792@taring.org>
Message-ID: <4ab41df4$0$42842$8046368a@newsreader.iphouse.net>
Source record: 13026

Richard Clark wrote:
> On Fri, 18 Sep 2009 19:13:17 +0200, Szczepan Bia?ek <sz.bialek@wp.pl>
> wrote:
>
>> All is exactly the same like in the fluids mechanics.
>
> "Exactly" makes it very, very easy to show how an analogy fails:
> Describe the laminar flow in terms of
> the Reynolds number for

Hmm, I think I'd start with a very long K1FO yagi, say 50 elements.
Maybe even extend one to 100 elements to getting very fine details.
Then we look at the longitoodordinal current along the horizontal
element by element. I'll have to work on it a while though.

What are you thinking?

> 73's
> Richard Clark, KB7QHC

tom
K0TAR

2165. Re: Standing waves

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-18 23:56:45 UTC
From: tom <news4792@taring.org>
Message-ID: <4ab41e80$0$42842$8046368a@newsreader.iphouse.net>
Source record: 13027

Szczepan Białż˝ek wrote:

>
> You send me to library. Try use his own words. Christofire do it (in
> "Spherical radiation patern"):

God forbid that you should actually do some research! What a terrible
thought!

tom
K0TAR

2166. Re: Standing waves

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-19 01:28:47 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <p9c8b5d5uk7keh1m9go4dlebnpfrjjgl3c@4ax.com>
Source record: 13028

On Fri, 18 Sep 2009 18:54:25 -0500, tom <news4792@taring.org> wrote:

>Richard Clark wrote:
>> On Fri, 18 Sep 2009 19:13:17 +0200, Szczepan Bia?ek <sz.bialek@wp.pl>
>> wrote:
>>
>>> All is exactly the same like in the fluids mechanics.
>>
>> "Exactly" makes it very, very easy to show how an analogy fails:
>> Describe the laminar flow in terms of
>> the Reynolds number for
>
>Hmm, I think I'd start with a very long K1FO yagi, say 50 elements.
>Maybe even extend one to 100 elements to getting very fine details.
>Then we look at the longitoodordinal current along the horizontal
>element by element. I'll have to work on it a while though.
>
>What are you thinking?

I am thinking that Stefan by lacking a demonstration of this
employment of his own chosen metaphor displays a vacuum in two subject
areas. As it stands, he stumbles through the nuances of RF. Instead,
he is trying to extrapolate them through a second subject, where, of
course, he tumbles over the nuances of fluidics.

The best we can expect is for him to haul a book to the nearest Xerox
and lean on the copy button to produce a snow job. The deepest
impression he will get of that intellectual experience is a paper cut.

73's
Richard Clark, KB7QHC

2167. Re: Standing waves

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-19 01:39:58 UTC
From: tom <news4792@taring.org>
Message-ID: <4ab436b0$0$42848$8046368a@newsreader.iphouse.net>
Source record: 13029

Richard Clark wrote:
>>
>> What are you thinking?
>
> I am thinking that Stefan by lacking a demonstration of this
> employment of his own chosen metaphor displays a vacuum in two subject
> areas. As it stands, he stumbles through the nuances of RF. Instead,
> he is trying to extrapolate them through a second subject, where, of
> course, he tumbles over the nuances of fluidics.
>
> The best we can expect is for him to haul a book to the nearest Xerox
> and lean on the copy button to produce a snow job. The deepest
> impression he will get of that intellectual experience is a paper cut.
>
> 73's
> Richard Clark, KB7QHC

Very perspective.

tom
K0TAR

2168. To Jeff Liebermann et al Re A/B Pushbutton Switch ?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-19 12:39:14 UTC
From: Robert11 <rgsros@xnotme.invalid>
Message-ID: <h92jdf$a5c$1@news.eternal-september.org>
Source record: 13030

Hello,

Thanks for help.
In my 70's now, and not all that sharp with this "stuff" anymore.
Really appreciate the help.
Plumbing my antenna and radios together is for me now a fairly big job, and
I would like to do it only once

Trying to decide on the "best" pushbutton switch for me, per my previous
post below.

There sure are a lot of offerings around for A/B pushbutton switches these
days.
All real cheap, hence my concern and questions.

Frankly, I don't think my application calls for the relatively expensive
Alpha Delta, Daiwa, etc. units,
as I do receiving only.

As I will be switching two receivers into a single Scantenna vhf/uhf
receive-only antenna,
I would like to get the one with the least loss, decent construction, etc.

Need something from HF frequencies to a true 2.0 GHz

Jeff; the one you suggested apparently comes out of Eagle Aspen Company,
and/or Pro Brand.

For the one you suggested: is it the consensus of most folks that this is
the "best" available these days ? (Is it "better" than the Grove offering,
which I was seriously considering ?)

Are there even better ones available for, e.g., under $ 25 or so ?

Any thoughts would be most appreciated.

Much thanks,
Bob

"A more modern
version is commonly available from CATV and Satellite TV vendors:
<http://www.sadoun.com/Sat/Products/Perfect/Perfect_Vision_A_B_Switch.htm>
$5/ea plus tax and shipping."

Regarding this pushbutton antenna switch that Grove offers:

http://www.grove-ent.com/SWC01.html
$19.95 SWC01

Was wondering if anyone is using it, or has any opinions on it ?
Sure is cheap enough.

They claim "usable" up to 2.0 GHz.

My application would be HF thru the vhf/uhf scanner frequencies,
BUT Receiving only.

2169. Resaonance and minimum SWR

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-19 16:03:25 UTC
From: Antonio Vernucci <vernucci@tin.it>
Message-ID: <4ab500ce$0$826$4fafbaef@reader5.news.tin.it>
Source record: 13031

Reading here and there that the signals of the on-going DX-expedition to Glorioso Island are generally very low, I got the curiosity to simulate the so-called "spiderbeam" antenna they are using (sized for the 10-meter band) on EZ-NEC.

Doing that, I obtained an unexpected result. The simulated antenna shows a clear SWR minimum at 29.0 MHz where impedance is 76 + j32 ohm.

I then checked SWR across the 24 - 34 MHz range with the following results:

- going up in range 29 - 34 MHz, the reactance steadily increases (+334 ohm at 34 MHz)

- going down in range 29 - 24 MHz, the reactance remains positive and steadily increases up to 28.5 MHz, after which it starts to decrease, until it becomes 0 ohm at 27 MHz, and negative below that frequency. At 27 MHz impedance is 9 + j0 ohm (hence it is the resonant point).

I knew that the resonant point does not precisely coincide with the minimum SWR point, but I would not have suspected such a big difference (2 MHz shift at 29 MHz!).

Any comment?

Tony I0JX
Rome, Italy

2170. Re: Resaonance and minimum SWR

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-19 16:17:46 UTC
From: Dave <noone@nowhere.com>
Message-ID: <Ku7tm.2771$Jd7.249@nwrddc02.gnilink.net>
Source record: 13032

"Antonio Vernucci" <vernucci@tin.it> wrote in message
news:4ab500ce$0$826$4fafbaef@reader5.news.tin.it...
> Reading here and there that the signals of the on-going DX-expedition to
> Glorioso Island are generally very low, I got the curiosity to simulate
> the so-called "spiderbeam" antenna they are using (sized for the 10-meter
> band) on EZ-NEC.
>
> Doing that, I obtained an unexpected result. The simulated antenna shows a
> clear SWR minimum at 29.0 MHz where impedance is 76 + j32 ohm.
>
> I then checked SWR across the 24 - 34 MHz range with the following
> results:
>
> - going up in range 29 - 34 MHz, the reactance steadily increases (+334
> ohm at 34 MHz)
>
> - going down in range 29 - 24 MHz, the reactance remains positive and
> steadily increases up to 28.5 MHz, after which it starts to decrease,
> until it becomes 0 ohm at 27 MHz, and negative below that frequency. At 27
> MHz impedance is 9 + j0 ohm (hence it is the resonant point).
>
> I knew that the resonant point does not precisely coincide with the
> minimum SWR point, but I would not have suspected such a big difference (2
> MHz shift at 29 MHz!).
>
> Any comment?
>
> Tony I0JX
> Rome, Italy
>

that is not surprising for an antenna that has a very low or very high
impedance at the resonant point. The SWR depends on the magnitude of the
impedances not the angle, so you could have a minimum SWR with a big
reactance and small real component.

2171. Re: Resaonance and minimum SWR

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-19 16:19:08 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <431ab51dv9tsv0rs397sjpr3jgdbkqnruk@4ax.com>
Source record: 13033

On Sat, 19 Sep 2009 18:03:25 +0200, "Antonio Vernucci"
<vernucci@tin.it> wrote:

>I knew that the resonant point does not precisely coincide with the minimum SWR
>point, but I would not have suspected such a big difference (2 MHz shift at 29
>MHz!).
>
>Any comment?

Hi Tony,

What did you expect it to be?

73's
Richard Clark, KB7QHC

2172. Re: Spherical radiation pattern

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-19 16:43:27 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <_S7tm.60762$nQ6.6149@newsfe07.iad>
Source record: 13034

Dave wrote:
>i will be gone in another week or so because verizon caved
> in and will be dumping usenet. maybe i'll resurrect myself with some
> other service, but none that i have to pay for, you aren't that much fun.

Groups.google.com is free if one can tolerate the clumsy interface.
--
73, Cecil, IEEE, OOTC, http://www.w5dxp.com

2173. Re: Resaonance and minimum SWR

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-19 16:59:53 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <m68tm.11327$944.4971@newsfe09.iad>
Source record: 13035

Antonio Vernucci wrote:
> I knew that the resonant point does not precisely coincide with the
> minimum SWR point, but I would not have suspected such a big difference
> (2 MHz shift at 29 MHz!).

There's a thread over on eHam.net dealing with this same subject.
Many complex antennas exhibit this effect to a certain extent. The
reason is obvious. Our SWR meters are calibrated for 50 ohms and
an antenna may be resonant with a e.g. 9+j0 ohm feedpoint impedance.

That's a 50 ohm SWR of 5.6:1 where almost 1/2 of the RF is rejected
at the antenna when 50 ohm coax is being used. If the 50 ohm SWR
drops below 5.6:1 somewhere else it necessarily must exhibit a
higher resistance and reactance than exists at the 9 ohm antenna
feedpoint.

Moral: There is nothing magic about 50 ohms. If you were using
a transmission line with a Z0 of 9 ohms with a 9 ohm SWR meter,
you wouldn't notice anything worth reporting.
--
73, Cecil, IEEE, OOTC, http://www.w5dxp.com

2174. Re: Resaonance and minimum SWR

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-19 19:32:02 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <XJednc3po7kkrCjXnZ2dnUVZ_t-dnZ2d@giganews.com>
Source record: 13036

Dave wrote:
>
> . . .The SWR depends on the magnitude of
> the impedances not the angle, so you could have a minimum SWR with a big
> reactance and small real component.

That's not true. For example, impedances of 50 + j0, 35.36 + j35.36, and 0 + j50 ohms all have the same magnitude (50 ohms), but a 50 ohm cable connected to loads of those impedances will have SWRs of 1, 2.41, and infinity respectively.

Correct formulas for calculating SWR can be found in the ARRL Antenna Book, the ARRL Handbook, or any respectable transmission line text. Incorrect ones can, I'm sure, be found on the Web and elsewhere.

Roy Lewallen, W7EL

2175. Re: Resaonance and minimum SWR

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-19 19:36:16 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <aLCdnS-Ek4koryjXnZ2dnUVZ_tidnZ2d@giganews.com>
Source record: 13037

Antonio Vernucci wrote:
> Reading here and there that the signals of the on-going DX-expedition to
> Glorioso Island are generally very low, I got the curiosity to simulate
> the so-called "spiderbeam" antenna they are using (sized for the
> 10-meter band) on EZ-NEC.
>
> Doing that, I obtained an unexpected result. The simulated antenna shows
> a clear SWR minimum at 29.0 MHz where impedance is 76 + j32 ohm.
>
> I then checked SWR across the 24 - 34 MHz range with the following results:
>
> - going up in range 29 - 34 MHz, the reactance steadily increases (+334
> ohm at 34 MHz)
>
> - going down in range 29 - 24 MHz, the reactance remains positive and
> steadily increases up to 28.5 MHz, after which it starts to decrease,
> until it becomes 0 ohm at 27 MHz, and negative below that frequency. At
> 27 MHz impedance is 9 + j0 ohm (hence it is the resonant point).
>
> I knew that the resonant point does not precisely coincide with the
> minimum SWR point, but I would not have suspected such a big difference
> (2 MHz shift at 29 MHz!).
>
> Any comment?
>
> Tony I0JX
> Rome, Italy

Check the Alt Z0 option button at the upper left of the SWR display.
What happens to the minimum SWR frequency? Then change the Alt SWR Z0
value in the main window to some other value, say 300 ohm. What effect
does that have?

Interesting, isn't it?

Roy Lewallen

2176. Re: Resaonance and minimum SWR

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-19 22:20:38 UTC
From: Owen Duffy <none@no.where>
Message-ID: <Xns9C8C54E0EB712nonenowhere@61.9.191.5>
Source record: 13038

"Antonio Vernucci" <vernucci@tin.it> wrote in
news:4ab500ce$0$826$4fafbaef@reader5.news.tin.it:

...
> I knew that the resonant point does not precisely coincide with the
> minimum SWR point, but I would not have suspected such a big
> difference (2 MHz shift at 29 MHz!).
>
> Any comment?

VSWR is not defined in terms of the conditions for resonance.

The characteristic of some kinds of antennas (including half wave dipoles and quarter wave monopoles over ground) with resonant impedance near 50 ohms is that the R component of feedpoint Z varies slowly with frequency around resonance (X=0) and X varies relatively quickly with frequency around resonance. Because of this, in the region of resonance (X=0), X tends to dominate VSWR(50) and the VSWR(50) minimum will be quite close to where X=0.

Whilst many folk equipped with MFJ259Bs or the like, and with less understanding, tune such an antenna for X=0, it is likely that the higher priority for system efficiency is to tune for VSWR minimum. Worse, they often do it at the source end of some length of transmission line.

I canvass the issues in the article "In pursuit of dipole resonance with an MFJ259B" at http://vk1od.net/blog/?p=680 , you may find it interesting.

Owen

>
> Tony I0JX
> Rome, Italy
>

2177. Re: Resaonance and minimum SWR

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-20 00:12:33 UTC
From: christofire <christofire@btinternet.com>
Message-ID: <5d-dnQyqGZ_I7ijXnZ2dnUVZ8sadnZ2d@bt.com>
Source record: 13039

"Cecil Moore" <nospam@w5dxp.com> wrote in message
news:m68tm.11327$944.4971@newsfe09.iad...
> Antonio Vernucci wrote:
>> I knew that the resonant point does not precisely coincide with the
>> minimum SWR point, but I would not have suspected such a big difference
>> (2 MHz shift at 29 MHz!).
>
> There's a thread over on eHam.net dealing with this same subject.
> Many complex antennas exhibit this effect to a certain extent. The
> reason is obvious. Our SWR meters are calibrated for 50 ohms and
> an antenna may be resonant with a e.g. 9+j0 ohm feedpoint impedance.
>
> That's a 50 ohm SWR of 5.6:1 where almost 1/2 of the RF is rejected
> at the antenna when 50 ohm coax is being used. If the 50 ohm SWR
> drops below 5.6:1 somewhere else it necessarily must exhibit a
> higher resistance and reactance than exists at the 9 ohm antenna
> feedpoint.
>
> Moral: There is nothing magic about 50 ohms. If you were using
> a transmission line with a Z0 of 9 ohms with a 9 ohm SWR meter,
> you wouldn't notice anything worth reporting.
> --
> 73, Cecil, IEEE, OOTC, http://www.w5dxp.com

Actually, there is something 'magic' about 50 ohms. An air-dielectric co-axial cable has minimum loss per metre when its characteristic impedance is 76.7 ohms and the relative permittivity of polythene is 2.26 so a polythene-dielectric co-axial cable has lowest loss when its characteristic impedance is 76.7/SQRT(2.26) = 51 ohms, which is most often rounded down to 50. This is on the basis that the conductor loss greatly exceeds the dielectric loss, which is true over most of the frequency range for which solid polythene dielectric is appropriate.

Maximum power handling, for a polythene-dielectric cable, occurs at a much lower impedance: 30/SQRT(2.26) = 20 ohms.

Chris

2178. Re: Resaonance and minimum SWR

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-20 15:14:04 UTC
From: Antonio Vernucci <vernucci@tin.it>
Message-ID: <4ab646bc$0$1107$4fafbaef@reader1.news.tin.it>
Source record: 13040

> Check the Alt Z0 option button at the upper left of the SWR display. What
> happens to the minimum SWR frequency? Then change the Alt SWR Z0 value in the
> main window to some other value, say 300 ohm. What effect does that have?
>
> Interesting, isn't it?
>
> Roy Lewallen

Yes, changing the Alt Z0 makes a dramatic effect, and setting it to 9 ohm obviously causes the minimum SWR point to shift from 29 to to 27 MHz (reaching 1:1).

Interesting to note that, using a 75-ohm cable, one can get a perfect match to the simulated spiderbeam antenna in two possible ways:

- either cancelling the antenna reactance using a -32 ohm series-capacitor. One then gets a (nearly) perfect match at 29 MHz, where antenna impedance is 76 + j32 ohm

- or using a 9:75-ratio transformer. One then gets a perfect match at 27 MHz (where impedance is 9 + j0 ohm)

Another interesting observation is that, at 29 MHz (i.e. where the antenna impedance is 76 + j32 ohm and the SWR on a 75-ohm cable shows the minimum value of 1.95) one can find a cable length at which the impedance appears to be purely resistive and equal to 1.95*75 = 146 ohm (or 75/1.95 = 38.5 ohm). This fact is deceiving as, seeing a purely resistive impedance, one could be led to concluding that the real antenna resonant frequency is 29 MHz, whilst in reality it resonates at 27 MHz (although knowing what is the real antenna resonant frequency may not be so important).

I raised the above arguments just as a confirmation of the fact that understanding what to do before attempting to adjust antennas is not that easy.

73

Tony I0JX

2179. Re: Resaonance and minimum SWR

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-20 15:48:51 UTC
From: Antonio Vernucci <vernucci@tin.it>
Message-ID: <4ab64ee3$0$1105$4fafbaef@reader1.news.tin.it>
Source record: 13041

> Actually, there is something 'magic' about 50 ohms. An air-dielectric
> co-axial cable has minimum loss per metre when its characteristic impedance is
> 76.7 ohms

I presume that the 76.7-0hm figure comes from a trade-off beween RF current and conductor resistance. In other words, increasing the impedance value, the RF current would become lower (for a given RF power), but the inner conductor resistance would become higher because of the lower diameter needed to obtain the higher impedance value (for a given outer diameter cable). And viceversa.

> and the relative permittivity of polythene is 2.26 so a polythene-dielectric
> co-axial cable has lowest loss when its characteristic impedance is
> 76.7/SQRT(2.26) = 51 ohms, which is most often rounded down to 50.

Under the assumption that dielectric loss is negligible, a permittivity 2.26 time higher than that of air results in a lower inner conductor diameter, for a given outer diameter cable and a given impedance. Probably, lowering impedance from 75 to about 50 ohm, the loss advantage one experiences thanks to the higher inner conductor diameter needed for the lower impedance value is higher than the loss disadvantage caused by the higher RF current (for a given RF power).

> Maximum power handling, for a polythene-dielectric cable, occurs at a much
> lower impedance: 30/SQRT(2.26) = 20 ohms.

I do not succeed to understand that statement. Maximum power handling is bound to maximum temperature which is in turn bound to dissipated power. If 50 ohm is the impedance at which minimum loss occurs (for a given RF power), why lowering impedance to 20 ohm should result in a loss reduction. In the equation 30/SQRT(2.26) = 20 ohms, which is meaning of the figure 30?

I wonder whether you could indicate us a reference where all those trade-offs are mathematically discussed.

73

Tony I0JX

2180. Re: Resaonance and minimum SWR

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-20 17:52:22 UTC
From: Jeff Liebermann <jeffl@cruzio.com>
Message-ID: <htqcb5h59c2958nn0k09op69emd6nu52go@4ax.com>
Source record: 13042

On Sun, 20 Sep 2009 17:48:51 +0200, "Antonio Vernucci"
<vernucci@tin.it> wrote:

>I wonder whether you could indicate us a reference where all those trade-offs
>are mathematically discussed.

This should help:
<http://www.microwaves101.com/encyclopedia/why50ohms.cfm>

--
Jeff Liebermann jeffl@cruzio.com
150 Felker St #D http://www.LearnByDestroying.com
Santa Cruz CA 95060 http://802.11junk.com
Skype: JeffLiebermann AE6KS 831-336-2558

2181. Re: Resaonance and minimum SWR

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-20 18:30:39 UTC
From: Antonio Vernucci <vernucci@tin.it>
Message-ID: <4ab674cf$0$1094$4fafbaef@reader4.news.tin.it>
Source record: 13043

> This should help:
> <http://www.microwaves101.com/encyclopedia/why50ohms.cfm>

Yes, very helpful. Thanks

Tony I0JX

2182. Re: Resaonance and minimum SWR

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-20 19:05:21 UTC
From: christofire <christofire@btinternet.com>
Message-ID: <VPqdnYUwo-hk4SvXnZ2dnUVZ8qKdnZ2d@bt.com>
Source record: 13044

"Jeff Liebermann" <jeffl@cruzio.com> wrote in message
news:htqcb5h59c2958nn0k09op69emd6nu52go@4ax.com...
> On Sun, 20 Sep 2009 17:48:51 +0200, "Antonio Vernucci"
> <vernucci@tin.it> wrote:
>
>>I wonder whether you could indicate us a reference where all those
>>trade-offs
>>are mathematically discussed.
>
> This should help:
> <http://www.microwaves101.com/encyclopedia/why50ohms.cfm>
>
>
> --
> Jeff Liebermann jeffl@cruzio.com
> 150 Felker St #D http://www.LearnByDestroying.com
> Santa Cruz CA 95060 http://802.11junk.com
> Skype: JeffLiebermann AE6KS 831-336-2558

Thanks Jeff, that reference does help but it gets a bit confused over matters of relative permittivity, Er.

Some time ago (2005), in my work, I derived the whole lot from almost first principles. It turns out that the series conductor loss (as opposed to the shunt dielectric loss) is proportional to (1+p)/ln(p), where p is the ratio of the inside diameter of the outer conductor (D) to the outside diameter of the inner conductor, and to SQRT(Er). The minimum value of this loss is found by differentiating the function of p with respect to p and that's what gives the 76.7 ohms value for Er = 1 (it also involves a constant for copper conductors, the root frequency and 1/D). The result scales with SQRT(Er) for polythene.

I should have stated the _peak_ power handling because the 30 ohms (air) value results from combination of the expression for the electric field strength and the expression for the characteristic impedance (along the lines of P = V^2/R). Minimising the field strength gives the greatest resistance to dielectric breakdown, but a different value of p results when the impedance is taken into account at the same time. Again, the result scales with SQRT(Er).

The application for all this was analogue to digital terrestrial television switch over - the digital signals have much greater peak-to-mean ratios than the analogue ones, so flashover in air-spaced feeders is a potential power limitation.

Chris

2183. Re: Resaonance and minimum SWR

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-20 19:46:54 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <gN-dnXpyqfApGyvXnZ2dnUVZ_j-dnZ2d@giganews.com>
Source record: 13045

Antonio Vernucci wrote:
> . . .
> Another interesting observation is that, at 29 MHz (i.e. where the
> antenna impedance is 76 + j32 ohm and the SWR on a 75-ohm cable shows
> the minimum value of 1.95) one can find a cable length at which the
> impedance appears to be purely resistive and equal to 1.95*75 = 146 ohm
> (or 75/1.95 = 38.5 ohm). This fact is deceiving as, seeing a purely
> resistive impedance, one could be led to concluding that the real
> antenna resonant frequency is 29 MHz, whilst in reality it resonates at
> 27 MHz (although knowing what is the real antenna resonant frequency may
> not be so important).
> . . .

No one with a basic understanding of transmission lines would think that the frequency at which resonance occurs (X = 0) at the input end is the same frequency at which the load is resonant, except for two special cases -- if the line Z0 equals the load resistance at the load's resonant frequency, or the line is an integral number of quarter wavelengths long at the load's resonant frequency. And, as you imply, the resonant frequency of the antenna itself has no significance. Transmission lines have been used for over a hundred years for impedance matching, transforming a load of complex impedance into a purely resistive impedance of a desired value.

> I raised the above arguments just as a confirmation of the fact that
> understanding what to do before attempting to adjust antennas is not
> that easy.

The way to begin is to gain a basic understanding of how transmission lines transform impedances. The ARRL Antenna Book is a good resource. If a person's knowledge is limited to only vague understandings of SWR and resonance, antennas and transmission lines will be a constant source of mysterious and unexpected results.

Roy Lewallen, W7EL

2184. Re: Resaonance and minimum SWR

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-20 19:50:38 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <gN-dnXVyqfAOGivXnZ2dnUVZ_j9i4p2d@giganews.com>
Source record: 13046

Antonio Vernucci wrote:
> . . .
> Under the assumption that dielectric loss is negligible, a permittivity
> 2.26 time higher than that of air results in a lower inner conductor
> diameter, for a given outer diameter cable and a given impedance. . .

Yes, and this is why foamed dielectric cable has lower loss than solid dielectric cable. Not because of lower dielectric loss (at least below a few GHz), but because it has a larger center conductor for the same impedance and outside diameter.

Roy Lewallen, W7EL

2185. Re: Resaonance and minimum SWR

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-20 20:43:24 UTC
From: christofire <christofire@btinternet.com>
Message-ID: <XIadncuSVfluDivXnZ2dnUVZ8sadnZ2d@bt.com>
Source record: 13047

"Roy Lewallen" <w7el@eznec.com> wrote in message
news:gN-dnXVyqfAOGivXnZ2dnUVZ_j9i4p2d@giganews.com...
> Antonio Vernucci wrote:
>> . . .
>> Under the assumption that dielectric loss is negligible, a permittivity
>> 2.26 time higher than that of air results in a lower inner conductor
>> diameter, for a given outer diameter cable and a given impedance. . .
>
> Yes, and this is why foamed dielectric cable has lower loss than solid
> dielectric cable. Not because of lower dielectric loss (at least below a
> few GHz), but because it has a larger center conductor for the same
> impedance and outside diameter.
>
> Roy Lewallen, W7EL

You've got it ... spread the word to all those amateurs who are hung up on
(negligible) dielectric loss!

Chris

2186. Re: Resaonance and minimum SWR

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-20 21:10:56 UTC
From: Owen Duffy <none@no.where>
Message-ID: <Xns9C8D49105D289nonenowhere@61.9.191.5>
Source record: 13048

"Antonio Vernucci" <vernucci@tin.it> wrote in
news:4ab646bc$0$1107$4fafbaef@reader1.news.tin.it:

...
> I raised the above arguments just as a confirmation of the fact that
> understanding what to do before attempting to adjust antennas is not
> that easy.

Well, it was easier until people that don't understand the fundamentals of transmission lines got access to instruments that measure R and X, and used their new found capability to prop up the "resonant antennas work better" myth.

For many common ham antenna *systems* (eg a length coax feed to a centre fed, approximately half wave dipole using an effective balun), system efficiency is best when transmission line losses are least, and minimising line VSWR is a good first cut for best efficiency. Having done that, an ATU at the tx to transform the load to that required by the tx so that it can deliver its rated power with specification linearity may be needed.

If you drill down on the resonance myth, its greatest validity is that for some types of antenna systems (including the one described above), resonance delivers a low VSWR, approximately the minimum VSWR, and in those systems leads to approximately lowest line loss, resulting in best efficiency. Nothing to do with the 'technical' explanation that I heard the other day that a "resonance antenna fairly sucks the energy out of the transmitter". It is a course a fallacy that resonant antennas naturally "work better", or that resonance is a necessary condition for high efficiency.

It is pointed out to me from time to time that the article that I referred you to earlier is way above the head of the average MFJ259B user, but it is my contention that you cannot realise much of the potential of the MFJ259B or the like without understanding transmission lines. VNAs are the new wave of instruments with potential exceeding typical user's desire for understanding.

Owen

2187. Re: Resaonance and minimum SWR

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-20 21:16:26 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <beydnSg32MkyBivXnZ2dnUVZ_hRi4p2d@giganews.com>
Source record: 13049

christofire wrote:
>
> You've got it ... spread the word to all those amateurs who are hung up on
> (negligible) dielectric loss!
>
> Chris

I've been doing what I can. I pointed it out on this newsgroup on Sept.
12, 1998, and repeat it whenever the opportunity arises.

Roy Lewallen, W7EL

2188. high power 4:1 balun

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-20 21:40:39 UTC
From: Ralph Mowery <rmowery28146@earthlink.net>
Message-ID: <DsqdnVqKm4xEPSvXnZ2dnUVZ_uGdnZ2d@earthlink.com>
Source record: 13050

Does anyone make a 4:1 balun that I can use for an off center fed antenna that will take the legal limit of power ?

I did find one that is around $ 80 to $ 100 that is suspose to handle it. I hate to pay that much for a ring of 'iron' and a few feet of wire wound on it and it will not work.

I have up a home made version of the Carolina Windom. Bought a balun rated for 1.5 kw. I only run around 1200 watts out of a Drake L4B amp. That balun will heat up and quit working (swr goes way up from about 1.7:1 at the frequency I use most) if I run more than about 500 to 600 watts SSB to the antenna for any length of time. The antenna is fed with a good grade of rg8 and about 20 feet from the antenna is a current balun (the one with the beads over the coax). It will heat up some but when I take it out of the line, the 4:1 balun still heats up . The 1:1 bead choke does not heat up to any big ammount when I put it on a dummy load and put 1200 watts to it.

I had a low power balun up with the same antenna and running 100 watts the antenna seemed to work fine.

If it was not for the wide bandwidth and good results I have been getting , I would just run an 80 meter dipole and no balun. Also want an antenna for 40 meters.
Have the usaul triband for 10,15,20.

2189. Re: high power 4:1 balun

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-20 22:08:04 UTC
From: Owen Duffy <none@no.where>
Message-ID: <Xns9C8D52BFEF79Enonenowhere@61.9.191.5>
Source record: 12901

"Ralph Mowery" <rmowery28146@earthlink.net> wrote in
news:DsqdnVqKm4xEPSvXnZ2dnUVZ_uGdnZ2d@earthlink.com:

> Does anyone make a 4:1 balun that I can use for an off center fed
> antenna that will take the legal limit of power ?

Is it too hard to quantify the power limit? It is jurisdiction dependent.

Talking in numbers is the beginning of understanding the problem. (A
loose paraphrasing of Lord Kelvin).
>
> I did find one that is around $ 80 to $ 100 that is suspose to handle
> it. I hate to pay that much for a ring of 'iron' and a few feet of
> wire wound on it and it will not work.
>
> I have up a home made version of the Carolina Windom. Bought a balun
> rated for 1.5 kw. I only run around 1200 watts out of a Drake L4B

The Carolina Windom seems to use a 4:1 voltage balun and a 1:1 current
balun closer to the tx. (I say seems because IIRC it is a proprietary
design.)

The loss in the voltage balun can be expected to be severe when the load
impedance is very high due to the resultant high flux level in the core.

Whilst commercial producers commonly state power limits, and often
extravagantly, few manufacturers give you loss characteristics,
especially for impedances a long way from nominal.

For an experiment, I measured the "heavy duty" 4:1 Ruthroff balun in a
popular 300W rated ATU with a VNA, and calculated efficiency of the balun
feeding a G5RV on five bands. Efficiency of the balun varied from 66% to
almost 100%. (Notes at http://vk1od.net/blog/?p=568 .)

It is my guess that the balun could safely dissipate say 10W continuous.
Then at 66% efficiency, it would only safely accept 30W continuous input.
Fortunately, the peak to average ratio of SSB is something like 30:1, so
it would probably handle 1000W PEP SSB telephony ok.

Rule no 1: Balun manufacturers often supply little information.

Rule no 2: Information that is supplied is of little use in establishing
behaviour on extreme loads.

> amp. That balun will heat up and quit working (swr goes way up from
> about 1.7:1 at the frequency I use most) if I run more than about 500
> to 600 watts SSB to the antenna for any length of time. The antenna

Using my peak to average ratio, you are talking about an average power of perhaps 20W.

You have probably reached the Curie point of the core, and it can be quite low depending on the mix.

It is not unusual that 4:1 voltage baluns that have adequate performance on a 200 ohm load have efficiency less than 50% on extreme loads such as might be experienced with the CW.

> is fed with a good grade of rg8 and about 20 feet from the antenna is
> a current balun (the one with the beads over the coax). It will heat
> up some but when I take it out of the line, the 4:1 balun still heats
> up . The 1:1 bead choke does not heat up to any big ammount when I
> put it on a dummy load and put 1200 watts to it.

The heating of a choke is due to flux cause by common mode current, and some copper loss. Did your test configuration have zero common mode current?

Though some show mathematical derivation for the magnitude of common mode current based on Zo alone (which leads to Rule 500), it is my contention that approach is not valid in an antenna application, and common mode current may be much higher or lower than indicated by that method.

>
> I had a low power balun up with the same antenna and running 100 watts
> the antenna seemed to work fine.
>
> If it was not for the wide bandwidth and good results I have been
> getting , I would just run an 80 meter dipole and no balun. Also want
> an antenna for 40 meters.

Don't overlook that a lossy balun leads to lower VSWR, and that is often erroneously interpreted as an indicator of "good results".

Owen

2190. Re: Resaonance and minimum SWR

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-21 01:57:43 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <z4Btm.366$Aw4.131@newsfe04.iad>
Source record: 12902

christofire wrote:
> "Cecil Moore" <nospam@w5dxp.com> wrote in message
>> Moral: There is nothing magic about 50 ohms.

> Actually, there is something 'magic' about 50 ohms.

It appears that you are using a different definition of
magic from the one I was using soI'll say the same thing
in different words:

There is nothing supernatural about 50 ohms.
--
73, Cecil, IEEE, OOTC, http://www.w5dxp.com

2191. Re: Resaonance and minimum SWR

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-21 02:41:29 UTC
From: Walter Maxwell <walt@w2du.com>
Message-ID: <knodb5tdi41outho4j0qb4m2o3od7oq2dd@4ax.com>
Source record: 12903

My post below is not exactly on target for the thread, but I believe useful. It's Sec 11.3 from Chapter 11 of Reflections, the whole of which is available on my web page at www. w2du.com.
The title of the Sec is "A Reader Self-test and Minimum-SWR Resistance."

Sec 11.3 A Reader Self-Test and Minimum-SWR Resistance

" Everyone knows that when a 50-ohm transmission line is terminated with a pure resistance of 50 ohms, the magnitude of the reflection coefficient,, rho , is 0, and the SWR is 1:1. Right? Of course! With that in mind, here is a little exercise to test your intuitive skill. If we insert a reactance of 50 ohm in series with the 50-ohm resistance, the load becomes Z = 50 + j50. The SWR will be 2.618:1. Now for the question. With this 50-ohm reactance in the load, is the SWR already at its minimum value with the 50-ohm resistance, or will some other value of resistance in the load reduce the SWR below 2.618:1? You say the SWR is already the lowest with the 50-ohm resistance, because, after all, the line impedance, ZC, is 50 ohms? Sorry, wrong. With reactance in the load, the minimum SWR always occurs when the resistance component of the load is greater than ZC. In fact, the more the reactance, the higher the resistance required for to obtain minimum SWR. For any specific value of reactance in the load there is one specific value of resistance that produces the lowest SWR. I call this resistance the "minimum-SWR resistance." Finding the value of this resistance is easy. First you normalize the reactance, X, by dividing it by the line impedance, ZC. The normalized value of X is represented by the lower case x. Thus x = XC / ZC. Then we solve for the normalized value of resistance r, from Eq 5-1, which is repeated here.

r = sqrt (x^2 - 1) Eq 5-1

Let's try it on the example above. The normalized value of 50 ohms of reactance X, is x = 1. Substituting in Eq 5-1, r = sqrt 2 = 1.414. So the true value of the minimum-SWR resistance is 1.414 x 50 = 70.7ohms. While the 50-ohm resistance yields a 2.618:1 SWR, the 70.7-ohm resistance in series with the 50-ohm reactance yields an SWR of 2.414:1. Not a great deal smaller, but still smaller than with the 50-ohm resistance.

So let's try a more dramatic example, this time with a 100-ohm reactance, which has a normalized value x = 2.0. With a 50-ohm resistance, the SWR is now 5.828:1. However, with the normalized minimum-SWR resistance, r = sqrt 5 = 2.236. Multiplying by 50, we get R = 111.8 ohms. With this larger resistance in series with the 100-ohm

reactance, the SWR is reduced from 5.828:1 to 4.236:1. The results of this exercise didn't turn out quite the way you expected, did it?"

For further proof of this concept I suggest reviewing the remainder of this Sec using the Smith Chart, available from my web page.

Walt, W2DU

2192. Re: Resaonance and minimum SWR

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-21 02:48:09 UTC
From: Walter Maxwell <walt@w2du.com>
Message-ID: <1aqdb5lvl9k53iico9r145rnqtkon5kql4@4ax.com>
Source record: 12904

On Sun, 20 Sep 2009 22:41:29 -0400, Walter Maxwell <walt@w2du.com>
wrote:

>My post below is not exactly on target for the thread, but I believe
>useful. It's Sec 11.3 from Chapter 11 of Reflections, the whole of
>which is available on my web page at www. w2du.com.
>The title of the Sec is "A Reader Self-test and Minimum-SWR
>Resistance."
>
>Sec 11.3 A Reader Self-Test and Minimum-SWR Resistance
>
> " Everyone knows that when a 50-ohm transmission line is terminated
>with a pure resistance of 50 ohms, the magnitude of the reflection
>coefficient,, rho , is 0, and the SWR is 1:1. Right? Of course! With
>that in mind, here is a little exercise to test your intuitive skill.
>If we insert a reactance of 50 ohm in series with the 50-ohm
>resistance, the load becomes Z = 50 + j50. The SWR will be 2.618:1.
>Now for the question. With this 50-ohm reactance in the load, is the
>SWR already at its minimum value with the 50-ohm resistance, or will
>some other value of resistance in the load reduce the SWR below
>2.618:1? You say the SWR is already the lowest with the 50-ohm
>resistance, because, after all, the line impedance, ZC, is 50 ohms?
>Sorry, wrong. With reactance in the load, the minimum SWR always
>occurs when the resistance component of the load is greater than ZC.
>In fact, the more the reactance, the higher the resistance required
>for to obtain minimum SWR. For any specific value of reactance in the
>load there is one specific value of resistance that produces the
>lowest SWR. I call this resistance the "minimum-SWR resistance."
>Finding the value of this resistance is easy. First you normalize the
>reactance, X, by dividing it by the line impedance, ZC. The normalized
>value of X is represented by the lower case x. Thus x = XC / ZC. Then
>we solve for the normalized value of resistance r, from Eq 5-1, which
>is repeated here.
>
>r = sqrt (x^2 + 1) Eq 5-1
>
> Let's try it on the example above. The normalized value of 50 ohms
>of reactance X, is x = 1. Substituting in Eq 5-1, r = sqrt 2 = 1.414.
>So the true value of the minimum-SWR resistance is 1.414 x 50 =
>70.7ohms. While the 50-ohm resistance yields a 2.618:1 SWR, the
>70.7-ohm resistance in series with the 50-ohm reactance yields an SWR
>of 2.414:1. Not a great deal smaller, but still smaller than with the
>50-ohm resistance.
>

> So let's try a more dramatic example, this time with a 100-ohm
>reactance, which has a normalized value x = 2.0. With a 50-ohm
>resistance, the SWR is now 5.828:1. However, with the normalized
>minimum-SWR resistance, r = sqrt 5 = 2.236. Multiplying by 50, we get
>R = 111.8 ohms. With this larger resistance in series with the 100-ohm
>reactance, the SWR is reduced from 5.828:1 to 4.236:1. The results of
>this exercise didn't turn out quite the way you expected, did it?"
>
>For further proof of this concept I suggest reviewing the remainder of
>this Sec using the Smith Chart, available from my web page.
>
>Walt, W2DU

2193. Re: Resaonance and minimum SWR

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-21 02:49:42 UTC
From: Walter Maxwell <walt@w2du.com>
Message-ID: <vbqdb5hqe31v92kecel7bq0dkf2lddt58a@4ax.com>
Source record: 12905

On Sun, 20 Sep 2009 22:41:29 -0400, Walter Maxwell <walt@w2du.com>
wrote:

>My post below is not exactly on target for the thread, but I believe
>useful. It's Sec 11.3 from Chapter 11 of Reflections, the whole of
>which is available on my web page at www. w2du.com.
>The title of the Sec is "A Reader Self-test and Minimum-SWR
>Resistance."
>
>Sec 11.3 A Reader Self-Test and Minimum-SWR Resistance
>
> " Everyone knows that when a 50-ohm transmission line is terminated
>with a pure resistance of 50 ohms, the magnitude of the reflection
>coefficient,, rho , is 0, and the SWR is 1:1. Right? Of course! With
>that in mind, here is a little exercise to test your intuitive skill.
>If we insert a reactance of 50 ohm in series with the 50-ohm
>resistance, the load becomes Z = 50 + j50. The SWR will be 2.618:1.
>Now for the question. With this 50-ohm reactance in the load, is the
>SWR already at its minimum value with the 50-ohm resistance, or will
>some other value of resistance in the load reduce the SWR below
>2.618:1? You say the SWR is already the lowest with the 50-ohm
>resistance, because, after all, the line impedance, ZC, is 50 ohms?
>Sorry, wrong. With reactance in the load, the minimum SWR always
>occurs when the resistance component of the load is greater than ZC.
>In fact, the more the reactance, the higher the resistance required
>for to obtain minimum SWR. For any specific value of reactance in the
>load there is one specific value of resistance that produces the
>lowest SWR. I call this resistance the "minimum-SWR resistance."
>Finding the value of this resistance is easy. First you normalize the
>reactance, X, by dividing it by the line impedance, ZC. The normalized
>value of X is represented by the lower case x. Thus x = XC / ZC. Then
>we solve for the normalized value of resistance r, from Eq 5-1, which
>is repeated here.
>
>r = sqrt (x^2 - 1) Eq 5-1
>
> Let's try it on the example above. The normalized value of 50 ohms
>of reactance X, is x = 1. Substituting in Eq 5-1, r = sqrt 2 = 1.414.
>So the true value of the minimum-SWR resistance is 1.414 x 50 =
>70.7ohms. While the 50-ohm resistance yields a 2.618:1 SWR, the
>70.7-ohm resistance in series with the 50-ohm reactance yields an SWR
>of 2.414:1. Not a great deal smaller, but still smaller than with the
>50-ohm resistance.
>

> So let's try a more dramatic example, this time with a 100-ohm
>reactance, which has a normalized value x = 2.0. With a 50-ohm
>resistance, the SWR is now 5.828:1. However, with the normalized
>minimum-SWR resistance, r = sqrt 5 = 2.236. Multiplying by 50, we get
>R = 111.8 ohms. With this larger resistance in series with the 100-ohm
>reactance, the SWR is reduced from 5.828:1 to 4.236:1. The results of
>this exercise didn't turn out quite the way you expected, did it?"
>
>For further proof of this concept I suggest reviewing the remainder of
>this Sec using the Smith Chart, available from my web page.
>
>Walt, W2DU

Sorry, I goofed on Eq. 5-1. The corrected eq is r = sqrt (x^2 + 1).

Walt, W2DU

2194. Re: Resaonance and minimum SWR

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-21 06:29:22 UTC
From: Owen Duffy <none@no.where>
Message-ID: <Xns9C8DA7BD73C37nonenowhere@61.9.191.5>
Source record: 12906

Walter Maxwell <walt@w2du.com> wrote in
news:knodb5tdi41outho4j0qb4m2o3od7oq2dd@4ax.com:

> My post below is not exactly on target for the thread, but I believe
> useful. It's Sec 11.3 from Chapter 11 of Reflections, the whole of
> which is available on my web page at www. w2du.com.
> The title of the Sec is "A Reader Self-test and Minimum-SWR
> Resistance."
>
> Sec 11.3 A Reader Self-Test and Minimum-SWR Resistance
>
> " Everyone knows that when a 50-ohm transmission line is terminated
> with a pure resistance of 50 ohms, the magnitude of the reflection
> coefficient,, rho , is 0, and the SWR is 1:1. Right? Of course!

Well, it for a distortionless 50 ohm line.

>With
> that in mind, here is a little exercise to test your intuitive skill.
> If we insert a reactance of 50 ohm in series with the 50-ohm
> resistance, the load becomes Z = 50 + j50. The SWR will be 2.618:1.
> Now for the question. With this 50-ohm reactance in the load, is the
> SWR already at its minimum value with the 50-ohm resistance, or will
> some other value of resistance in the load reduce the SWR below
> 2.618:1? You say the SWR is already the lowest with the 50-ohm
> resistance, because, after all, the line impedance, ZC, is 50 ohms?

Continuing on the distortionless example, if you visualise this on a Smith chart, for any constant X and R independently variable, the value of R for minimum VSWR will be such that the tangent to the reactance circle is also a tangent to the VSWR circle at that point (R,X), and R for minimum VSWR will always be greater than Ro for Xl<>0.

However, Zo for practical cables is not real, not quite.

Owen

2195. Re: Resaonance and minimum SWR

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-21 06:32:42 UTC
From: Ian White GM3SEK <gm3sek@ifwtech.co.uk>
Message-ID: <IGDiqYFK4xtKFAel@ifwtech.co.uk>
Source record: 12907

christofire wrote:
>
>"Roy Lewallen" <w7el@eznec.com> wrote in message
>news:gN-dnXVyqfAOGivXnZ2dnUVZ_j9i4p2d@giganews.com...
>> Antonio Vernucci wrote:
>>> . . .
>>> Under the assumption that dielectric loss is negligible, a permittivity
>>> 2.26 time higher than that of air results in a lower inner conductor
>>> diameter, for a given outer diameter cable and a given impedance. . .
>>
>> Yes, and this is why foamed dielectric cable has lower loss than solid
>> dielectric cable. Not because of lower dielectric loss (at least below a
>> few GHz), but because it has a larger center conductor for the same
>> impedance and outside diameter.
>>
>> Roy Lewallen, W7EL
>
>
>You've got it ... spread the word to all those amateurs who are hung up on
>(negligible) dielectric loss!
>
It isn't the amateurs so much as the advertising. Marketing departments
highlight the foam dielectric because it's more obvious, and pretty soon
even the manufacturers are believing their own publicity.

As for the 50-ohm impedance, the reasons why it became an industry
standard are interesting but purely historical. The reason for using it
now is almost exclusively because it *is* an industry standard.

--

73 from Ian GM3SEK 'In Practice' columnist for RadCom (RSGB)
http://www.ifwtech.co.uk/g3sek

2196. Re: Standing waves

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-21 16:53:15 UTC
From: Szczepan Białek <sz.bialek@wp.pl>
Message-ID: <h97vr4rp1@node1.news.atman.pl>
Source record: 12908

"Richard Clark" <kb7qhc@comcast.net> wrote
news:00g7b5hnd4530cn0rmu609gc326vko7nt3@4ax.com...
>>
> I won't wait for that obvious failure. This is several steps above
> your pay-grade. So, you should really attempt to work on first
> principles rather than rummaging in the attic for impressive artifacts
> of science.

And what should do Richard Harrison who wrote: "At the open circuited ends
of a resonant antenna there is almost double
the forward voltage but zero total current due to cancellation of the
dorward and reflected currents at the open circuit. At the open circuit
in the wire, all the energy in the wave is transferred to the electric
field. "
S*

2197. Re: Standing waves

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-21 17:01:51 UTC
From: Szczepan Białek <sz.bialek@wp.pl>
Message-ID: <h980batt1@node1.news.atman.pl>
Source record: 12909

"Dave" <noone@nowhere.com>wrote
news:OJPsm.2659$Jd7.666@nwrddc02.gnilink.net...
>
> "Szczepan Bialek" <sz.bialek@wp.pl> wrote in message
>>>
>>>>In the Gas Analogy the monopole antena is exactly like the Kundt's tube.
>>>
>> Heaviside did the Hydraulic Analogy. All is exactly the same like in the
>> fluids mechanics.
>> Next the electrons were discovered. Automatically Heaviside is a history
>> and the Gas Analogy is in power.
>>
>> But you, radio people, are very close to waves and should be easy for you
>> to work out the answer for the Question:
>> Which Analogy is right?
>
> neither analogy is 'right'. they are useful in limited circumstances to
> demonstrate some basic pressure wave physics to young students. but
> neither one properly reproduces electromagnetic waves.

"electromagnetic waves" are paper waves. Radio waves are real waves. Now we
must not know what the waves are like. Now we should estabilish from which
part of the radiator radiate the radio waves.
Do you agree with Richard Harisson:
"At the open circuited ends of a resonant antenna there is almost double
the forward voltage but zero total current due to cancellation of the
dorward and reflected currents at the open circuit. At the open circuit
in the wire, all the energy in the wave is transferred to the electric
field."
S*

2198. Re: Standing waves

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-21 17:09:07 UTC
From: Szczepan Białek <sz.bialek@wp.pl>
Message-ID: <h980or$102$1@node1.news.atman.pl>
Source record: 12910

"Cecil Moore" <nospam@w5dxp.com> wrote
news:UeKsm.42134$JG1.24325@newsfe24.iad...
> Richard Fry wrote:
>> At the top of a monopole, and at the ends
>> of a dipole the net current is almost zero -- so those locations
>> generate very little of the total EM radiation from these antennas.
>
> Since the forward current and reflected current are equal
> in magnitude and opposite in phase at the ends, they act
> like transmission line currents and the magnetic fields
> cancel at the ends. They are in phase at the feedpoint -
> hence the maximum radiation at that point.

EM means elecro- magnetic. Radiation can start from any of them, See what
Richard Harrison wrote: "At the open circuited ends of a resonant antenna
there is almost double
the forward voltage but zero total current due to cancellation of the
dorward and reflected currents at the open circuit. At the open circuit
in the wire, all the energy in the wave is transferred to the electric
field."
S*

2199. Re: Standing waves

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-21 17:23:24 UTC
From: Szczepan Białek <sz.bialek@wp.pl>
Message-ID: <h981jk$17e$1@node1.news.atman.pl>
Source record: 12911

"tom" <news4792@taring.org>
news:4ab41e80$0$42842$8046368a@newsreader.iphouse.net...
> Szczepan Biaďż˝ek wrote:
>
> God forbid that you should actually do some research! What a terrible
> thought!

All necessary resarch are done by radio people. You all know how antennas work. Monopole and dipole means the electric pole because no magnetic poles. You only do not realize that EM waves can start from the ELECRIC field. The electric field is radiated from the ends where is high voltage and no current.
S*

2200. Re: Ordering Pre-Made Coax Assy's & Adapters ?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-21 17:29:01 UTC
From: Jim Lux <james.p.lux@jpl.nasa.gov>
Message-ID: <h98d4t$3hb$1@news.jpl.nasa.gov>
Source record: 12913

Robert11 wrote:
> Hi,
>
> Was wondering where you folks order small quantities of made up coax
> assemblies, adapters (such as SMA to BNC) and the like from ?
>

L-com has reasonably fast service.. prices are middle of the road.

2201. Re: Standing waves

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-21 18:00:37 UTC
From: Richard Fry <rfry@adams.net>
Message-ID: <5a0a5d03-ac80-4bcf-8934-b04cae58b0cd@g1g2000vbr.googlegroups.com>
Source record: 12912

On Sep 21, 12:23 pm, Szczepan Białek <sz.bia...@wp.pl> wrote:
> You only do not realize that EM waves can start from the ELECRIC field. The
> electric field is radiated from the ends where is high voltage and no
> current.

No, Szczepan, it is you that does not realize that voltage, alone, cannot produce an electromagnetic field.

Only the change in current and charge flowing along a conductor, over time, produces far-field EM radiation. That radiation includes both the magnetic and electric fields, at right angles to each other and to the direction of travel.

It is untrue that one part of a conductor or antenna radiates the magnetic field, and another part radiates the electric field, no matter the claims of the proponents of the E-H antenna (which have not been demonstrated).

The fact that the ends of a dipole, and the top of a monopole have very little net current flowing means that those locations cannot contribute very much to the EM radiation from those antennas.

You really should form your opinions from research in modern textbooks on antennas, rather than using Wikipedia and inapplicable analogies to sound waves. At a minimum you could recognize the quotes from them on this subject that already have been posted here.

RF

2202. Re: Standing waves

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-21 19:05:44 UTC
From: christofire <christofire@btinternet.com>
Message-ID: <JJSdndnC9PUWUyrXnZ2dnUVZ8iidnZ2d@bt.com>
Source record: 12914

"Szczepan Bia&#65533;ek" <sz.bialek@wp.pl> wrote in message
news:h97vr4rp1@node1.news.atman.pl...
>
> "Richard Clark" <kb7qhc@comcast.net> wrote
> news:00g7b5hnd4530cn0rmu609gc326vko7nt3@4ax.com...
>>>
>> I won't wait for that obvious failure. This is several steps above
>> your pay-grade. So, you should really attempt to work on first
>> principles rather than rummaging in the attic for impressive artifacts
>> of science.
>
> And what should do Richard Harrison who wrote: "At the open circuited ends
> of a resonant antenna there is almost double
> the forward voltage but zero total current due to cancellation of the
> dorward and reflected currents at the open circuit. At the open circuit
> in the wire, all the energy in the wave is transferred to the electric
> field. "
> S*

What Richard wrote is correct, if written in a slightly provocative manner (deliberately?). But he wasn't stating that the electric field 'At the open-circuited ends of a resonant antenna' passes energy into a radiated radio wave. The energy that makes it that far (i.e. isn't radiated on account of current in the element) is stored temporarily in an 'electrostatic' field which is one of several 'reactive' or 'induction' field components that surround a dipole antenna and decay with distance much faster than the radiation field components (i.e. those that make up a radio wave). As I've noted before, the term 'electrostatic' should not be interpreted literally as an unchanging field - it is used to differentiate between the reactive components and the radiation components of electric field - if this offends you, just call it a 'reactive' component of electric field. This stored energy is passed back into the antenna during the following RF quarter cycle.

And guess what ... one of the reactive field components is longitudinal!

... but it isn't part of a radio wave - both parts of a radio wave, the magnetic field and the attendant electric field, are directed transverse to the direction of propagation, but now I'm repeating myself from a week or more ago. Power cannot be abstracted from the reactive fields, including the longitudinal one; they affect the imaginary part of the terminal impedance of the antenna.

Of course, I expect you will contradict all this but I still recommend that you read a proper account of the fields around a dipole rather than making

up your own version. Since you appear to have a phobia of libraries, you could buy a second-hand copy of Kraus, Antennas for only $15 online: http://www.abebooks.com/servlet/SearchResults?an=Kraus&sts=t&tn=Antennas&x=55&y=10 and there are many, many other sources.

Failing that, you could always search the web for a bootleg copy, or one of the MIT Radiation Laboratory series of books. I don't condone bootlegging but someone in another newsgroup recently gave a link to a collection of illegal copies and, in the hope of ending these ridiculous arguments, I'll pass on what he wrote: http://cer.ucsd.edu/~james/notes/MIT%20OpenCourseWare/MIT%20Radiation%20Lab/

Chris

2203. Re: Standing waves

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-21 19:13:20 UTC
From: christofire <christofire@btinternet.com>
Message-ID: <9ICdnZh1RZ_JTSrXnZ2dnUVZ8tidnZ2d@bt.com>
Source record: 12915

"Szczepan Bia�ek" <sz.bialek@wp.pl> wrote in message
news:h980or$102$1@node1.news.atman.pl...
>
> "Cecil Moore" <nospam@w5dxp.com> wrote
> news:UeKsm.42134$JG1.24325@newsfe24.iad...
>> Richard Fry wrote:
>>> At the top of a monopole, and at the ends
>>> of a dipole the net current is almost zero -- so those locations
>>> generate very little of the total EM radiation from these antennas.
>>
>> Since the forward current and reflected current are equal
>> in magnitude and opposite in phase at the ends, they act
>> like transmission line currents and the magnetic fields
>> cancel at the ends. They are in phase at the feedpoint -
>> hence the maximum radiation at that point.
>
> EM means elecro- magnetic. Radiation can start from any of them, See what
> Richard Harrison wrote: "At the open circuited ends of a resonant antenna
> there is almost double
> the forward voltage but zero total current due to cancellation of the
> dorward and reflected currents at the open circuit. At the open circuit
> in the wire, all the energy in the wave is transferred to the electric
> field."
> S*

See my post earlier in this thread. You are misinterpreting what Richard Harrison wrote to suit your own, incorrect, made-up version of how antennas work.

Please think on this, Szczepan Bia�ek: the likelihood that your personal version of the physics is correct is vanishingly small - when it conflicts with the version everyone else (except perhaps Art Unwin) appears to understand from their education, which is derived from the basis for antennas that have been in use for more than 100 years.

Chris

2204. Re: Standing waves

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-21 19:21:01 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <ImQtm.49222$ec2.2331@newsfe13.iad>
Source record: 12916

Szczepan Białż˝ek wrote:
>
> "Cecil Moore" <nospam@w5dxp.com> wrote
>> Since the forward current and reflected current are equal
>> in magnitude and opposite in phase at the ends, they act
>> like transmission line currents and the magnetic fields
>> cancel at the ends. They are in phase at the feedpoint -
>> hence the maximum radiation at that point.
>
> See what Richard Harrison wrote:
> "At the open circuited ends of a resonant
> antenna there is almost double
> the forward voltage but zero total current due to cancellation of the
> forward and reflected currents at the open circuit. At the open circuit
> in the wire, all the energy in the wave is transferred to the electric
> field."

What I wrote agrees with what Richard H. wrote and vice versa.
--
73, Cecil, IEEE, OOTC, http://www.w5dxp.com

2205. Re: Standing waves

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-21 19:39:59 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <c6lfb5t0fqiqdu9vsa8or5rhejctuu9q8g@4ax.com>
Source record: 12917

On Mon, 21 Sep 2009 18:53:15 +0200, Szczepan Bia?ek <sz.bialek@wp.pl>
wrote:

>And what should do Richard Harrison who wrote

Which has absolutely nothing to do with the failure of your swampy
metaphor - EXCEPT to demonstrate its stagnation into a cesspool by
being completely ignored by you.

It's amusing to see you wading out there tho'. ;-)

73's
Richard Clark, KB7QHC

2206. Re: Standing waves

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-21 20:11:29 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <76Rtm.63780$u76.54990@newsfe10.iad>
Source record: 12918

Szczepan Białˇek wrote:
> The electric field is radiated from the ends where is
> high voltage and no current.

An individual photon is emitted by an individual
decelerating free electron complete with a
self-contained electric and magnetic field.
It is impossible for the electric field of
a single particular photon to originate 1/4WL
away from the origin of the magnetic field.
--
73, Cecil, IEEE, OOTC, http://www.w5dxp.com

2207. Re: Standing waves

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-21 20:33:15 UTC
From: Art Unwin <arthurunwin@gmail.com>
Message-ID: <2540a899-797b-432d-9d47-36f8748e2f72@p15g2000vbl.googlegroups.com>
Source record: 12919

On Sep 21, 12:23 pm, Szczepan Białek <sz.bia...@wp.pl> wrote:
> "tom" <news4...@taring.org>news:4ab41e80$0$42842$8046368a@newsreader.iphouse.net...
>
> > Szczepan Bia³ek wrote:
>
> > God forbid that you should actually do some research! What a terrible
> > thought!
>
> All necessary resarch are done by radio people. You all know how antennas
> work. Monopole and dipole means the electric pole because no magnetic poles.
> You only do not realize that EM waves can start from the ELECRIC field. The
> electric field is radiated from the ends where is high voltage and no
> current.
> S*

S*
These guys are not helping you! What they are doing is using you for
cannon fodder.
Try looking at things my way. You know that when a time varying
current is applied to a radiator that it also supports a reacting
current with spin, known as as an Eddy current
You also know that the current applied produces a electrical field and
a magnetic field that interchange energy between each other in the
form of a tank circuit.
Now look at the sequence of actions.We do know that the Eddy current
produces a lifting force and a spin force and we also know that there
is a electro static field surrounding the radiator. First we must
recognise that particles encapsulate the whole radiator but can be
individually lifted from the radiator with spin applied a short
distance. At this point it enters the electrostatic field around the
radiator where at the same time the generated magnetic field is
intersecting the electrostatic field. The moment that the lifted
particle enters the electro static field mix it is subjected to a
accelarating force exactly the same way as a electron in a CRT is
impacted upon. If you refer to the actions within a electron tube you
will note that the electrostatic field offsets the direction of the
accellerated particle into an exiting parabolic direction. The
combined fields will only accelerate the particle while it is within
the electrostatic field proper, after which it has a straight line
projection with spin. The time that it is within the electrostatic
field is the total accelerating time ie Newtons law 1/2 ft sqd.
The acceleration imparted to the particle happens to be the speed of
light which implies that this particle is able to emit light. If you
have difficulty then read up on the CRT.

As a point of interest the Eddy current itself must be balanced by an equal and opposite force per Newton and if we look at it in boundary terms we see that the opposing force is the combination of Gravity and the rotation of the Earth. What this shows is that the particle has spin and accelleration where the vector associated with Gravity is now neutralized such that it retains its straight line action with spin as it traverses the boundaries of the Earth Another thing of importance is that Newtons laws are based on the condition of mass where the particle becomes an excellent fit as opposed to a field or a wave.
Back to the radiator itself. If it is a full wave length then it is a closed circuit of the tank circuit form. If a radiator is less than a wave length then yes, charges will form at the end of a radiator but is hampered from further movement by the opposing impedance of the environment. The charges will still leak but with out a spinning action it will remain in the near field. Ofcourse changing the environment will give an instantaneus charge in a spark form because as an open circuit it always searches for the closed circuit function.
Regards
Art

2208. Re: Standing waves

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-21 21:19:22 UTC
From: christofire <christofire@btinternet.com>
Message-ID: <9rWdncXRdK1DcCrXnZ2dnUVZ8oudnZ2d@bt.com>
Source record: 12920

"Art Unwin" <arthurunwin@gmail.com> wrote in message
news:2540a899-797b-432d-9d47-36f8748e2f72@p15g2000vbl.googlegroups.com...
On Sep 21, 12:23 pm, Szczepan Bialek <sz.bia...@wp.pl> wrote:
> "tom"
> <news4...@taring.org>news:4ab41e80$0$42842$8046368a@newsreader.iphouse.net...
>
> > Szczepan Bia&#65533;ek wrote:
>
> > God forbid that you should actually do some research! What a terrible
> > thought!
>
> All necessary resarch are done by radio people. You all know how antennas
> work. Monopole and dipole means the electric pole because no magnetic
> poles.
> You only do not realize that EM waves can start from the ELECRIC field.
> The
> electric field is radiated from the ends where is high voltage and no
> current.
> S*

S*
These guys are not helping you! What they are doing is using you for
cannon fodder.
Try looking at things my way. You know that when a time varying
current is applied to a radiator that it also supports a reacting
current with spin, known as as an Eddy current
You also know that the current applied produces a electrical field and
a magnetic field that interchange energy between each other in the
form of a tank circuit.
Now look at the sequence of actions.We do know that the Eddy current
produces a lifting force and a spin force and we also know that there
is a electro static field surrounding the radiator. First we must
recognise that particles encapsulate the whole radiator but can be
individually lifted from the radiator with spin applied a short
distance. At this point it enters the electrostatic field around the
radiator where at the same time the generated magnetic field is
intersecting the electrostatic field. The moment that the lifted
particle enters the electro static field mix it is subjected to a
accelarating force exactly the same way as a electron in a CRT is
impacted upon. If you refer to the actions within a electron tube you
will note that the electrostatic field offsets the direction of the
accellerated particle into an exiting parabolic direction. The
combined fields will only accelerate the particle while it is within
the electrostatic field proper, after which it has a straight line

projection with spin. The time that it is within the electrostatic field is the total accelerating time ie Newtons law 1/2 ft sqd.
The acceleration imparted to the particle happens to be the speed of light which implies that this particle is able to emit light. If you have difficulty then read up on the CRT.
As a point of interest the Eddy current itself must be balanced by an equal and opposite force per Newton and if we look at it in boundary terms we see that the opposing force is the combination of Gravity and the rotation of the Earth. What this shows is that the particle has spin and accelleration where the vector associated with Gravity is now neutralized such that it retains its straight line action with spin as it traverses the boundaries of the Earth Another thing of importance is that Newtons laws are based on the condition of mass where the particle becomes an excellent fit as opposed to a field or a wave.
Back to the radiator itself. If it is a full wave length then it is a closed circuit of the tank circuit form. If a radiator is less than a wave length then yes, charges will form at the end of a radiator but is hampered from further movement by the opposing impedance of the environment. The charges will still leak but with out a spinning action it will remain in the near field. Ofcourse changing the environment will give an instantaneus charge in a spark form because as an open circuit it always searches for the closed circuit function.
Regards
Art

That's hilarious!

We're not using Mr. Bialek as 'cannon fodder' - he is presenting himself as cannon fodder voluntarily and he has the power to stop this happening. The same applies to you. But the concept of him looking at things your way is akin to a nun on a clowns head.

Eddy currents are not named after someone called Eddy and the speed of light is a speed so it cannot be an amount of acceleration. Any takers for the other faux pas?

Chris

2209. Re: Standing waves

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-21 21:25:40 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <uhrfb5h17gfbq808p2i3nsdfca1lfvrhtp@4ax.com>
Source record: 12921

On Mon, 21 Sep 2009 22:19:22 +0100, "christofire"
<christofire@btinternet.com> wrote:

>
>"Art Unwin" <arthurunwin@gmail.com> wrote in message
>the Eddy current itself must be balanced by an
>equal and opposite force

>Eddy currents are not named after someone called Eddy and the speed of light
>is a speed so it cannot be an amount of acceleration. Any takers for the
>other faux pas?

I can imagine an Uncle Eddy, but for equal and opposite - Auntie Eddy?

If an eddy circulates in one direction (maintaining the hydrological
metaphor of Stefan's) Auntie Eddy must run opposite. So now the Art
of Antenna Bris finds itself in a backwash.

73's
Richard Clark, KB7QHC

2210. Re: high power 4:1 balun

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-21 21:28:40 UTC
From: Karl Beckman <Karl.Beckman@motorola.com>
Message-ID: <h98r6b$ab0$1@engnntp2.cig.mot.com>
Source record: 12944

First thing to remember is a really radical thought: The power rating of a voltage balun has to be decreased by the highest SWR factor existing on the line. That is, a 2 kW rated (at 1:1) balun is only good for 1 kW at 2:1 VSWR or 200 watts if your wattmeter shows a 10:1 VSWR looking at the antenna. The reason is that the current (heating) losses in the windings go up as the square of the maximum current - remember hearing about "I squared R". A 4:1 VSWR means the current max value is twice the minimum, therefore you'll be heating up the core four times as much as if you had a 1:! VSWR on the line. It doesn't matter whether the line is unbalanced coaxial or balanced open wire.

In your case the ratio of rated power divided by working power is 1.25, so the maximum VSWR tolerable before you exceed the dissipation rating of the balun is only 1.25. Or working the other direction, to always stay cool you need to find a balun rated for (1200) x (VSWRmax) watts.

The input reactance of the Windom changes as you change the driving frequency (and band), therefore the VSWR on the feedline does also. The balun may stay reasonably cool on a few frequencies, but will be flaming hot on most others.

--
Karl Beckman, P.E.
WA8NVW - licensed since 1964

"Ralph Mowery" <rmowery28146@earthlink.net> wrote in message
news:DsqdnVqKm4xEPSvXnZ2dnUVZ_uGdnZ2d@earthlink.com...
> Does anyone make a 4:1 balun that I can use for an off center fed antenna
> that will take the legal limit of power ?
>
> I did find one that is around $ 80 to $ 100 that is suspose to handle it.
> I hate to pay that much for a ring of 'iron' and a few feet of wire wound
> on it and it will not work.
>
> I have up a home made version of the Carolina Windom. Bought a balun
> rated for 1.5 kw. I only run around 1200 watts out of a Drake L4B amp.
> That balun will heat up and quit working (swr goes way up from about
> 1.7:1 at the frequency I use most) if I run more than about 500 to 600
> watts SSB to the antenna for any length of time. The antenna is fed with
> a good grade of rg8 and about 20 feet from the antenna is a current balun
> (the one with the beads over the coax). It will heat up some but when I
> take it out of the line, the 4:1 balun still heats up . The 1:1 bead
> choke does not heat up to any big ammount when I put it on a dummy load
> and put 1200 watts to it.
>

> I had a low power balun up with the same antenna and running 100 watts the
> antenna seemed to work fine.
>
> If it was not for the wide bandwidth and good results I have been getting
> , I would just run an 80 meter dipole and no balun. Also want an antenna
> for 40 meters.
> Have the usaul triband for 10,15,20.
>
>
>

2211. Re: Standing waves

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-21 22:10:02 UTC
From: Richard Fry <rfry@adams.net>
Message-ID: <765e5c73-f567-4470-9403-0f8b9bae3a97@q14g2000vbi.googlegroups.com>
Source record: 12922

On Sep 21, 3:33 pm, Art Unwin <arthurun...@gmail.com> wrote:
> S*
> These guys are not helping you! What they are doing is using you for
> cannon fodder. Try looking at things my way. <major snip>

Interesting how Art Unwin has tried to hijack this thread into yet another pulpit of his for those willing to believe his bizarre, and unprovable concepts about antenna theory and performance.

RF

2212. Re: Standing waves

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-21 22:25:14 UTC
From: Art Unwin <arthurunwin@gmail.com>
Message-ID: <281450d6-0f9c-4ff9-9dca-532b9eee8626@d21g2000vbm.googlegroups.com>
Source record: 12923

On Sep 21, 4:19 pm, "christofire" <christof...@btinternet.com> wrote:
> "Art Unwin" <arthurun...@gmail.com> wrote in message
>
> news:2540a899-797b-432d-9d47-36f8748e2f72@p15g2000vbl.googlegroups.com...
> On Sep 21, 12:23 pm, Szczepan Bialek <sz.bia...@wp.pl> wrote:
>
>
>
> > "tom"
> > <news4...@taring.org>news:4ab41e80$0$42842$8046368a@newsreader.iphouse.net...
>
> > > Szczepan Bia³ek wrote:
>
> > > God forbid that you should actually do some research! What a terrible
> > > thought!
>
> > All necessary resarch are done by radio people. You all know how antennas
> > work. Monopole and dipole means the electric pole because no magnetic
> > poles.
> > You only do not realize that EM waves can start from the ELECRIC field.
> > The
> > electric field is radiated from the ends where is high voltage and no
> > current.
> > S*
>
> S*
> These guys are not helping you! What they are doing is using you for
> cannon fodder.
> Try looking at things my way. You know that when a time varying
> current is applied to a radiator that it also supports a reacting
> current with spin, known as as an Eddy current
> You also know that the current applied produces a electrical field and
> a magnetic field that interchange energy between each other in the
> form of a tank circuit.
> Now look at the sequence of actions.We do know that the Eddy current
> produces a lifting force and a spin force and we also know that there
> is a electro static field surrounding the radiator. First we must
> recognise that particles encapsulate the whole radiator but can be
> individually lifted from the radiator with spin applied a short
> distance. At this point it enters the electrostatic field around the
> radiator where at the same time the generated magnetic field is
> intersecting the electrostatic field. The moment that the lifted
> particle enters the electro static field mix it is subjected to a
> accelarating force exactly the same way as a electron in a CRT is

> impacted upon. If you refer to the actions within a electron tube you
> will note that the electrostatic field offsets the direction of the
> accellerated particle into an exiting parabolic direction. The
> combined fields will only accelerate the particle while it is within
> the electrostatic field proper, after which it has a straight line
> projection with spin. The time that it is within the electrostatic
> field is the total accelerating time ie Newtons law 1/2 ft sqd.
> The acceleration imparted to the particle happens to be the speed of
> light which implies that this particle is able to emit light. If you
> have difficulty then read up on the CRT.
> As a point of interest the Eddy current itself must be balanced by an
> equal and opposite force per Newton and if we look at it in boundary
> terms we see that the opposing force is the combination of Gravity and
> the rotation of the Earth. What this shows is that the particle has
> spin and accelleration where the vector associated with Gravity is now
> neutralized such that it retains its straight line action with spin
> as it traverses the boundaries of the Earth Another thing of
> importance is that Newtons laws are based on the condition of mass
> where the particle becomes an excellent fit as opposed to a field or a
> wave.
> Back to the radiator itself. If it is a full wave length then it is a
> closed circuit of the tank circuit form. If a radiator is less than a
> wave length then yes, charges will form at the end of a radiator but
> is hampered from further movement by the opposing impedance of the
> environment. The charges will still leak but with out a spinning
> action it will remain in the near field. Ofcourse changing the
> environment will give an instantaneus charge in a spark form because
> as an open circuit it always searches for the closed circuit function.
> Regards
> Art
>
> That's hilarious!
>
> We're not using Mr. Bialek as 'cannon fodder' - he is presenting himself as
> cannon fodder voluntarily and he has the power to stop this happening. The
> same applies to you. But the concept of him looking at things your way is
> akin to a nun on a clowns head.
>
> Eddy currents are not named after someone called Eddy and the speed of light
> is a speed so it cannot be an amount of acceleration. Any takers for the
> other faux pas?
>
> Chris

Chris you are being stupid as well as acting as a fool.
Acceleration of the particle only occurs while within the
electrostatic field. When it exits it has the speed of light because
it has emmerged from the intersecting two fields.and thus from the
accellerating forces. I remind you of Newtons law of ut + 1/2 ft sqd
The first expression is for the speed attained on entering the

accelerating field and the other half is for the length of the
accelerating electrostatic field. On leaving the two fields it looses
the applied accelerating force where it has arrived at a particular
speed.Maybe you should look up the workings of a CRT using Newtons
laws instead of shooting from the hip.
It was at a different time that the speed of light was measured where
it was found to equal the sppeed emerging from two intersecting fields.

2213. Re: Standing waves

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-21 23:05:15 UTC
From: Dave <noone@nowhere.com>
Message-ID: <LETtm.2963$Jd7.1217@nwrddc02.gnilink.net>
Source record: 12924

"Szczepan Bialek" <sz.bialek@wp.pl> wrote in message
news:h980batt1@node1.news.atman.pl...
>
> "Dave" <noone@nowhere.com>wrote
> news:OJPsm.2659$Jd7.666@nwrddc02.gnilink.net...
>>
>> "Szczepan Bialek" <sz.bialek@wp.pl> wrote in message
>>>>
>>>>>In the Gas Analogy the monopole antena is exactly like the Kundt's
>>>>>tube.
>>>>
>>> Heaviside did the Hydraulic Analogy. All is exactly the same like in the
>>> fluids mechanics.
>>> Next the electrons were discovered. Automatically Heaviside is a history
>>> and the Gas Analogy is in power.
>>>
>>> But you, radio people, are very close to waves and should be easy for
>>> you to work out the answer for the Question:
>>> Which Analogy is right?
>>
>> neither analogy is 'right'. they are useful in limited circumstances to
>> demonstrate some basic pressure wave physics to young students. but
>> neither one properly reproduces electromagnetic waves.
>
> "electromagnetic waves" are paper waves. Radio waves are real waves. Now
> we must not know what the waves are like. Now we should estabilish from
> which part of the radiator radiate the radio waves.
> Do you agree with Richard Harisson:
> "At the open circuited ends of a resonant antenna there is almost double
> the forward voltage but zero total current due to cancellation of the
> dorward and reflected currents at the open circuit. At the open circuit
> in the wire, all the energy in the wave is transferred to the electric
> field."
> S*
>
>
we know what they are like, you just have to understand the mathematics.
and yes, richard's statements are true, but a bit too restrictive, it
doesn't HAVE to be resonant. Voltage doubles and current=0 at the end of
any wire fed with a time varying current, it doesn't even have to be a sine
wave... note the effect of sending square waves from a time domain
reflectometer down an open circuited wire.

2214. Re: Standing waves

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-22 00:33:23 UTC
From: christofire <christofire@btinternet.com>
Message-ID: <Y7KdnYJ3kNjKhiXXnZ2dnUVZ8tGdnZ2d@bt.com>
Source record: 12925

"Art Unwin" <arthurunwin@gmail.com> wrote in message
news:281450d6-0f9c-4ff9-9dca-532b9eee8626@d21g2000vbm.googlegroups.com...
On Sep 21, 4:19 pm, "christofire" <christof...@btinternet.com> wrote:
> "Art Unwin" <arthurun...@gmail.com> wrote in message

- - snip - -

Chris you are being stupid as well as acting as a fool.
Acceleration of the particle only occurs while within the
electrostatic field. When it exits it has the speed of light because
it has emmerged from the intersecting two fields.and thus from the
accellerating forces. I remind you of Newtons law of ut + 1/2 ft sqd
The first expression is for the speed attained on entering the
accelerating field and the other half is for the length of the
accelerating electrostatic field. On leaving the two fields it looses
the applied accelerating force where it has arrived at a particular
speed.Maybe you should look up the workings of a CRT using Newtons
laws instead of shooting from the hip.
It was at a different time that the speed of light was measured where
it was found to equal the sppeed emerging from two intersecting fields.

* Actually, I'm well aware of the principle involved in accelerating
electrons in an electron gun as used in CRTs, klystrons, TWTs, and so on, by
subjecting an electron cloud to a potential difference using an anode with a
hole in it (!), but that's different from what happens in an antenna.

The acceleration of charge in an antenna results almost entirely from the
applied potential difference at its terminals. The radiated fields result
from the alternating current effectively passing through the radiation
resistance, and all the other, reactive, fields have no direct effect on the
radiation resistance, or the component of the current that passes through it
in phase with the voltage that is developed across it, which together, of
course, represent the radiated power. The reactive fields affect the
terminal impedance and a large imaginary part can upset the device trying to
send power into the antenna, but that is more of a system issue. The
alternating current that passes through the radiation resistance is composed
of charge that moves in time with each RF cycle, accelerating and
decelerating accordingly. The electrostatic field developed between the
ends of a half-wave dipole reaches its maximum value a quarter of a cycle
later than the voltage at the drive point so any effect it has on the charge
in the antenna elements during each cycle must be reactive, and it doesn't
affect the radiation resistance or the radiated wave.

But all this can be looked up from any one of the respected books on
antennas. Kraus, and others, gives expressions for the different field
components and the theory all hangs together quite readily using Maxwell's

equations without modification.

I don't care if you think me stupid, and I'll continue to try to avoid name calling of individuals, although I may criticise what they write especially if it appears ignorant of proper science yet attempts to re-write established theory, and therefore appears arrogant.

Chris

2215. Re: Standing waves

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-22 01:43:04 UTC
From: Art Unwin <arthurunwin@gmail.com>
Message-ID: <dfa7677b-17ad-4733-b2f1-cae8c34f41cf@b18g2000vbl.googlegroups.com>
Source record: 12926

On Sep 21, 7:33 pm, "christofire" <christof...@btinternet.com> wrote:
> "Art Unwin" <arthurun...@gmail.com> wrote in message
>
> news:281450d6-0f9c-4ff9-9dca-532b9eee8626@d21g2000vbm.googlegroups.com...
> On Sep 21, 4:19 pm, "christofire" <christof...@btinternet.com> wrote:
>
> > "Art Unwin" <arthurun...@gmail.com> wrote in message
>
> - - snip - -
>
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>
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> radiation resistance, or the component of the current that passes through it
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> send power into the antenna, but that is more of a system issue. The
> alternating current that passes through the radiation resistance is composed
> of charge that moves in time with each RF cycle, accelerating and
> decelerating accordingly. The electrostatic field developed between the
> ends of a half-wave dipole reaches its maximum value a quarter of a cycle
> later than the voltage at the drive point so any effect it has on the charge
> in the antenna elements during each cycle must be reactive, and it doesn't

> affect the radiation resistance or the radiated wave.
>
> But all this can be looked up from any one of the respected books on
> antennas. Krauss, and others, gives expressions for the different field
> components and the theory all hangs together quite readily using Maxwell's
> equations without modification.
>
> I don't care if you think me stupid, and I'll continue to try to avoid name
> calling of individuals, although I may criticise what they write especially
> if it appears ignorant of proper science yet attempts to re-write
> established theory, and therefore appears arrogant.
>
> Chris

No it does not appear in Kraus book. He never followed Maxwells laws
with respect to equilibrium. To do that you must think in terms of
wavelength. After all with respect to science all revolve around
boundary laws of the Universe and you blindly ignore that fact.
Now back to radiation which applies spin to a p. Nowarticle where as
with a crt no spin is applied as it is heat that separates the resting
particle Now earlier you refered to a electrostatic field that
according to what you stated did not have a border and surely you know
that just can't be unless it is in equilibrium which requires a closed
circuit.
For this to come to fruition you go back to the boundary laws where
the arbitrary border is one that is closed i.e. in equilibrium. Now
cast your mind back to the Gauss extension where radiators and
particles lie in a closed static field. Now you should see that
equilibrium must reign for a closed static field. Now you blithely
mentioned an electrostatic field with nary a mention as to how it is
formed and how it fits into the whole picture.
Why? Because the books do not provide an unbroken trail that fully
describes radiation
(books admit that) as I have done where everything dove tails into
the existing laws of the Universe. And then I gave you a bonus with
respect to the weak field that Einstein searched for in vain. Einstein
looked at the package presented by the Big Bag but omitted to keep
that which it was wrapped into. That was the arbitrary boundary around
which were forces or vectors that were equal and opposite when a
smallest of smallest of particles edged out towards the border. Yes it
was of a weak force but for all of that it broke the equilibrium
boundary as the forces at that point was not now equal. The breakage
was one where the opposing forces were offset to each other thus
providing a torque force that provided spin. Now we come to our own
Earth encased in a arbitrary border and outside the border we have the
same conditions of equilibrium that must equal the forces of the Big
Bang which means the outside has two vectors, gravity vector which is
straight and a vector denoting spin i.e. rotation of the Earth. On the
other side of the border you again have two vectors a straight vector
and that curly one you don't like me to call eddy current.

Yup. Everything falls together nicely thank you, when you study
radiation from first principles instead of binding yourself to books
that readily admit to not understanding the radiation process. Now
this is not being arrogant when one has applied all principles but I
do think it is arrogant of you and others to asasinate the character
of "S" purely because of his english and spelling and not to help one
that wants to learn.
Just think about it all. I have shown how a particle moves in space in
a straight line trajectory such that the particle maintains a straight
line without the parabolic force of gravity driving it down to the
Earth. Go back to your books and show just how the electrostatic field
came about and what was the borders that it was contained in
Art
via applied spin and where gravity

2216. Re: Standing waves

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-22 01:43:09 UTC
From: tom <news4792@taring.org>
Message-ID: <4ab82c14$0$42842$8046368a@newsreader.iphouse.net>
Source record: 12927

Art Unwin wrote:
>
> Chris you are being stupid as well as acting as a fool.
> Acceleration of the particle only occurs while within the
> electrostatic field. When it exits it has the speed of light because
> it has emmerged from the intersecting two fields.and thus from the

Nice job on the name calling, dingbat.

So, which charged particle are you proposing is being accelerated here?
There are none that have no mass, which would mean that no particle
capable of being accelerated by an electrostatic field could exit at
"the speed of light because it has emmerged from the intersecting two
fields".

Have you now discovered a new particle which has charge and no mass?

tom
K0TAR

2217. Re: Standing waves

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-22 02:05:42 UTC
From: Art Unwin <arthurunwin@gmail.com>
Message-ID: <91392552-2848-41c5-8dc6-0d08f9e025b4@31g2000vbf.googlegroups.com>
Source record: 12928

On Sep 21, 8:43 pm, tom <news4...@taring.org> wrote:
> Art Unwin wrote:
>
> > Chris you are being stupid as well as acting as a fool.
> > Acceleration of the particle only occurs while within the
> > electrostatic field. When it exits it has the speed of light because
> > it has emmerged from the intersecting two fields.and thus from the
>
> Nice job on the name calling, dingbat.

You do it all the time TOM , no reasons, just because!

>
> So, which charged particle are you proposing is being accelerated here?
>   There are none that have no mass, which would mean that no particle
> capable of being accelerated by an electrostatic field could exit at
> "the speed of light because it has emmerged from the intersecting two
> fields".
You are talking garbage Tom in a attempt to sound educated.
When you introduce Newtons laws you are standing on the existence of
mass.
It was a particle with mass that broke the equilibrium of the Sun
which starts the whole cycle.
This mass is debris from the burning and release of energy from the
sun which ebbs and flows according to the 11 year sun spot cycle. It
is acknowledged that particles from the Universe are in the billions
per cubic meter in the Earths system and all these particles have
mass. The idea that neutrinos, a particle from the Sun had no mass was
dispelled years ago, so the Laws of Newton remains in place. This very
same action is shown with respect to a CRT where the particle which in
that case does not have spin. You will see that the particle is
accelerated within the borders of the electrostatic field which is
also intersected by a mgnetic field such that its path is parabolic
within the confines of the electrostatic field which becomes a
straight line travel without acelleration as it leaves the confines of
the electrostatic field. It is all quite simple Tom but you continue
to implant erronius data into the description as a basis to supply
insults.

>
> Have you now discovered a new particle which has charge and no mass?

There you go again, all particles have mass and Newtons laws are still
in place
Stop playing the fool

>
> tom
> K0TAR

2218. Re: Standing waves

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-22 02:23:13 UTC
From: tom <news4792@taring.org>
Message-ID: <4ab8350e$0$28116$8046368a@newsreader.iphouse.net>
Source record: 12929

Art Unwin wrote:
>> Have you now discovered a new particle which has charge and no mass?
>
> There you go again, all particles have mass and Newtons laws are still
> in place
> Stop playing the fool

So explain how your particle which has mass can attain light speed.

tom
K0TAR

2219. Re: Standing waves

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-22 02:32:41 UTC
From: derek unwin <derekunwin@gmail.com>
Message-ID: <6af5771e-116a-46fa-b3e7-9904f8245225@u16g2000pru.googlegroups.com>
Source record: 12930

On Sep 22, 10:23 am, tom <news4...@taring.org> wrote:
> Art Unwin wrote:
> >> Have you now discovered a new particle which has charge and no mass?
>
> > > There you go again, all particles have mass and Newtons laws are still
> > > in place
> > > Stop playing the fool
>
> So explain how your particle which has mass can attain light speed.
>
> tom
> K0TAR

2220. Re: Standing waves

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-22 02:37:44 UTC
From: derek unwin <derekunwin@gmail.com>
Message-ID: <d34cc219-0ac6-47b8-bac1-fdcb1a18a6b4@v15g2000prn.googlegroups.com>
Source record: 12931

```
On Sep 22, 10:32 am, derek unwin <derekun...@gmail.com> wrote:
> On Sep 22, 10:23 am, tom <news4...@taring.org> wrote:
>
> > Art Unwin wrote:
> > >> Have you now discovered a new particle which has charge and no mass?
>
> > > There you go again, all particles have mass and Newtons laws are still
> > > in place
> > > Stop playing the fool
>
> > So explain how your particle which has mass can attain light speed.
>
> > tom
> > K0TAR

Read before you post. Plank!
```

2221. Re: Standing waves

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-22 03:24:24 UTC
From: Art Unwin <arthurunwin@gmail.com>
Message-ID: <f1b79e22-58e1-45bd-956a-61c565efceff@f33g2000vbm.googlegroups.com>
Source record: 12932

On Sep 21, 9:23 pm, tom <news4...@taring.org> wrote:
> Art Unwin wrote:
> >> Have you now discovered a new particle which has charge and no mass?
>
> > > There you go again, all particles have mass and Newtons laws are still
> > > in place
> > > Stop playing the fool
>
> So explain how your particle which has mass can attain light speed.
>
> tom
> K0TAR

You could go to college and learn all this but here goes.
Planck did a treatise on heat radiation where he stated that heat
radiation
is enabled by two independent functions. First was by conduction and
the second by a ray.
He went on to enlarge on the notion of a ray when is studies moved on
to radio and light radiation. He often consulted with Einstein and was
well aware of his efforts to find the weak force and where he gave up
on that and started a new science where he came up with mc sqd,. With
the abandoned search of Einstein Planck settled hard on the idea that
light was a radiated beam or wave of sorts and it was natural of him
to see radiation of heat in a similar manner i.e a wave or ray in a
similar way that light was thought of.
In fact his work moved later to the nature of light and radio
radiation where the theme of a ray or wave was retained. If Einstein
had included the wrappings of the Big Bang in his studies particles
would have retained the high ground for both him and Planck.
as well as this group together with science which has been misled to
this very day.
Thus Planck started on the wrong track with respect to heat radiation
and all of his other studies. Now he may have known what the speed of
light was but he would see it as a ray of light the same way as a ray
of heat. It was later found independently that a particle at the exit
from the combined field intersection was the speed of light which now
can be seen as the cause of light in connection with particle speed
i.e an effect and not a cause.
Since we note that wavelengths can denote a change of color the
connection of wavelength, spin ,deccelleration or what ever, directly
relates to the emmission of light.
So to answer your question the cause of this particular speed is the
interaction of two intesecting fields on a particle of mass. This same

particle is the same particle that emits light which cannot exceed the speed attained in the combined fields since there is no applied accellerating force applied to that same particle ,only retardation. And this is the same particle that sits on a diamagnetic material that is removed from a heated anode without spin but with an increase in potential energy. Without spin this same particle deccellerates before impacting on a luminescent glass surface of a CRT.

2222. Re: Standing waves

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-22 03:29:39 UTC
From: tom <news4792@taring.org>
Message-ID: <4ab84508$0$42843$8046368a@newsreader.iphouse.net>
Source record: 12933

derek unwin wrote:
>
> Read before you post. Plank!

Plank?

You don't even know the standard word which means "I'm blocking you
forever because your intelligence is less than dirt".

tom
K0TAR

2223. Re: Standing waves

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-22 03:34:12 UTC
From: tom <news4792@taring.org>
Message-ID: <4ab8461a$0$42842$8046368a@newsreader.iphouse.net>
Source record: 12934

Art Unwin wrote:
> On Sep 21, 9:23 pm, tom <news4...@taring.org> wrote:
>> Art Unwin wrote:
>>>> Have you now discovered a new particle which has charge and no mass?
>>> There you go again, all particles have mass and Newtons laws are still
>>> in place
>>> Stop playing the fool
>> So explain how your particle which has mass can attain light speed.
>>
>> tom
>> K0TAR
>
> You could go to college and learn all this but here goes.
> Planck did a treatise on heat radiation where he stated that heat
> radiation
> is enabled by two independent functions. First was by conduction and
> the second by a ray.
> He went on to enlarge on the notion of a ray when is studies moved on
> to radio and light radiation. He often consulted with Einstein and was
> well aware of his efforts to find the weak force and where he gave up
> on that and started a new science where he came up with mc sqd,. With
> the abandoned search of Einstein Planck settled hard on the idea that
> light was a radiated beam or wave of sorts and it was natural of him
> to see radiation of heat in a similar manner i.e a wave or ray in a
> similar way that light was thought of.
> In fact his work moved later to the nature of light and radio
> radiation where the theme of a ray or wave was retained. If Einstein
> had included the wrappings of the Big Bang in his studies particles
> would have retained the high ground for both him and Planck.
> as well as this group together with science which has been misled to
> this very day.
> Thus Planck started on the wrong track with respect to heat radiation
> and all of his other studies. Now he may have known what the speed of
> light was but he would see it as a ray of light the same way as a ray

Bafflegab.

> of heat. It was later found independently that a particle at the exit
> from the combined field intersection was the speed of light which now
> can be seen as the cause of light in connection with particle speed
> i.e an effect and not a cause.

Give references. This is the key to your argument, in case you can't
figure that out. It also breaks all current laws of physics.

> Since we note that wavelengths can denote a change of color the
> connection of wavelength, spin ,deccelleration or what ever, directly
> relates to the emmission of light.
> So to answer your question the cause of this particular speed is the
> interaction of two intesecting fields on a particle of mass. This same
> particle is the same particle that emits light which cannot exceed the
> speed attained in the combined fields since there is no
> applied accellerating force applied to that same particle ,only
> retardation. And this is the same particle that sits on a diamagnetic
> material that is removed from a heated anode without spin but with an
> increase in potential energy. Without spin this same particle
> deccellerates before impacting on a luminescent glass surface of a CRT.

So you admit you can't explain how to get a particle with mass to light
speed.

Fraud.

tom
K0TAR

2224. Re: Standing waves

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-22 04:23:00 UTC
From: Art Unwin <arthurunwin@gmail.com>
Message-ID: <4a62c79e-7986-4bc7-93b2-9851e5194a40@l35g2000vba.googlegroups.com>
Source record: 12935

On Sep 21, 10:34 pm, tom <news4...@taring.org> wrote:
> Art Unwin wrote:
> > On Sep 21, 9:23 pm, tom <news4...@taring.org> wrote:
> >> Art Unwin wrote:
> >>>> Have you now discovered a new particle which has charge and no mass?
> >>> There you go again, all particles have mass and Newtons laws are still
> >>> in place
> >>> Stop playing the fool
> >> So explain how your particle which has mass can attain light speed.
>
> >> tom
> >> K0TAR
>
> > You could go to college and learn all this but here goes.
> > Planck did a treatise on heat radiation where he stated that heat
> > radiation
> > is enabled by two independent functions. First was by conduction and
> > the second by a ray.
> > He went on to enlarge on the notion of a ray when is studies moved on
> > to radio and light radiation. He often consulted with Einstein and was
> > well aware of his efforts to find the weak force and where he gave up
> > on that and started a new science where he came up with mc sqd,. With
> > the abandoned search of Einstein Planck settled hard on the idea that
> > light was a radiated beam or wave of sorts and it was natural of him
> > to see radiation of heat in a similar manner i.e a wave or ray in a
> > similar way that light was thought of.
> > In fact his work moved later to the nature of light and radio
> > radiation where the theme of a ray or wave was retained. If Einstein
> > had included the wrappings of the Big Bang in his studies particles
> > would have retained the high ground for both him and Planck.
> > as well as this group together with science which has been misled to
> > this very day.
> > Thus Planck started on the wrong track with respect to heat radiation
> > and all of his other studies. Now he may have known what the speed of
> > light was but he would see it as a ray of light the same way as a ray
>
> Bafflegab.
>
> > of heat. It was later found independently that a particle at the exit
> > from the combined field intersection was the speed of light which now
> > can be seen as the cause of light in connection with particle speed
> > i.e an effect and not a cause.
>
> Give references. This is the key to your argument, in case you can't

> figure that out. It also breaks all current laws of physics.
>
> > Since we note that wavelengths can denote a change of color the
> > connection of wavelength, spin ,deccelleration or what ever, directly
> > relates to the emmission of light.
> > So to answer your question the cause of this particular speed is the
> > interaction of two intesecting fields on a particle of mass. This same
> > particle is the same particle that emits light which cannot exceed the
> > speed attained in the combined fields since there is no
> > applied accellerating force applied to that same particle ,only
> > retardation. And this is the same particle that sits on a diamagnetic
> > material that is removed from a heated anode without spin but with an
> > increase in potential energy. Without spin this same particle
> > deccellerates before impacting on a luminescent glass surface of a CRT.
>
> So you admit you can't explain how to get a particle with mass to light
> speed.
>

All that time I took to educate you was all for nothing
On top of that you accused me of breaking the laws of physics which
can only be the laws as you under stand them which is different to the
rest of the World. I also note that you have insulted another person
of the group calling him dirt.
Really you need to read a book of the World as we know it where the
magnetic fields of the Earth become inert to change and the forces of
the standard model reverse to the point of beginnings. When this
reverse begins the dead will rise and it will be heaven
as we then grow younger. Ofcourse those who decided to stay on the
side of the Red sea
will not rejoin the others that stayed on the right path which suggest
that the Middle East will be destroyed as the majority of the tribe
descendants lives there. Ofcourse if you have lived a life where you
insulted all you certainly will not be "one of the meek" that gets
blessed. Yup, read a different book next time and check out the laws
that we all have violated.

> Fraud.
>
> tom
> K0TAR

2225. Re: Standing waves

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-22 05:19:37 UTC
From: jaroslav lipka <jarolipka@gmail.com>
Message-ID: <123f1d35-9298-4c4e-a3a1-719f706eefb4@h40g2000prf.googlegroups.com>
Source record: 12936

On Sep 22, 11:34 am, tom <news4...@taring.org> wrote:
> Art Unwin wrote:
> > On Sep 21, 9:23 pm, tom <news4...@taring.org> wrote:
> >> Art Unwin wrote:
> >>>> Have you now discovered a new particle which has charge and no mass?
> >>> There you go again, all particles have mass and Newtons laws are still
> >>> in place
> >>> Stop playing the fool
> >> So explain how your particle which has mass can attain light speed.
>
> >> tom
> >> K0TAR
>
> > You could go to college and learn all this but here goes.
> > Planck did a treatise on heat radiation where he stated that heat
> > radiation
> > is enabled by two independent functions. First was by conduction and
> > the second by a ray.
> > He went on to enlarge on the notion of a ray when is studies moved on
> > to radio and light radiation. He often consulted with Einstein and was
> > well aware of his efforts to find the weak force and where he gave up
> > on that and started a new science where he came up with mc sqd,. With
> > the abandoned search of Einstein Planck settled hard on the idea that
> > light was a radiated beam or wave of sorts and it was natural of him
> > to see radiation of heat in a similar manner i.e a wave or ray in a
> > similar way that light was thought of.
> > In fact his work moved later to the nature of light and radio
> > radiation where the theme of a ray or wave was retained. If Einstein
> > had included the wrappings of the Big Bang in his studies particles
> > would have retained the high ground for both him and Planck.
> > as well as this group together with science which has been misled to
> > this very day.
> > Thus Planck started on the wrong track with respect to heat radiation
> > and all of his other studies. Now he may have known what the speed of
> > light was but he would see it as a ray of light the same way as a ray
>
> Bafflegab.
>
> > of heat. It was later found independently that a particle at the exit
> > from the combined field intersection was the speed of light which now
> > can be seen as the cause of light in connection with particle speed
> > i.e an effect and not a cause.
>
> Give references. This is the key to your argument, in case you can't

> figure that out. It also breaks all current laws of physics.

---------- Current laws of physics ----------

Wowl he got something right for a change

Jaro

2226. Re: Standing waves

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-22 07:21:25 UTC
From: Szczepan Białek <sz.bialek@wp.pl>
Message-ID: <h99jh8$8vu$1@node1.news.atman.pl>
Source record: 12937

"Cecil Moore" <nospam@w5dxp.com> news:ImQtm.49222$ec2.2331@newsfe13.iad...
> Szczepan Biaďż˝ek wrote:
>>
>> "Cecil Moore" <nospam@w5dxp.com> wrote
>>> Since the forward current and reflected current are equal
>>> in magnitude and opposite in phase at the ends, they act
>>> like transmission line currents and the magnetic fields
>>> cancel at the ends. They are in phase at the feedpoint -
>>> hence the maximum radiation at that point.

It apply to 1/2WL dipole. But what radiate in 0.05WL dipole? There the
"maximum radiation " is in the transmission line (1/4WL from the end). The
feed point is also in the transmissing line.
"R. Clark wrote : "[* What is this proportional and
proportionate mean? For a dipole of
0.05 WL to a dipole of 0.5WL, the far field change for that 10:1
variation is negligible. However, for a dipole of 0.5WL to a dipole
of 1.25WL, the far field change for that 2.5:1 (a smaller proportion)
variation is very noticeable.]"

>>
>> See what Richard Harrison wrote:
>> "At the open circuited ends of a resonant antenna there is almost double
>> the forward voltage but zero total current due to cancellation of the
>> forward and reflected currents at the open circuit. At the open circuit
>> in the wire, all the energy in the wave is transferred to the electric
>> field."
>
> What I wrote agrees with what Richard H. wrote and vice versa.

Rather no. Richard do not write about a feed point.
S*

2227. Re: Standing waves

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-22 07:35:37 UTC
From: Szczepan Białek <sz.bialek@wp.pl>
Message-ID: <h99jha$8vu$2@node1.news.atman.pl>
Source record: 12938

"christofire" <christofire@btinternet.com> wrote
news:JJSdndnC9PUWUyrXnZ2dnUVZ8iidnZ2d@bt.com...
>
> "Szczepan Biaďż˝ek" <sz.bialek@wp.pl> wrote in message
> news:h97vr4rp1@node1.news.atman.pl...
>>
>>
>> And what should do Richard Harrison who wrote: "At the open circuited
>> ends of a resonant antenna there is almost double
>> the forward voltage but zero total current due to cancellation of the
>> dorward and reflected currents at the open circuit. At the open circuit
>> in the wire, all the energy in the wave is transferred to the electric
>> field. "
>> S*
>
>
> What Richard wrote is correct, if written in a slightly provocative manner
> (deliberately?). But he wasn't stating that the electric field 'At the
> open-circuited ends of a resonant antenna' passes energy into a radiated
> radio wave.

Look at this: ""At the open circuited ends of a resonant antenna there is
almost double the forward voltage".
"Almost double voltage" is like the pressure in the Kundt's tube.

> The energy that makes it that far (i.e. isn't radiated on account of
> current in the element) is stored temporarily in an 'electrostatic' field
> which is one of several 'reactive' or 'induction' field components that
> surround a dipole antenna and decay with distance much faster than the
> radiation field components (i.e. those that make up a radio wave). As
> I've noted before, the term 'electrostatic' should not be interpreted
> literally as an unchanging field - it is used to differentiate between the
> reactive components and the radiation components of electric field - if
> this offends you, just call it a 'reactive' component of electric field.
> This stored energy is passed back into the antenna during the following RF
> quarter cycle.
>
> And guess what ... one of the reactive field components is longitudinal!
>
> ... but it isn't part of a radio wave - both parts of a radio wave, the
> magnetic field and the attendant electric field, are directed transverse
> to the direction of propagation, but now I'm repeating myself from a week
> or more ago. Power cannot be abstracted from the reactive fields,
> including the longitudinal one; they affect the imaginary part of the
> terminal impedance of the antenna.

>
> Of course, I expect you will contradict all this but I still recommend
> that you read a proper account of the fields around a dipole rather than
> making up your own version.

It is not my version. The electrons were discovered 100 years ago.

> Since you appear to have a phobia of libraries, you could buy a
> second-hand copy of Kraus, Antennas for only $15 online:
> http://www.abebooks.com/servlet/SearchResults?an=Kraus&sts=t&tn=Antennas&x=55&y=10
> and there are many, many other sources.

I am sure that there is all about electrons. It is not easy to read with
understanding. Take a glance once more and try to find compressible
electrons.
>
> Failing that, you could always search the web for a bootleg copy, or one
> of the MIT Radiation Laboratory series of books. I don't condone
> bootlegging but someone in another newsgroup recently gave a link to a
> collection of illegal copies and, in the hope of ending these ridiculous
> arguments,

All arguments are from this Group posts.

> I'll pass on what he wrote:
> http://cer.ucsd.edu/~james/notes/MIT%20OpenCourseWare/MIT%20Radiation%20Lab/

S*

2228. Re: Standing waves

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-22 07:40:30 UTC
From: Szczepan Białek <sz.bialek@wp.pl>
Message-ID: <h99jqb$91b$1@node1.news.atman.pl>
Source record: 12939

Uďż˝ytkownik "Richard Clark" <kb7qhc@comcast.net> napisaďż˝ w wiadomoďż˝ci
news:c6lfb5t0fqiqdu9vsa8or5rhejctuu9q8g@4ax.com...
> On Mon, 21 Sep 2009 18:53:15 +0200, Szczepan Bia?ek <sz.bialek@wp.pl>
> wrote:
>
>>And what should do Richard Harrison who wrote
>
> Which has absolutely nothing to do with the failure of your swampy
> metaphor - EXCEPT to demonstrate its stagnation into a cesspool by
> being completely ignored by you.
>
> It's amusing to see you wading out there tho'. ;-)

For me it is important that at the end the voltage is doubled: "At the open
circuited ends
of a resonant antenna there is almost double the forward voltage".

I am colecting such arguments from radio people posts.
S*

2229. Re: Standing waves

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-22 08:13:14 UTC
From: Szczepan Białek <sz.bialek@wp.pl>
Message-ID: <h99mvm$9hm$1@node1.news.atman.pl>
Source record: 12941

"Dave" <noone@nowhere.com>
news:LETtm.2963$Jd7.1217@nwrddc02.gnilink.net...
>
> "Szczepan Bialek" <sz.bialek@wp.pl> wrote in message
> news:h980batt1@node1.news.atman.pl...
>>>>>
>>>>>>In the Gas Analogy the monopole antena is exactly like the Kundt's
>>>>>>tube.
>>>>>
>>>> Heaviside did the Hydraulic Analogy. All is exactly the same like in
>>>> the fluids mechanics.
>>>> Next the electrons were discovered. Automatically Heaviside is a
>>>> history and the Gas Analogy is in power.
>>>>
>>>> But you, radio people, are very close to waves and should be easy for
>>>> you to work out the answer for the Question:
>>>> Which Analogy is right?
>>>
>>> neither analogy is 'right'. they are useful in limited circumstances to
>>> demonstrate some basic pressure wave physics to young students. but
>>> neither one properly reproduces electromagnetic waves.
>>
>> "electromagnetic waves" are paper waves. Radio waves are real waves. Now
>> we must not know what the waves are like. Now we should estabilish from
>> which part of the radiator radiate the radio waves.
>> Do you agree with Richard Harisson:
>> "At the open circuited ends of a resonant antenna there is almost double
>> the forward voltage but zero total current due to cancellation of the
>> dorward and reflected currents at the open circuit. At the open circuit
>> in the wire, all the energy in the wave is transferred to the electric
>> field."
>> S*
>>
>>
> we know what they are like, you just have to understand the mathematics.

I understand. Without that it was be impossible to know that Maxwell
proposed the displacement current to save the incompressible electric fluid.
In Maxwell times AC current was known. To pass the incompressible fluid
through a capacitor the displacement current is necessary. I prefere the
compressible electrons. They compress in the plates and nothing flow between
them. The polarization is not the macro flow.

> and yes, richard's statements are true, but a bit too restrictive, it
> doesn't HAVE to be resonant. Voltage doubles and current=0 at the end of

> any wire fed with a time varying current, it doesn't even have to be a
> sine wave... note the effect of sending square waves from a time domain
> reflectometer down an open circuited wire.

Yes. But antennas are in resonance.
S*
>

2230. Re: Standing waves

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-22 08:34:34 UTC
From: Szczepan Białek <sz.bialek@wp.pl>
Message-ID: <h99mvn$9hm$2@node1.news.atman.pl>
Source record: 12940

"Richard Fry" <rfry@adams.net> wrote
news:5a0a5d03-ac80-4bcf-8934-b04cae58b0cd@g1g2000vbr.googlegroups.com...
On Sep 21, 12:23 pm, Szczepan Biaďż˝ek <sz.bia...@wp.pl> wrote:
>> You only do not realize that EM waves can start from the ELECRIC field.
>> The
> electric field is radiated from the ends where is high voltage and no
> current.

>No, Szczepan, it is you that does not realize that voltage, alone,
cannot produce an

Let us assume that electromagnetic field is a proposition by Maxwell.
The electric field is more realistic.

>Only the change in current and charge flowing along a conductor, over
time, produces far-field EM radiation. That radiation includes both
the magnetic and electric fields, at right angles to each other and to
the direction of travel.

>It is untrue that one part of a conductor or antenna radiates the
magnetic field, and another part radiates the electric field, no
matter the claims of the proponents of the E-H antenna (which have not
been demonstrated).

But it is experimentally proved. Stationary charge - electric field, Moving
charge - magnetic field.
Probably the both fields are the same. Only instruments are different.

>The fact that the ends of a dipole, and the top of a monopole have
very little net current flowing means that those locations cannot
contribute very much to the EM radiation from those antennas.

But there are the doubled voltage. Very strong pulses must appear in space.

>You really should form your opinions from research in modern textbooks
on antennas, rather than using Wikipedia and inapplicable analogies to
sound waves. At a minimum you could recognize the quotes from them on
this subject that already have been posted here.

Up to now the acoustic analogy is fully applicable.
S*

RF

2231. Re: Standing waves

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-22 08:48:43 UTC
From: Szczepan Białek <sz.bialek@wp.pl>
Message-ID: <h99nq7$9l2$1@node1.news.atman.pl>
Source record: 12942

"Art Unwin" <arthurunwin@gmail.com> wrote
news:2540a899-797b-432d-9d47-36f8748e2f72@p15g2000vbl.googlegroups.com...
On Sep 21, 12:23ďż˝ pm, Szczepan BiaĹ□ek <sz.bia...@wp.pl> wrote:
> ďż˝ "tom"
> <news4...@taring.org>news:4ab41e80$0$42842$8046368a@newsreader.iphouse.net...
>
> > Szczepan BiaÂłek wrote:
>
> > God forbid that you should actually do some research! ďż˝ What a terrible
> > thought!
>
>> All necessary resarch are done by radio people. You all know how antennas
> work. Monopole and dipole means the electric pole because no magnetic
> poles.
> You only do not realize that EM waves can start from the ELECRIC field.
> The
> electric field is radiated from the ends where is high voltage and no
> current.
> S*

S*
>These guys are not helping you! What they are doing is using you for
cannon fodder.

Day after day they state the new for me aguments that the acoustic analogy
is the winner.

>Try looking at things my way. You know that when a time varying
current is applied to a radiator that it also supports a reacting
current with spin, known as as an Eddy current
You also know that the current applied produces a electrical field and
a magnetic field that interchange energy between each other in the
form of a tank circuit.

You go into details. Now is not time for that. Now we should work out the
consensus on which part of the radiator radiate the radio waves.

>Now look at the sequence of actions.We do know that the Eddy current
produces a lifting force and a spin force and we also know that there
is a electro static field surrounding the radiator. First we must
recognise that particles encapsulate the whole radiator but can be
individually lifted from the radiator with spin applied a short
distance. At this point it enters the electrostatic field around the
radiator where at the same time the generated magnetic field is
intersecting the electrostatic field. The moment that the lifted

particle enters the electro static field mix it is subjected to a accelarating force exactly the same way as a electron in a CRT is impacted upon. If you refer to the actions within a electron tube you will note that the electrostatic field offsets the direction of the accellerated particle into an exiting parabolic direction. The combined fields will only accelerate the particle while it is within the electrostatic field proper, after which it has a straight line projection with spin. The time that it is within the electrostatic field is the total accelerating time ie Newtons law 1/2 ft sqd.
The acceleration imparted to the particle happens to be the speed of light which implies that this particle is able to emit light. If you have difficulty then read up on the CRT.
As a point of interest the Eddy current itself must be balanced by an equal and opposite force per Newton and if we look at it in boundary terms we see that the opposing force is the combination of Gravity and the rotation of the Earth. What this shows is that the particle has spin and accelleration where the vector associated with Gravity is now neutralized such that it retains its straight line action with spin as it traverses the boundaries of the Earth Another thing of importance is that Newtons laws are based on the condition of mass where the particle becomes an excellent fit as opposed to a field or a wave.
> Back to the radiator itself. If it is a full wave length then it is a closed circuit of the tank circuit form. If a radiator is less than a wave length then yes, charges will form at the end of a radiator but is hampered from further movement by the opposing impedance of the environment. The charges will still leak but with out a spinning action it will remain in the near field. Ofcourse changing the environment will give an instantaneus charge in a spark form because as an open circuit it always searches for the closed circuit function.

It will not be easy to work out here all details.
S*

Regards
Art

2232. Re: Spherical radiation pattern

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-22 08:55:48 UTC
From: Szczepan Białek <sz.bialek@wp.pl>
Message-ID: <h99o7g$9mi$1@node1.news.atman.pl>
Source record: 12943

"Richard Harrison" <richardharrison@webtv.net> wrote
news:20335-4AB3EBEA-1942@storefull-3172.bay.webtv.net...
> Cecil, W5DXP wrote:
> "The forwerd and the reflected current sre in phase at the feedpoint and
> thus radiation is maximum at that maximum current point."
>
> Exactly. The reflected current has made s round trip of 180 degrees plus
> the reflection has added another 180 degrees for a total of 360 degrees
> or back in phase with the forward current at the feedpoint.
>
> At the open circuited ends of a resonant antenna there is almost double
> the forward voltage

Could you tell us if the "almost double voltage" is the measured of
theoretically predicted?

>but zero total current due to cancellation of the
> dorward and reflected currents at the open circuit. At the open circuit
> in the wire, all the energy in the wave is transferred to the electric
> field.
>
> The relationship between the input power of a given antenna and the
> strength of the far electromagnetic field which it will produce depends
> among other factors the length and shape of the antenna.
>
> Best regards, Richard Harrison, KB5WZI
S*

2233. Re: Standing waves

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-22 11:20:41 UTC
From: Richard Fry <rfry@adams.net>
Message-ID: <467c3d5b-4859-40a7-bc8d-f275738074b8@31g2000vbf.googlegroups.com>
Source record: 12945

On Sep 22, 3:13 am, Szczepan Białek <sz.bia...@wp.pl> wrote:

> Yes. But antennas are in resonance.

That is rarely true.

A naturally resonant antenna has zero reactance at its feedpoint. But that is not a requirement for it to produce EM radiation efficiently from all of the r-f current flowing on it.

The monopoles used by MW broadcast stations vary from 60 to 225 electrical degrees in height. Only a few of those heights are naturally resonant.

Yet they all radiate nearly 100% of the applied power, because any antenna reactance is offset by an impedance matching network at the feedpoint.

RF

2234. Aluminium oxide removal

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-22 11:26:58 UTC
From: tk5ep <pegloff@gmail.com>
Message-ID: <4ab8b487$0$10725$426a34cc@news.free.fr>
Source record: 12946

Hi All,

A bit trivial but very common problem...
I got a free 203BA i had to remove from a tower. It has been there for years.
All parts are OK except that i can't dismantle some elements. Certain tube junctions are corroded despite some tape protection, and the elements are like soldered.

Is there a safe way to remove the aluminium oxide so i can disassemble the elements for transportation ?

I've been told that letting petroleum seep between the elements would help. But that can take days or ... weeks...

I'm sure, you all had this problem one day and that someone found a "good" solution.

Thanks for any comments,
73, Patrick TK5EP

2235. Re: Standing waves

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-22 11:39:16 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <MH2um.46209$JG1.45005@newsfe24.iad>
Source record: 12947

Szczepan Białˇek wrote:
> For me it is important that at the end the voltage is doubled: "At the
> open circuited ends
> of a resonant antenna there is almost double the forward voltage".

The same thing happens with an open-circuit stub yet it
radiates a negligible amount. The only place where an
antenna radiates more than a negligible amount is where
the forward and reverse currents are unbalanced.

At the ends of a 1/2WL dipole, the forward and reverse
currents are perfectly balanced, i.e. they are 100%
transmission line currents which are known not to
radiate.

At the 1/2WL dipole feedpoint, the forward and reverse
currents are most unbalanced, i.e. since they are in
phase at the feedpoint, they can be considered to be
100% antenna currents.

This is just one more example of the illogic of
forcing forward and reflected waves into a mashed
potatoes theory of energy. The underlying laws of
physics are lost in the process.
--
73, Cecil, IEEE, OOTC, http://www.w5dxp.com

2236. Re: Standing waves

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-22 11:49:17 UTC
From: Richard Fry <rfry@adams.net>
Message-ID: <ddc5f438-c0e6-429f-80d3-e07e96311e7f@o13g2000vbl.googlegroups.com>
Source record: 12948

On Sep 22, 3:34 am, Szczepan Białek <sz.bia...@wp.pl> wrote:

> Up to now the acoustic analogy is fully applicable.

Not if one understands the physics of radiation.

> But it is experimentally proved. Stationary charge - electric field,
> Moving charge - magnetic field.

Untrue, and I challenge you to cite any credible experimental data
that you think proves your belief.

Far-field EM radiation is produced only by the current flow on the
antenna, and that radiation contains BOTH the electric and the
magnetic fields.

You may have missed the accurate description posted by Chris, and
pasted below.

"The acceleration of charge in an antenna results almost entirely from
the
applied potential difference at its terminals. The radiated fields
result
from the alternating current effectively passing through the radiation
resistance, and all the other, reactive, fields have no direct effect
on the
radiation resistance, or the component of the current that passes
through it
in phase with the voltage that is developed across it, which together,
of
course, represent the radiated power. The reactive fields affect the
terminal impedance and a large imaginary part can upset the device
trying to
send power into the antenna, but that is more of a system issue. The
alternating current that passes through the radiation resistance is
composed
of charge that moves in time with each RF cycle, accelerating and
decelerating accordingly. The electrostatic field developed between
the
ends of a half-wave dipole reaches its maximum value a quarter of a
cycle
later than the voltage at the drive point so any effect it has on the
charge
in the antenna elements during each cycle must be reactive, and it
doesn't
affect the radiation resistance or the radiated wave."

RF

2237. Re: Standing waves

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-22 11:51:44 UTC
From: christofire <christofire@btinternet.com>
Message-ID: <jeidnWP344j0JyXXnZ2dnUVZ8h2dnZ2d@bt.com>
Source record: 12949

"Art Unwin" <arthurunwin@gmail.com> wrote in message
news:dfa7677b-17ad-4733-b2f1-cae8c34f41cf@b18g2000vbl.googlegroups.com...
On Sep 21, 7:33 pm, "christofire" <christof...@btinternet.com> wrote:
> "Art Unwin" <arthurun...@gmail.com> wrote in message
>
> news:281450d6-0f9c-4ff9-9dca-532b9eee8626@d21g2000vbm.googlegroups.com...
> On Sep 21, 4:19 pm, "christofire" <christof...@btinternet.com> wrote:
>
> > "Art Unwin" <arthurun...@gmail.com> wrote in message
>
> - - snip - -
>
> Chris you are being stupid as well as acting as a fool.
> Acceleration of the particle only occurs while within the
> electrostatic field. When it exits it has the speed of light because
> it has emmerged from the intersecting two fields.and thus from the
> accellerating forces. I remind you of Newtons law of ut + 1/2 ft sqd
> The first expression is for the speed attained on entering the
> accelerating field and the other half is for the length of the
> accelerating electrostatic field. On leaving the two fields it looses
> the applied accelerating force where it has arrived at a particular
> speed.Maybe you should look up the workings of a CRT using Newtons
> laws instead of shooting from the hip.
> It was at a different time that the speed of light was measured where
> it was found to equal the sppeed emerging from two intersecting fields.
>
> * Actually, I'm well aware of the principle involved in accelerating
> electrons in an electron gun as used in CRTs, klystrons, TWTs, and so on,
> by
> subjecting an electron cloud to a potential difference using an anode with
> a
> hole in it (!), but that's different from what happens in an antenna.
>
> The acceleration of charge in an antenna results almost entirely from the
> applied potential difference at its terminals. The radiated fields result
> from the alternating current effectively passing through the radiation
> resistance, and all the other, reactive, fields have no direct effect on
> the
> radiation resistance, or the component of the current that passes through
> it
> in phase with the voltage that is developed across it, which together, of
> course, represent the radiated power. The reactive fields affect the
> terminal impedance and a large imaginary part can upset the device trying
> to

> send power into the antenna, but that is more of a system issue. The
> alternating current that passes through the radiation resistance is
> composed
> of charge that moves in time with each RF cycle, accelerating and
> decelerating accordingly. The electrostatic field developed between the
> ends of a half-wave dipole reaches its maximum value a quarter of a cycle
> later than the voltage at the drive point so any effect it has on the
> charge
> in the antenna elements during each cycle must be reactive, and it doesn't
> affect the radiation resistance or the radiated wave.
>
> But all this can be looked up from any one of the respected books on
> antennas. Krauss, and others, gives expressions for the different field
> components and the theory all hangs together quite readily using Maxwell's
> equations without modification.
>
> I don't care if you think me stupid, and I'll continue to try to avoid
> name
> calling of individuals, although I may criticise what they write
> especially
> if it appears ignorant of proper science yet attempts to re-write
> established theory, and therefore appears arrogant.
>
> Chris

No it does not appear in Kraus book.

* That is incorrect, and I expect you know that to be the case. All of what I wrote above can be traced to sources such as Kraus, Jordan and Balmain, and Jasik; books you may never have tried to read and understand (on the basis of your comment).

He never followed Maxwells laws
with respect to equilibrium.

* Define 'equilibrium' in trems of normal physics and cite a reference.

To do that you must think in terms of
wavelength. After all with respect to science all revolve around
boundary laws of the Universe and you blindly ignore that fact.

* How is there a boundary to the universe? It is unbounded - the universe is known to be expanding into empty space.

Now back to radiation which applies spin to a p.

* No it doesn't - cite a reference.

Nowarticle where as
with a crt no spin is applied as it is heat that separates the resting
particle

* ... separates it from what?

Now earlier you refered to a electrostatic field that
according to what you stated did not have a border and surely you know
that just can't be unless it is in equilibrium which requires a closed
circuit.

* Fields in unbounded space tend to be unbounded. The fields around a
dipole are bounded by the surface of the dipole, which is the boundary
condition used by NEC, and usually in practice by the earth.

For this to come to fruition you go back to the boundary laws where
the arbitrary border is one that is closed i.e. in equilibrium.

* Define 'equilibrium' in terms of normal physics and cite a reference.

Now
cast your mind back to the Gauss extension where radiators and
particles lie in a closed static field. Now you should see that
equilibrium must reign for a closed static field. Now you blithely
mentioned an electrostatic field with nary a mention as to how it is
formed and how it fits into the whole picture.

* Recent discussion has been about the electric field produced by the
voltage that appears between the ends of a dipole - that's what I was
writing about, and so were you. How can you state 'with nary a mention as
to how it is formed'?

Why? Because the books do not provide an unbroken trail that fully
describes radiation
(books admit that) as I have done where everything dove tails into
the existing laws of the Universe.

* Kraus provides a trail that's as unbroken as can be comprehended by most
engineers. Physicists may wish to take it further but there's no evidence
of physicists in this newsgroup.

And then I gave you a bonus with
respect to the weak field that Einstein searched for in vain. Einstein
looked at the package presented by the Big Bag but omitted to keep
that which it was wrapped into.

* Is the universe enclosed in a Big Bag?

That was the arbitrary boundary around
which were forces or vectors that were equal and opposite when a
smallest of smallest of particles edged out towards the border. Yes it
was of a weak force but for all of that it broke the equilibrium
boundary as the forces at that point was not now equal. The breakage
was one where the opposing forces were offset to each other thus
providing a torque force that provided spin. Now we come to our own
Earth encased in a arbitrary border and outside the border we have the
same conditions of equilibrium that must equal the forces of the Big
Bang which means the outside has two vectors, gravity vector which is
straight and a vector denoting spin i.e. rotation of the Earth. On the
other side of the border you again have two vectors a straight vector

and that curly one you don't like me to call eddy current.

* Call it what you wish. Capitalising the word within a sentence, as you did before, is usually reserved for phenomena named after the people who discovered them - but that's an engineer thing.

Yup. Everything falls together nicely thank you, when you study radiation from first principles instead of binding yourself to books that readily admit to not understanding the radiation process.

* If you believe so fervently in your own version of all this then why don't you submit it to peer review at sci.physics or sci.physics.research? It's rather unfair to expose this only to an amateur radio newsgroup when what you are doing is apparently re-writing physics in such a major way. Those newsgroups would be more appropriate, considering the depth to which you are going (i.e. well beyond amateur radio) - wouldn't you agree.

Now
this is not being arrogant when one has applied all principles

* My dictionary defines 'arrogant' as: 'having or showing an exaggerated opinion of one's own importance , merit, ability, etc.' from the Latin 'arrogare': 'to claim as one's own'. Your re-writing of physics conforms to this definition precisely.

but I
do think it is arrogant of you and others to asasinate the character
of "S" purely because of his english and spelling and not to help one
that wants to learn.

* He is showing no inclination of wanting to learn - he asks a question, and then when answered responds with non-physical contradiction. His treatement here is a direct consequence of that behaviour, like yours.

Just think about it all. I have shown how a particle moves in space in
a straight line trajectory such that the particle maintains a straight
line without the parabolic force of gravity driving it down to the
Earth. Go back to your books and show just how the electrostatic field
came about and what was the borders that it was contained in
Art
via applied spin and where gravity

* As I say, you should present your theory to sci.physics and sci.physics.research if you have any interest in checking whether it is correct, and not limit its exposure to this group. Do let us know when you have posted there.

Chris

2238. Re: Standing waves

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-22 12:13:59 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <uc3um.2236$IR3.1336@newsfe25.iad>
Source record: 12950

Szczepan Białż˝ek wrote:
> Now we should work out
> the consensus on which part of the radiator radiate the radio waves.

Here's what you are missing: RF is AC. At some point
in the radiation cycle, the instantaneous radiation has
to be zero at the zero-crossing time. That is when the
magnetic field energy is essentially zero and close to
100% of the energy is contained in the electric fields
at the ends of the dipole.

You cannot have it both ways. You cannot have a radiation
peak at a net current maximum time and also have a radiation
peak at a net voltage maximum time since they are ~90 degrees
out of phase. If what you are saying were really happening,
an antenna would radiate two times the applied frequency,
but it obviously doesn't.

Or did you not realize that when the electric field is
at its maximum amplitude, the current is close to zero-
crossing all up and down the standing wave antenna? The
phase of the feedpoint current is within a couple of
degrees of the phase of the current all up and down
the antenna.

That's why the current on a standing wave antenna cannot
be used to measure the delay through a wire or a loading
coil. All such "measurements" are bogus.
--
73, Cecil, IEEE, OOTC, http://www.w5dxp.com

2239. Re: Standing waves

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-22 12:28:37 UTC
From: Richard Fry <rfry@adams.net>
Message-ID: <f9e080ad-4116-424f-8c88-d8d9c42dcf67@d34g2000vbm.googlegroups.com>
Source record: 12851

On Sep 22, 2:21 am, Szczepan Białek <sz.bia...@wp.pl> wrote:

> It apply to 1/2WL dipole. But what radiate in 0.05WL dipole? There the
> "maximum radiation " is in the transmission line (1/4WL from the end).
> The feed point is also in the transmissing line.

There is no radiation from a transmission line as long as the currents in it are balanced. Attaching a transmission line to a 0.05WL center-fed dipole does not change that balance.

The feedpoint of such a short dipole has very high capacitive reactance, so getting much current to flow into it would be difficult without proper impedance matching to the transmission line.

But whatever the impedance match, all of the radiation occurs from the 0.05WL dipole itself, and maximum radiation is generated at the feedpoint, where the r-f current is greatest.

RF

2240. Re: Spherical radiation pattern

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-22 12:46:15 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <zG3um.231027$vp.207238@newsfe12.iad>
Source record: 12852

Szczepan Białż˝ek wrote:
> Could you tell us if the "almost double voltage" is the measured of
> theoretically predicted?

Since a voltage reference point is difficult to achieve
at the ends of a dipole, we rely on the conservation of
energy principle. Since the current is zero at the ends
of a dipole, all the energy must be contained in the
electric field. With that knowledge, the voltage can
be estimated.

Such is easy to understand by taking voltage measurements
on a 1/4WL open-circuit stub. If one uses resistance wire
for the stub, one can simulate radiation loss in a dipole.

The following is a transmission line simulation of a 1/4WL
monopole designed to run on the free demo version of EZNEC
available from www.eznec.com

http://www.w5dxp.com/stub_dip.EZ

The user defined resistivity of the wire is what causes
the 35 ohm feedpoint resistance akin to a 1/4WL monopole.
The 10 megohm load allows us to look at the voltage
across the "open" end of the stub. It is 1033 volts for
a 100 watt input. We can assume the forward voltage and
the reflected voltage at the end of the stub are equal
at 516 volts.
--
73, Cecil, IEEE, OOTC, http://www.w5dxp.com

2241. Re: Aluminium oxide removal

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-22 15:39:22 UTC
From: John Ferrell <jferrell13@triad.rr.com>
Message-ID: <lprhb5156aplko1dmhs2e10jv3mvjsh4f8@4ax.com>
Source record: 12853

On Tue, 22 Sep 2009 13:26:58 +0200, tk5ep <pegloff@gmail.com> wrote:

>Hi All,
>
>A bit trivial but very common problem...
>I got a free 203BA i had to remove from a tower. It has been there for
>years.
>All parts are OK except that i can't dismantle some elements. Certain
>tube junctions are corroded despite some tape protection, and the
>elements are like soldered.
>
>Is there a safe way to remove the aluminium oxide so i can disassemble
>the elements for transportation ?
>
>I've been told that letting petroleum seep between the elements would
>help. But that can take days or ... weeks...
>
>I'm sure, you all had this problem one day and that someone found a
>"good" solution.
>
>Thanks for any comments,
>73, Patrick TK5EP
>
I like to use a source of heat like a propane torch to loosen up the
joints. You will need gloves as well, the aluminum conducts heat very
fast...

2242. Re: high power 4:1 balun

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-22 16:52:46 UTC
From: Jim Lux <james.p.lux@jpl.nasa.gov>
Message-ID: <h9avcunkc1@news.jpl.nasa.gov>
Source record: 12854

Karl Beckman wrote:
> First thing to remember is a really radical thought: The power rating of a
> voltage balun has to be decreased by the highest SWR factor existing on the
> line. That is, a 2 kW rated (at 1:1) balun is only good for 1 kW at 2:1
> VSWR or 200 watts if your wattmeter shows a 10:1 VSWR looking at the
> antenna. The reason is that the current (heating) losses in the windings go
> up as the square of the maximum current - remember hearing about "I squared
> R". A 4:1 VSWR means the current max value is twice the minimum, therefore
> you'll be heating up the core four times as much as if you had a 1:! VSWR on
> the line. It doesn't matter whether the line is unbalanced coaxial or
> balanced open wire.
>

The other factor is core saturation.. flux goes as the voltage*frequency
... so 10:1 VSWR means you might have 10x voltage..

2243. Re: high power 4:1 balun

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-22 17:52:38 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <h93ib5h5jkj8rkt9vkttn8aa35m1udfgk1@4ax.com>
Source record: 12855

On Tue, 22 Sep 2009 09:52:46 -0700, Jim Lux <james.p.lux@jpl.nasa.gov>
wrote:

>The other factor is core saturation..

Hi Jim,

The only reason why a common mode choke (a more appropriate BalUn
construction for any application) would encounter "core saturation" is
due to the presence of a very significant common mode current - the
thing the choke (or BalUn) is supposed to suppress. If the "core
saturates" this is an indication that a common mode choke is very,
very necessary.

The better the choke (the higher its common mode Z), the more it will
snub the current. The more it snubs the current, the less chance of
"core saturation."

The solution to a hot BalUn is suppression of the current that is
energizing the "core."

As for:
>Karl Beckman wrote:
>> First thing to remember is a really radical thought: The power rating of a
>> voltage balun has to be decreased by the highest SWR factor existing on the
>> line.

I have NEVER heard this apocryphal "rule of thumb" before. For one
thing, it doesn't make sense on the face of it as it defines a linear
relationship between current (or voltage) with power.

73's
Richard Clark, KB7QHC

2244. Re: Standing waves

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-22 17:57:21 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <5o3ib5172vqk81so7b61qlkmuc2ll8g1c9@4ax.com>
Source record: 12856

On Tue, 22 Sep 2009 09:40:30 +0200, Szczepan Bia?ek <sz.bialek@wp.pl>
wrote:

>> Which has absolutely nothing to do with the failure of your swampy
>> metaphor - EXCEPT to demonstrate its stagnation into a cesspool by
>> being completely ignored by you.
>>
>> It's amusing to see you wading out there tho'. ;-)
>
>For me it is important that at the end the voltage is doubled

Yes, we can all tell what is important to you. Unfortunately it does
not equate with what is important for you. No doubt that distinction
is lost in translation and you will continue to fumble on.

I'm glad to see you shed that nonsense about hydraulics. As you
understood that topic far less than RF (which is in itself on very
shaky ground), it wouldn't have done to poison the well.

This poor understanding is quite obvious by your last comment above.

73's
Richard Clark, KB7QHC

2245. Re: Standing waves

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-22 18:01:50 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <v44ib5dm14lno81rg16m51ajc95t8qcgi9@4ax.com>
Source record: 12857

On Tue, 22 Sep 2009 12:51:44 +0100, "christofire"
<christofire@btinternet.com> wrote:

>Chris

Could you turn your newsreader's quoting mechanism back on? It is
very confusing to have to fumble with Art's babbling interleaved with
your "special" editorial marks.

73's
Richard Clark, KB7QHC

2246. Re: Standing waves

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-22 18:03:20 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <j94ib5ppa69jnk2vom3902t0nhbn3i9eji@4ax.com>
Source record: 12858

On Tue, 22 Sep 2009 10:48:43 +0200, Szczepan Bia?ek <sz.bialek@wp.pl>
wrote with abysmal quoting:

>It will not be easy to work out here all details.
>S*
>
>
>Regards
>Art

You guys need to get a room.

73's
Richard Clark, KB7QHC

2247. Re: Standing waves

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-22 18:36:24 UTC
From: Szczepan Białek <sz.bialek@wp.pl>
Message-ID: <h9aq7tfut1@node1.news.atman.pl>
Source record: 12859

"Richard Fry" <rfry@adams.net> wrote
news:f9e080ad-4116-424f-8c88-d8d9c42dcf67@d34g2000vbm.googlegroups.com...
On Sep 22, 2:21 am, Szczepan Biaďż˝ek <sz.bia...@wp.pl> wrote:

>> It apply to 1/2WL dipole. But what radiate in 0.05WL dipole? There the
> "maximum radiation " is in the transmission line (1/4WL from the end).
> The feed point is also in the transmissing line.

>There is no radiation from a transmission line as long as the currents
in it are balanced. Attaching a transmission line to a 0.05WL center-
fed dipole does not change that balance.

>The feedpoint of such a short dipole has very high capacitive
reactance, so getting much current to flow into it would be difficult
without proper impedance matching to the transmission line.

The feed point is the part of the transmissing line and not radiate.

>But whatever the impedance match, all of the radiation occurs from the
0.05WL dipole itself, and maximum radiation is generated at the
feedpoint, where the r-f current is greatest.

See above.

Dipole 0.05 is probably the straight. How long are the folded dipoles and
the loop antennas? Are there the short version?
S*

2248. Re: Standing waves

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-22 18:44:50 UTC
From: Szczepan Białek <sz.bialek@wp.pl>
Message-ID: <h9aqnm$g10$1@node1.news.atman.pl>
Source record: 12860

"Cecil Moore" <nospam@w5dxp.com> wrote
news:uc3um.2236$lR3.1336@newsfe25.iad...
> Szczepan Biaďż˝ek wrote:
>> Now we should work out the consensus on which part of the radiator
>> radiate the radio waves.
>
> Here's what you are missing: RF is AC. At some point
> in the radiation cycle, the instantaneous radiation has
> to be zero at the zero-crossing time. That is when the
> magnetic field energy is essentially zero and close to
> 100% of the energy is contained in the electric fields
> at the ends of the dipole.
>
> You cannot have it both ways. You cannot have a radiation
> peak at a net current maximum time and also have a radiation
> peak at a net voltage maximum time since they are ~90 degrees
> out of phase. If what you are saying were really happening,
> an antenna would radiate two times the applied frequency,
> but it obviously doesn't.

We do not have the both. But we have the Luxembourg effect. Each dipole
antena radiate two times the applied frequency, The pulses from the ends
are 180 degrees apart.
>
> Or did you not realize that when the electric field is
> at its maximum amplitude, the current is close to zero-
> crossing all up and down the standing wave antenna?
> phase of the feedpoint current is within a couple of
> degrees of the phase of the current all up and down
> the antenna.
>
> That's why the current on a standing wave antenna cannot
> be used to measure the delay through a wire or a loading
> coil. All such "measurements" are bogus.

S*

2249. Re: Spherical radiation pattern

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-22 18:52:40 UTC
From: Szczepan Białek <sz.bialek@wp.pl>
Message-ID: <h9ar6d$g2r$1@node1.news.atman.pl>
Source record: 12861

"Cecil Moore" <nospam@w5dxp.com> wrote
news:zG3um.231027$vp.207238@newsfe12.iad...
> Szczepan Biaďż˝ek wrote:
>> Could you tell us if the "almost double voltage" is the measured of
>> theoretically predicted?
>
> Since a voltage reference point is difficult to achieve
> at the ends of a dipole, we rely on the conservation of
> energy principle. Since the current is zero at the ends
> of a dipole, all the energy must be contained in the
> electric field. With that knowledge, the voltage can
> be estimated.
>
> Such is easy to understand by taking voltage measurements
> on a 1/4WL open-circuit stub. If one uses resistance wire
> for the stub, one can simulate radiation loss in a dipole.
>
> The following is a transmission line simulation of a 1/4WL
> monopole designed to run on the free demo version of EZNEC
> available from www.eznec.com
>
> http://www.w5dxp.com/stub_dip.EZ
>
> The user defined resistivity of the wire is what causes
> the 35 ohm feedpoint resistance akin to a 1/4WL monopole.
> The 10 megohm load allows us to look at the voltage
> across the "open" end of the stub. It is 1033 volts for
> a 100 watt input. We can assume the forward voltage and
> the reflected voltage at the end of the stub are equal
> at 516 volts.

The acoustic analogy predict it: "Between the nodes are places where the
amplitude is doubled. So the places
with doubled amplitude are standing. Pressure pulse travel.
In antennas is electron gas. The first place where the doubled amplitude
(amplitude means voltage or electron density) appear is end of the radials.
The next is halve wave apart from the end. Such places radiate strong
electric waves. They are the source of radiation."
S*

> --
> 73, Cecil, IEEE, OOTC, http://www.w5dxp.com

2250. Re: Standing waves

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-22 18:58:53 UTC
From: Richard Fry <rfry@adams.net>
Message-ID: <5c58a0b3-1746-421f-be39-33aa9130f49b@f10g2000vbf.googlegroups.com>
Source record: 12862

On Sep 22, Szczepan Białek <sz.bia...@wp.pl> wrote:

> But what radiate in 0.05WL dipole? There the
> "maximum radiation" is in the transmission line (1/4WL from the end).
> The feed point is also in the transmissing line.

Then later the same day he wrote:

> The feed point is the part of the transmissing line and not radiate.

Pick one of the above comments, only, Szczepan.

The feed points are terminals of the antenna. On center-fed dipoles
that are 1/2WL or less in length, antenna current is highest at those
terminals.

> How long are the folded dipoles and the
> loop antennas? Are there the short version?

They can be any length, but some lengths have better input
characteristics and/or more useful radiation patterns than others.

RF

2251. Re: high power 4:1 balun

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-22 19:04:42 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <eM6dnVKsjrxNgiTXnZ2dnUVZ_vBi4p2d@giganews.com>
Source record: 12863

Jim Lux wrote:
>
> The other factor is core saturation.. flux goes as the voltage*frequency
> ... so 10:1 VSWR means you might have 10x voltage..

At HF, the ferrites which are best to use for baluns will go up in
flames due to loss at flux densities well below saturation.

Roy Lewallen, W7EL

2252. Re: Standing waves

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-22 19:18:31 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <nq9um.68047$u76.23259@newsfe10.iad>
Source record: 12864

Szczepan Białż˝ek wrote:
> Each dipole
> antenna radiate two times the applied frequency, ...

Sorry, 2*sin(2wt) <> sin(wt)

Here's the question: Is the radiated RF wave in phase
with the standing wave current or in phase with the
standing wave voltage? The radiated RF wave cannot be
in phase with both since they are 90 degrees out of
phase on the standing wave antenna.
--
73, Cecil, IEEE, OOTC, http://www.w5dxp.com

2253. Re: Spherical radiation pattern

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-22 19:30:47 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <PB9um.68050$u76.18939@newsfe10.iad>
Source record: 12865

Szczepan Białż˝ek wrote:
> In antennas is electron gas.

Your "electron gas" is a cloud of photons emitted
by electrons. Those photons are infinitely
"compressible".

> The first place where the doubled amplitude
> (amplitude means voltage or electron density) appear is end of the radials.
> The next is halve wave apart from the end. Such places radiate strong
> electric waves. They are the source of radiation."

Again, it is impossible for the voltage maximums and
current maximums to both radiate since such would
double the radiated frequency which it doesn't. We
usually transmit and receive on the same frequency.

You must decide whether the peak radiation comes
from the current maximum or the voltage maximum since
they do not occur at the same time. Until you make
that choice, rational discussion is not possible.
--
73, Cecil, IEEE, OOTC, http://www.w5dxp.com

2254. 80 / 160 mt

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-22 19:55:23 UTC
From: Steve <Steve@altrochenospam.com>
Message-ID: <4ab92bab$0$830$4fafbaef@reader5.news.tin.it>
Source record: 12866

I am speachless ...! http://www.youtube.com/watch?v=gEKLVgU1B50

2255. Re: Standing waves

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-22 20:24:17 UTC
From: Art Unwin <arthurunwin@gmail.com>
Message-ID: <9eaf5504-1d95-48b7-aff8-7e1070fe59a2@f33g2000vbm.googlegroups.com>
Source record: 12867

On Sep 22, 6:51 am, "christofire" <christof...@btinternet.com> wrote:
> "Art Unwin" <arthurun...@gmail.com> wrote in message
>
> news:dfa7677b-17ad-4733-b2f1-cae8c34f41cf@b18g2000vbl.googlegroups.com...
> On Sep 21, 7:33 pm, "christofire" <christof...@btinternet.com> wrote:
>
>
>
> > "Art Unwin" <arthurun...@gmail.com> wrote in message
>
> >news:281450d6-0f9c-4ff9-9dca-532b9eee8626@d21g2000vbm.googlegroups.com...
> > On Sep 21, 4:19 pm, "christofire" <christof...@btinternet.com> wrote:
>
> > > "Art Unwin" <arthurun...@gmail.com> wrote in message
>
> > - - snip - -
>
> > Chris you are being stupid as well as acting as a fool.
> > Acceleration of the particle only occurs while within the
> > electrostatic field. When it exits it has the speed of light because
> > it has emmerged from the intersecting two fields.and thus from the
> > accellerating forces. I remind you of Newtons law of ut + 1/2 ft sqd
> > The first expression is for the speed attained on entering the
> > accelerating field and the other half is for the length of the
> > accelerating electrostatic field. On leaving the two fields it looses
> > the applied accelerating force where it has arrived at a particular
> > speed.Maybe you should look up the workings of a CRT using Newtons
> > laws instead of shooting from the hip.
> > It was at a different time that the speed of light was measured where
> > it was found to equal the sppeed emerging from two intersecting fields.
>
> > * Actually, I'm well aware of the principle involved in accelerating
> > electrons in an electron gun as used in CRTs, klystrons, TWTs, and so on,
> > by
> > subjecting an electron cloud to a potential difference using an anode with
> > a
> > hole in it (!), but that's different from what happens in an antenna.
>
> > The acceleration of charge in an antenna results almost entirely from the
> > applied potential difference at its terminals. The radiated fields result
> > from the alternating current effectively passing through the radiation
> > resistance, and all the other, reactive, fields have no direct effect on
> > the
> > radiation resistance, or the component of the current that passes through

> > it
> > in phase with the voltage that is developed across it, which together, of
> > course, represent the radiated power. The reactive fields affect the
> > terminal impedance and a large imaginary part can upset the device trying
> > to
> > send power into the antenna, but that is more of a system issue. The
> > alternating current that passes through the radiation resistance is
> > composed
> > of charge that moves in time with each RF cycle, accelerating and
> > decelerating accordingly. The electrostatic field developed between the
> > ends of a half-wave dipole reaches its maximum value a quarter of a cycle
> > later than the voltage at the drive point so any effect it has on the
> > charge
> > in the antenna elements during each cycle must be reactive, and it doesn't
> > affect the radiation resistance or the radiated wave.
>
> > But all this can be looked up from any one of the respected books on
> > antennas. Krauss, and others, gives expressions for the different field
> > components and the theory all hangs together quite readily using Maxwell's
> > equations without modification.
>
> > I don't care if you think me stupid, and I'll continue to try to avoid
> > name
> > calling of individuals, although I may criticise what they write
> > especially
> > if it appears ignorant of proper science yet attempts to re-write
> > established theory, and therefore appears arrogant.
>
> > Chris
>
> No it does not appear in Kraus book.
>
> * That is incorrect, and I expect you know that to be the case. All of what
> I wrote above can be traced to sources such as Kraus, Jordan and Balmain,
> and Jasik; books you may never have tried to read and understand (on the
> basis of your comment).
>
> He never followed Maxwells laws
> with respect to equilibrium.
>
> * Define 'equilibrium' in trems of normal physics and cite a reference.
Surprised you dont know that!
Easily done. Boundary laws are based on Newtons laws where every
action has an equal and opposite reaction. So a subject under
discussion is placed inside an arbitrary border
where the forces of the contents must be equal to the sum of the
forces outside the boundary. Where does Krauss deviate from from
Maxwells laws? well for one thing his radiator differed from a full
WL or period so immediately he has strayed. Another thing is by
straying from a full WL he was unable to contain the electrostatic

field within a border
such as a quad. And it goes on especially with regards to his windings
pitch theory.
Thus the contents of the arbitrary boundary is now in a state of
equilibrium. this is true whether a unit of time has been added or not
to the equation.

>
> To do that you must think in terms of
> wavelength. After all with respect to science all revolve around
> boundary laws of the Universe and you blindly ignore that fact.
>
> * How is there a boundary to the universe? It is unbounded - the universe
> is known to be expanding into empty space.

Hogwash. Nobody knows the extent of the Universe boundary. Every day
discoveries are made beyond our Universe so we are nowhere near the
point we can ascertain what forces
are required to contain a boundary.
Again I am surprised you didn't know that!

>
> Now back to radiation which applies spin to a p.
>
> * No it doesn't - cite a reference.

Well look at how salvage yards sort out metals into different
enclosures.
They apply a displacement current to a conveyor where each piece of
metal is elevated with spin such that it lands in the appropriate
enclosure which is dependent on the resistivity of the metal elevated.
This method of elevating scrap for recovery has been used for years
and it is the same action that is applied to particles for radiation.
Why would you need a citation for a practice that is well known and in
use? On top of that a citation is only an instrument to poin out who
and where the statement was made. This has its use for those who
easily believe what they see in print and thus save them from effort.

>
> Nowarticle where as
> with a crt no spin is applied as it is heat that separates the resting
> particle
>
> * ... separates it from what?

Now you are being silly. first the particle was resting. Then heat was
applied to its butt.
Now think about it. What fields are in place to take control of the
free particle that now has a increase in its potential energy?

>
> Now earlier you refered to a electrostatic field that

> according to what you stated did not have a border and surely you know
> that just can't be unless it is in equilibrium which requires a closed
> circuit.
>
> * Fields in unbounded space tend to be unbounded. The fields around a
> dipole are bounded by the surface of the dipole, which is the boundary
> condition used by NEC, and usually in practice by the earth.

Tend, tend. You mean you don't know? NEC is per the laws of Maxwell.
Equilibrium is a must as is the encirclement of a electrostatic field
just like a quad or loop antenna. Since the programmer did not follow
Maxwell in its entirety and frankly did many modifications such that
it would solve planar radiators, who knows what license the
programmers took to get the job done where it could foolmost of the
people most of the time?

>
> For this to come to fruition you go back to the boundary laws where
> the arbitrary border is one that is closed i.e. in equilibrium.
>
> * Define 'equilibrium' in terms of normal physics and cite a reference.
Hmm I thought I had done that before!

>
> Now
> cast your mind back to the Gauss extension where radiators and
> particles lie in a closed static field. Now you should see that
> equilibrium must reign for a closed static field. Now you blithely
> mentioned an electrostatic field with nary a mention as to how it is
> formed and how it fits into the whole picture.
>
> * Recent discussion has been about the electric field produced by the
> voltage that appears between the ends of a dipole - that's what I was
> writing about, and so were you. How can you state 'with nary a mention as
> to how it is formed'?

I have concentrated on radiator that were in equilibrium and of a
closed circuit called a tank circuit
. You are mixing things up. I explained for somebody else what a
charge does for a radiator that is NOT in equilibrium because others
were unable to describe it adequately.

> Why? Because the books do not provide an unbroken trail that fully
> describes radiation
> (books admit that) as I have done where everything dove tails into
> the existing laws of the Universe.

> * Kraus provides a trail that's as unbroken as can be comprehended by most
> engineers. Physicists may wish to take it further but there's no evidence
> of physicists in this newsgroup.

No Krauss did no such thing. He expanded a yagi style radiator where
the elements ere made of loops. All he did was to connect them into a
continuous conductor. When experimenting with this he saw evidence
that field did not follow the axis of the windings
(rotation of the earth again) so he adjusted the pitch of the
windings to obtain a satisfactory pattern. He did not improve on the
existing knowledge of radiators as his radiators were not in
equilibrium and thus strayed from Maxwell.

>
> And then I gave you a bonus with
> respect to the weak field that Einstein searched for in vain. Einstein
> looked at the package presented by the Big Bag but omitted to keep
> that which it was wrapped into.
>
> * Is the universe enclosed in a Big Bag?

If you wish to put it into a three dimensional border be my guest. It
would be interesting to know what your starting point is bearing in
mind your position of a huge surrounding void.

>
> That was the arbitrary boundary around
> which were forces or vectors that were equal and opposite when a
> smallest of smallest of particles edged out towards the border. Yes it
> was of a weak force but for all of that it broke the equilibrium
> boundary as the forces at that point was not now equal. The breakage
> was one where the opposing forces were offset to each other thus
> providing a torque force that provided spin. Now we come to our own
> Earth encased in a arbitrary border and outside the border we have the
> same conditions of equilibrium that must equal the forces of the Big
> Bang which means the outside has two vectors, gravity vector which is
> straight and a vector denoting spin i.e. rotation of the Earth. On the
> other side of the border you again have two vectors a straight vector
> and that curly one you don't like me to call eddy current.
>
> * Call it what you wish. Capitalising the word within a sentence, as you
> did before, is usually reserved for phenomena named after the people who
> discovered them - but that's an engineer thing.

Big deal

>
> Yup. Everything falls together nicely thank you, when you study
> radiation from first principles instead of binding yourself to books
> that readily admit to not understanding the radiation process.
>
> * If you believe so fervently in your own version of all this then why don't
> you submit it to peer review at sci.physics or sci.physics.research? It's
> rather unfair to expose this only to an amateur radio newsgroup when what
> you are doing is apparently re-writing physics in such a major way. Those
> newsgroups would be more appropriate, considering the depth to which you are
> going (i.e. well beyond amateur radio) - wouldn't you agree.

Not really, espeilly if the groups has the same stature as this one.

>
> Now

> this is not being arrogant when one has applied all principles
>
> * My dictionary defines 'arrogant' as: 'having or showing an exaggerated
> opinion of one's own importance , merit, ability, etc.' from the Latin
> 'arrogare': 'to claim as one's own'. Your re-writing of physics conforms to
> this definition precisely.

So it is arrogant to do things for your self from first principles to
confirm whether printed matter is correct or not? Why would anybody
broaden the outlook of others work without determining that its
foundations was of rock or sand? Trust but verify seems very apt here.

>
> but I
> do think it is arrogant of you and others to asasinate the character
> of "S" purely because of his english and spelling and not to help one
> that wants to learn.
>
> * He is showing no inclination of wanting to learn - he asks a question, and
> then when answered responds with non-physical contradiction. His treatement
> here is a direct consequence of that behaviour, like yours.

Could be but he is not alone. He is surrounded by pseudo experts in
all fields who can prove nothing for themselves and relying on the
printed matter of others. Might just as well close the doors of a
library for a year to determine which book came out on top. Why on
earth would somebody turn him away from hydrolics when it like
electric current has laminar flow

>
> Just think about it all. I have shown how a particle moves in space in
> a straight line trajectory such that the particle maintains a straight
> line without the parabolic force of gravity driving it down to the
> Earth. Go back to your books and show just how the electrostatic field
> came about and what was the borders that it was contained in
> Art
> via applied spin and where gravity
>
> * As I say, you should present your theory to sci.physics and
> sci.physics.research if you have any interest in checking whether it is
> correct, and not limit its exposure to this group. Do let us know when you
> have posted there.

No, that is not the choice I have made. I decided to merge a paper
aproach with that of a patent request . You have read one patent
request and you have to wait for the PTO to print out the concluding
application. I am sharing it with industry and not the boneheads
who bunch themselves into secret rooms away from those outside who

cannot possibly provide anything of interest. They have the common
interest that if it doesn't come from them.....!!!!!! Pretty much
the same as this group. We shall see
Art

>
> Chris

2256. Re: Standing waves

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-22 20:29:15 UTC
From: Mike Coslo <mjc5@psu.edu>
Message-ID: <h9bc2p$703c$1@tr22n12.aset.psu.edu>
Source record: 12868

Richard Clark wrote:
> On Tue, 22 Sep 2009 10:48:43 +0200, Szczepan Bia?ek <sz.bialek@wp.pl>
> wrote with abysmal quoting:
>
>> It will not be easy to work out here all details.
>> S*
>>
>>
>> Regards
>> Art
>
> You guys need to get a room.

I think that might already be the case.

- 73 de Mike N3LI -

2257. Re: high power 4:1 balun

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-22 20:35:24 UTC
From: Owen Duffy <none@no.where>
Message-ID: <Xns9C8F4309F8307nonenowhere@61.9.191.5>
Source record: 12869

"Karl Beckman" <Karl.Beckman@motorola.com> wrote in
news:h98r6b$ab0$1@engnntp2.cig.mot.com:

> First thing to remember is a really radical thought: The power rating
> of a voltage balun has to be decreased by the highest SWR factor
> existing on the line. That is, a 2 kW rated (at 1:1) balun is only
> good for 1 kW at 2:1 VSWR or 200 watts if your wattmeter shows a 10:1
> VSWR looking at the antenna. The reason is that the current (heating)
> losses in the windings go up as the square of the maximum current -
> remember hearing about "I squared R". A 4:1 VSWR means the current
> max value is twice the minimum, therefore you'll be heating up the
> core four times as much as if you had a 1:! VSWR on the line. It
> doesn't matter whether the line is unbalanced coaxial or balanced open
> wire.

My comments are addressed to so called voltage baluns. The above
explanation and my comments are not applicable to current baluns.

Your explanation of your Rule of Thumb is valid if the balun is located
at an impedance minimum for the stated VSWR. The explanation does not
apply at all in the opposite case, and to a lesser extent in all other
cases.

In many cases where the balun overheats, it is operating at an extremely
high current, and I^2R losses are not main contribution to heating.

>
> In your case the ratio of rated power divided by working power is
> 1.25, so the maximum VSWR tolerable before you exceed the dissipation
> rating of the balun is only 1.25. Or working the other direction, to
> always stay cool you need to find a balun rated for (1200) x (VSWRmax)
> watts.

Which also assumes that the balun was properly rated for the 1200W.

>
> The input reactance of the Windom changes as you change the driving
> frequency (and band), therefore the VSWR on the feedline does also.
> The balun may stay reasonably cool on a few frequencies, but will be
> flaming hot on most others.
>

The core material may only need to reach temperatures towards 200°C to
compromise the balun, the Curie point of some ferrites in use is lower
than 200°C. Thing is that the ferrite heats very slowly, and a 5 minute
test is not likely to raise the temperature to anywhere near the long
term temperature. That is good for us for many modes as they have high

peak to average ratio, but for the low peak to average modes / high duty cycle modes, the balun core may increase in temperature significantly for an hour.

The key thing is that assuming balun efficiency is very high is quite wrong, and when you start to think about balun efficiencies being below 50% under some extreme conditions, you realise the challenge in 5kW rated devices that are in small boxes and must not reach 200°C.

Owen

2258. Re: Standing waves

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-22 21:24:08 UTC
From: Art Unwin <arthurunwin@gmail.com>
Message-ID: <09f52243-4074-463f-b34f-52ac07e66e69@o36g2000vbl.googlegroups.com>
Source record: 12870

On Sep 22, 3:29 pm, Mike Coslo <m...@psu.edu> wrote:
> Richard Clark wrote:
> > On Tue, 22 Sep 2009 10:48:43 +0200, Szczepan Bia?ek <sz.bia...@wp.pl>
> > wrote with abysmal quoting:
>
> >> It will not be easy to work out here all details.
> >> S*
>
> >> Regards
> >> Art
>
> > You guys need to get a room.
>
> I think that might already be the case.
>
>   - 73 de Mike N3LI -

Mike I am certainly not wired the same as Clark as I'm married and
have great grand children. It maybe normal for him to go into a room
with a man but why would he paint such a picture of "S" to infer that
he is as sick as him? I like women like any other real man
and certainly do not condone the practices that Clark and possibly you
would aproove of
with respect to males or airport bathroom manners

2259. Re: high power 4:1 balun

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-22 21:44:39 UTC
From: Jim Lux <james.p.lux@jpl.nasa.gov>
Message-ID: <h9bgg6$21s$1@news.jpl.nasa.gov>
Source record: 12872

Roy Lewallen wrote:
> Jim Lux wrote:
>>
>> The other factor is core saturation.. flux goes as the
>> voltage*frequency ... so 10:1 VSWR means you might have 10x voltage..
>
> At HF, the ferrites which are best to use for baluns will go up in
> flames due to loss at flux densities well below saturation.
>
> Roy Lewallen, W7EL

Well then, same general idea.. lots of volts = lots of flux = lots of dissipated energy from the core loss...

And, of course, not all baluns are made with appropriate materials (e.g. using a lossy EMI suppression mix might be fine in a "choke" application, where high Z is keeping the current low.. but terrible in a transformer type situation, where you have a lot of flux in the core)

2260. Re: Standing waves

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-22 21:46:21 UTC
From: Richard Fry <rfry@adams.net>
Message-ID: <7c13262e-ed2c-44bd-bd22-05c16163e0cf@e18g2000vbe.googlegroups.com>
Source record: 12871

On Sep 22, 1:44 pm, Szczepan Białek <sz.bia...@wp.pl> wrote:
> > If what you are saying were really happening,
> > an antenna would radiate two times the applied frequency,
> > but it obviously doesn't.
>
> We do not have the both. But we have the Luxembourg effect. Each dipole
> antena radiate two times the applied frequency, The pulses from the ends
> are 180 degrees apart.

So then, Szczepan, should transmissions using such antennas, and
expecting to be received on frequency "X" transmit on frequency "X" /
2 ? Note that such is not the reality.

Some low-level radiation from the transmit antenna may exist at twice
the carrier frequency, but in almost all cases it arises from
insufficient suppression of the 2nd harmonic of, and in the
transmitter.

And in NO case is it produced as you describe above.

RF

2261. Re: high power 4:1 balun

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-22 22:17:11 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <auiib5dfmn8khhok1ii5l2a8l02d264t8f@4ax.com>
Source record: 12873

On Tue, 22 Sep 2009 14:44:39 -0700, Jim Lux <james.p.lux@jpl.nasa.gov>
wrote:

>And, of course, not all baluns are made with appropriate materials (e.g.
>using a lossy EMI suppression mix might be fine in a "choke"
>application, where high Z is keeping the current low.. but terrible in a
>transformer type situation, where you have a lot of flux in the core)

Hi Jim,

A BalUn IS a transformer, and many of the lowest loss, widest
bandwidth ones are specifically designed to choke common mode
currents.

Such BalUns are NOT flux linked transformers and thus avoid working
(transverse) currents inducing loss and saturation issues.

It appears that the inference from your flux transformer terminology
>transformer type situation, where you have a lot of flux in the core)
is at cross purposes with BalUn best design.

73's
Richard Clark, KB7QHC

2262. Re: high power 4:1 balun

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-22 22:23:45 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <HrqdnZjRf4zl0yTXnZ2dnUVZ_qudnZ2d@giganews.com>
Source record: 12874

Jim Lux wrote:
> Roy Lewallen wrote:
>> Jim Lux wrote:
>>>
>>> The other factor is core saturation.. flux goes as the
>>> voltage*frequency ... so 10:1 VSWR means you might have 10x voltage..
>>
>> At HF, the ferrites which are best to use for baluns will go up in
>> flames due to loss at flux densities well below saturation.
>>
>> Roy Lewallen, W7EL
>
>
> Well then, same general idea.. lots of volts = lots of flux = lots of
> dissipated energy from the core loss...

Not exactly. The dominant loss mechanisms in "low frequency" ferrites
are essentially linear, and don't cause distortion. Saturation occurs
during a portion of each cycle, resulting in distortion. And saturation
doesn't always imply high loss.

> And, of course, not all baluns are made with appropriate materials (e.g.
> using a lossy EMI suppression mix might be fine in a "choke"
> application, where high Z is keeping the current low.. but terrible in a
> transformer type situation, where you have a lot of flux in the core)

A properly designed transformer has very little flux in the core -- the
flux is the vector sum of the flux in all the windings, which in an
ideal transformer is zero. The flux you do have is the magnetizing flux
due to the finite impedances of the windings, which you strive to
maximize just as you do in a choke (and the leakage flux which isn't
coupled from one winding to the others). So the best core material is
generally the same for a broadband choke as it is for a broadband
transformer. EMI suppression materials are very good for both, since
they're engineered to maximize impedance. An exception is where you're
dealing with enough power that the core loss is intolerable. For
example, a well designed choke or transformer might have only 0.5 dB
loss, a generally insignificant amount. But if you apply a kW to it,
you're talking about 120 watts of power dissipation, too much for a
small core. In those cases you have to use lower loss material, which
usually means lower impedance windings and consequent higher flux density.

Roy Lewallen, W7EL

2263. Re: Standing waves

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-22 22:30:39 UTC
From: Registered User <n4jvp@ix.netcom.com>
Message-ID: <1uiib51o2aqb080cp47400t7h8tmarovfm@4ax.com>
Source record: 12875

On Tue, 22 Sep 2009 13:24:17 -0700 (PDT), Art Unwin
<arthurunwin@gmail.com> wrote:

>
>Well look at how salvage yards sort out metals into different
>enclosures.
>They apply a displacement current to a conveyor where each piece of
>metal is elevated with spin such that it lands in the appropriate
>enclosure which is dependent on the resistivity of the metal elevated.
This isn't exactly how such systems work. Abstractly the system is a
metal detector and a sorting table hanging off a CAN. A controller at
the other end of the CAN 'reads' the discriminator and 'writes' to the
sorter. The writes open and close ejector nozzles. These are the magic
devices that cause the material to 'elevate with spin'.

>This method of elevating scrap for recovery has been used for years
>and it is the same action that is applied to particles for radiation.
>Why would you need a citation for a practice that is well known and in
>use?
Because you might be wishing your agenda into how you propose things
work. Who'da thunk that!

2264. Re: Standing waves

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-22 23:15:52 UTC
From: christofire <christofire@btinternet.com>
Message-ID: <qpqdnbdu0dAwxyTXnZ2dnUVZ8v-dnZ2d@bt.com>
Source record: 12876

"Richard Clark" <kb7qhc@comcast.net> wrote in message
news:v44ib5dm14lno81rg16m51ajc95t8qcgi9@4ax.com...
> On Tue, 22 Sep 2009 12:51:44 +0100, "christofire"
> <christofire@btinternet.com> wrote:
>
>>Chris
>
> Could you turn your newsreader's quoting mechanism back on? It is
> very confusing to have to fumble with Art's babbling interleaved with
> your "special" editorial marks.
>
> 73's
> Richard Clark, KB7QHC

Richard,

It's not something I have control over using Outlook Express, and it has been commented upon by others before. Whether OE maintains the '>'s before lines of quoted text seems to depend on something in the text I'm quoting. I gather it is a known issue, and it's the reason why I sometimes use a '*' before the first line of new paragraphs of my response. I have been told I should ditch OE but I don't want to use webmail; I could use Agent but I haven't so far.

Chris

2265. Aluminum as a ground system

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-22 23:19:40 UTC
From: Ed <Huckleberry_REMOVE_@bigvalley.net>
Message-ID: <Xns9C8EA619A693BHuckleberrybigvalley@198.186.192.196>
Source record: 12877

A new commercial radio hilltop vault is being installed in my area....
and the contractor has installed the tower and vault ground ring with
aluminum wire/cable, I have been advised. I do NOT know the gauge of
the wire, but I am curious what your thoughts are on this issue. I have
been involved the past 35 years of my career in a number of ground
installations and every one of those used large copper cable... no
aluminum anywhere. The last of these I saw was 6 or 7 years ago.

QUESTION: Are aluminum ground systems becoming common? Are they
reliable, even after absorbing some heavy strikes? Any other comments?

Ed K7AAT on the Oregon Coast

.

.

2266. Re: Standing waves

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-22 23:24:50 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <OOudnTojGPtVwSTXnZ2dnUVZ_t-dnZ2d@giganews.com>
Source record: 12878

christofire wrote:
>
> Richard,
>
> It's not something I have control over using Outlook Express, and it has
> been commented upon by others before. Whether OE maintains the '>'s before
> lines of quoted text seems to depend on something in the text I'm quoting.
> I gather it is a known issue, and it's the reason why I sometimes use a '*'
> before the first line of new paragraphs of my response. I have been told I
> should ditch OE but I don't want to use webmail; I could use Agent but I
> haven't so far.
>
> Chris

I highly recommend Mozilla Thunderbird.

Roy Lewallen, W7EL

2267. Re: Standing waves

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-22 23:28:31 UTC
From: christofire <christofire@btinternet.com>
Message-ID: <XaadnfZsY-o5wCTXnZ2dnUVZ8k2dnZ2d@bt.com>
Source record: 12879

"Art Unwin" <arthurunwin@gmail.com> wrote in message
news:9eaf5504-1d95-48b7-aff8-7e1070fe59a2@f33g2000vbm.googlegroups.com...
On Sep 22, 6:51 am, "christofire" <christof...@btinternet.com> wrote:
> "Art Unwin" <arthurun...@gmail.com> wrote in message

- - snip - -

> * As I say, you should present your theory to sci.physics and
> sci.physics.research if you have any interest in checking whether it is
> correct, and not limit its exposure to this group. Do let us know when you
> have posted there.

No, that is not the choice I have made. I decided to merge a paper
aproach with that of a patent request . You have read one patent
request and you have to wait for the PTO to print out the concluding
application. I am sharing it with industry and not the boneheads
who bunch themselves into secret rooms away from those outside who
cannot possibly provide anything of interest. They have the common
interest that if it doesn't come from them.....!!!!!! Pretty much
the same as this group. We shall see
Art

* OK, at an appropriate juncture I'll invite some of them to come over and
take a look at what you write here (crossposting would probably be frowned
upon). It might be enlightening to receive the views of some physicists.

Chris

2268. Re: Aluminum as a ground system

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-22 23:33:02 UTC
From: christofire <christofire@btinternet.com>
Message-ID: <h7adndMBNfgvwyTXnZ2dnUVZ8g2dnZ2d@bt.com>
Source record: 12880

"Ed" <Huckleberry_REMOVE_@bigvalley.net> wrote in message
news:Xns9C8EA619A693BHuckleberrybigvalley@198.186.192.196...
>
> A new commercial radio hilltop vault is being installed in my area....
> and the contractor has installed the tower and vault ground ring with
> aluminum wire/cable, I have been advised. I do NOT know the gauge of
> the wire, but I am curious what your thoughts are on this issue. I have
> been involved the past 35 years of my career in a number of ground
> installations and every one of those used large copper cable... no
> aluminum anywhere. The last of these I saw was 6 or 7 years ago.
>
> QUESTION: Are aluminum ground systems becoming common? Are they
> reliable, even after absorbing some heavy strikes? Any other comments?
>
> Ed K7AAT on the Oregon Coast

Isn't aluminium in the presence of air naturally coated with a thin layer of
aluminium oxide which doesn't conduct? In which case aluminium might be
fine for lightning conductors but hopeless for RF. What will the tower
carry? ... if it's all VHF and upwards then there's probably no problem.

Chris

2269. Re: Aluminum as a ground system

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-22 23:35:18 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <a76dnbuM0d6gwiTXnZ2dnUVZ_qudnZ2d@giganews.com>
Source record: 12881

Ed wrote:
> A new commercial radio hilltop vault is being installed in my area....
> and the contractor has installed the tower and vault ground ring with
> aluminum wire/cable, I have been advised. I do NOT know the gauge of
> the wire, but I am curious what your thoughts are on this issue. I have
> been involved the past 35 years of my career in a number of ground
> installations and every one of those used large copper cable... no
> aluminum anywhere. The last of these I saw was 6 or 7 years ago.
>
> QUESTION: Are aluminum ground systems becoming common? Are they
> reliable, even after absorbing some heavy strikes? Any other comments?
>
> Ed K7AAT on the Oregon Coast

My only experience with an aluminum wire ground system was one I laid many years ago in Denver, with buried aluminum radials. It was pretty badly corroded in a few years. But the soil there is alkali, not like the acid soil you have on the coast. Interestingly, aluminum corrosion is minimum at a pH of about 5.5 (see http://www.tpub.com/content/doe/h1015v1/css/h1015v1_121.htm), which is likely roughly what your soil is. So while there might be a lot of places where corrosion would be a problem your location might be one of those where it wouldn't.

Roy Lewallen, W7EL

2270. Re: Standing waves

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-22 23:48:18 UTC
From: Art Unwin <arthurunwin@gmail.com>
Message-ID: <32df18f2-006d-4ade-b1d8-97b80bf8e2bc@p9g2000vbl.googlegroups.com>
Source record: 12882

On Sep 22, 6:28 pm, "christofire" <christof...@btinternet.com> wrote:
> "Art Unwin" <arthurun...@gmail.com> wrote in message
>
> news:9eaf5504-1d95-48b7-aff8-7e1070fe59a2@f33g2000vbm.googlegroups.com...
> On Sep 22, 6:51 am, "christofire" <christof...@btinternet.com> wrote:
>
> > "Art Unwin" <arthurun...@gmail.com> wrote in message
>
> - - snip - -
>
> > * As I say, you should present your theory to sci.physics and
> > sci.physics.research if you have any interest in checking whether it is
> > correct, and not limit its exposure to this group. Do let us know when you
> > have posted there.
>
> No, that is not the choice I have made. I decided to merge a paper
> aproach with that of a patent request . You have read one patent
> request and you have to wait for the PTO to print out the concluding
> application. I am sharing it with industry and not the boneheads
> who bunch themselves into secret rooms away from those outside who
> cannot possibly provide anything of interest. They have the common
> interest that if it doesn't come from them.....!!!!!! Pretty much
> the same as this group. We shall see
> Art
>
> * OK, at an appropriate juncture I'll invite some of them to come over and
> take a look at what you write here (crossposting would probably be frowned
> upon). It might be enlightening to receive the views of some physicists.
>
> Chris

If you know of any I would welcome their views. There are many retired
educated people in this world today that turn to that which they had
an interest with when young. Now it is difficult to get up to speed in
different sciences because various journals get the rights of various
papers from Universities e.t.c which are then denied to libraries and
the public.
This is a resource the country should assist because its costs are low
and where all have
large experience obtained thru their working years. Imagine
professionals who when retired
have twenty or more years of experience be allowed to follow and
contribute in areas where an interest has laid dormant for so long.
Today's efforts are applied to computers where data comes out in

bundles which have to be sorted to determine if anything good is being offered by using a mish mash of arithmetic formulae that are merged with similar formulae from different functions. Sad, sad, sad.

2271. Re: Standing waves

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-22 23:54:37 UTC
From: tom <news4792@taring.org>
Message-ID: <4ab9641e$0$42848$8046368a@newsreader.iphouse.net>
Source record: 12883

Roy Lewallen wrote:
> christofire wrote:
>>
>> Richard,
>>
>> It's not something I have control over using Outlook Express, and it
>> has been commented upon by others before. Whether OE maintains the
>> '>'s before lines of quoted text seems to depend on something in the
>> text I'm quoting. I gather it is a known issue, and it's the reason
>> why I sometimes use a '*' before the first line of new paragraphs of
>> my response. I have been told I should ditch OE but I don't want to
>> use webmail; I could use Agent but I haven't so far.
>>
>> Chris
>
> I highly recommend Mozilla Thunderbird.
>
> Roy Lewallen, W7EL

I second that recommendation.

tom
K0TAR

2272. Re: Standing waves

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-22 23:58:10 UTC
From: christofire <christofire@btinternet.com>
Message-ID: <h4qdnXsW9ZMK-STXnZ2dnUVZ8sqdnZ2d@bt.com>
Source record: 12884

"Art Unwin" <arthurunwin@gmail.com> wrote in message
news:32df18f2-006d-4ade-b1d8-97b80bf8e2bc@p9g2000vbl.googlegroups.com...
On Sep 22, 6:28 pm, "christofire" <christof...@btinternet.com> wrote:
> "Art Unwin" <arthurun...@gmail.com> wrote in message
>
> news:9eaf5504-1d95-48b7-aff8-7e1070fe59a2@f33g2000vbm.googlegroups.com...
> On Sep 22, 6:51 am, "christofire" <christof...@btinternet.com> wrote:
>
> > "Art Unwin" <arthurun...@gmail.com> wrote in message
>
> - - snip - -
>
> > * As I say, you should present your theory to sci.physics and
> > sci.physics.research if you have any interest in checking whether it is
> > correct, and not limit its exposure to this group. Do let us know when
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> > have posted there.
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> No, that is not the choice I have made. I decided to merge a paper
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> request and you have to wait for the PTO to print out the concluding
> application. I am sharing it with industry and not the boneheads
> who bunch themselves into secret rooms away from those outside who
> cannot possibly provide anything of interest. They have the common
> interest that if it doesn't come from them.....!!!!!! Pretty much
> the same as this group. We shall see
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>
> * OK, at an appropriate juncture I'll invite some of them to come over and
> take a look at what you write here (crossposting would probably be frowned
> upon). It might be enlightening to receive the views of some physicists.
>
> Chris

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educated people in this world today that turn to that which they had
an interest with when young. Now it is difficult to get up to speed in
different sciences because various journals get the rights of various
papers from Universities e.t.c which are then denied to libraries and
the public.
This is a resource the country should assist because its costs are low
and where all have
large experience obtained thru their working years. Imagine
professionals who when retired

have twenty or more years of experience be allowed to follow and contribute in areas where an interest has laid dormant for so long. Today's efforts are applied to computers where data comes out in bundles which have to be sorted to determine if anything good is being offered by using a mish mash of arithmetic formulae that are merged with similar formulae from different functions. Sad, sad, sad.

* It's true that a lot of effort is put into the areas that yield the greatest profit, and computing in one form or another does seem to have a grip at the moment. However, it is enlightening to take a look from time to time at news groups like the two I named to see the sorts of things they are discussing, and the _unbounded_ nature of the universe (which is what I wrote) is one of them. They too appear to have input from ex-professionals.

Have you ever tried to obtain access to a technical library in a university or one of the engineering institutions? You might be surprised how easy or inexpensive it turns out to be. As a member of the general public I have access to the IET library in London to read as much as I wish, and to photocopy.

Chris

2273. Re: Standing waves

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-22 23:59:19 UTC
From: Art Unwin <arthurunwin@gmail.com>
Message-ID: <32f5baf1-9f1d-4536-823a-d97a75abf0af@q14g2000vbi.googlegroups.com>
Source record: 12885

On Sep 22, 5:30 pm, Registered User <n4...@ix.netcom.com> wrote:
> On Tue, 22 Sep 2009 13:24:17 -0700 (PDT), Art Unwin
>
> <arthurun...@gmail.com> wrote:
>
> >Well look at how salvage yards sort out metals into different
> >enclosures.
> >They apply a displacement current to a conveyor where each piece of
> >metal is elevated with spin such that it lands in the appropriate
> >enclosure which is dependent on the resistivity of the metal elevated.
>
> This isn't exactly how such systems work. Abstractly the system is a
> metal detector and a sorting table hanging off a CAN. A controller at
> the other end of the CAN 'reads' the discriminator and 'writes' to the
> sorter. The writes open and close ejector nozzles. These are the magic
> devices that cause the material to 'elevate with spin'.
>
> >This method of elevating scrap for recovery has been used for years
> >and it is the same action that is applied to particles for radiation.
> >Why would you need a citation for a practice that is well known and in
> >use?
>
> Because you might be wishing your agenda into how you propose things
> work. Who'da thunk that!

Interesting. Can you point to an article or something on the web that
describes what you
say. For myself I have only run into articles by special purpose
machine manufacturers
who deal with sorting machines for scrap yards which deals with many
materials including plastics , glass etc as well as different metallic
materials. This sorting aproach that you mention sounds rather
interesting if they are relying on magic or voodoo!

2274. Re: Standing waves

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-23 00:26:01 UTC
From: Richard Fry <rfry@adams.net>
Message-ID: <3a84dc10-8135-4635-bc0e-097c81383163@33g2000vbe.googlegroups.com>
Source record: 12886

On Sep 22, 6:48 pm, Art Unwin <arthurun...@gmail.com> wrote
after major clippage:
> Today's efforts are applied to computers where data comes out in
> bundles which have to be sorted to determine if anything good is being
> offered by using a mish mash of arithmetic formulae that are merged
> with similar formulae from different functions. Sad, sad, sad.

However as far as NEC is concerned, your sad-sad-sadness applies only
to those (possibly even yourself) using computer software without
sufficient understanding of how it should be used, and applied.

Note that the U.S. FCC has endorsed the use of NEC in the licensing
process of many types of directional MW broadcast arrays -- given that
such NEC analysis was performed by someone with provable and
acceptable competence.

RF

2275. Re: Spherical radiation pattern

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-23 01:08:56 UTC
From: Dave <noone@nowhere.com>
Message-ID: <lyeum.3078$Jd7.1105@nwrddc02.gnilink.net>
Source record: 12887

```
"Szczepan Bialek" <sz.bialek@wp.pl> wrote in message
news:h99o7g$9mi$1@node1.news.atman.pl...
>
> "Richard Harrison" <richardharrison@webtv.net> wrote
> news:20335-4AB3EBEA-1942@storefull-3172.bay.webtv.net...
>> Cecil, W5DXP wrote:
>> "The forwerd and the reflected current sre in phase at the feedpoint and
>> thus radiation is maximum at that maximum current point."
>>
>> Exactly. The reflected current has made s round trip of 180 degrees plus
>> the reflection has added another 180 degrees for a total of 360 degrees
>> or back in phase with the forward current at the feedpoint.
>>
>> At the open circuited ends of a resonant antenna there is almost double
>> the forward voltage
>
> Could you tell us if the "almost double voltage" is the measured of
> theoretically predicted?

both
```

2276. Re: Spherical radiation pattern

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-23 01:11:30 UTC
From: Dave <noone@nowhere.com>
Message-ID: <6Beum.3080$Jd7.220@nwrddc02.gnilink.net>
Source record: 12888

"Szczepan Bialek" <sz.bialek@wp.pl> wrote in message
news:h9ar6d$g2r$1@node1.news.atman.pl...
>
> "Cecil Moore" <nospam@w5dxp.com> wrote
> news:zG3um.231027$vp.207238@newsfe12.iad...
>> Szczepan Biaï¿½ek wrote:
>>> Could you tell us if the "almost double voltage" is the measured of
>>> theoretically predicted?
>>
>> Since a voltage reference point is difficult to achieve
>> at the ends of a dipole, we rely on the conservation of
>> energy principle. Since the current is zero at the ends
>> of a dipole, all the energy must be contained in the
>> electric field. With that knowledge, the voltage can
>> be estimated.
>>
>> Such is easy to understand by taking voltage measurements
>> on a 1/4WL open-circuit stub. If one uses resistance wire
>> for the stub, one can simulate radiation loss in a dipole.
>>
>> The following is a transmission line simulation of a 1/4WL
>> monopole designed to run on the free demo version of EZNEC
>> available from www.eznec.com
>>
>> http://www.w5dxp.com/stub_dip.EZ
>>
>> The user defined resistivity of the wire is what causes
>> the 35 ohm feedpoint resistance akin to a 1/4WL monopole.
>> The 10 megohm load allows us to look at the voltage
>> across the "open" end of the stub. It is 1033 volts for
>> a 100 watt input. We can assume the forward voltage and
>> the reflected voltage at the end of the stub are equal
>> at 516 volts.
>
> The acoustic analogy predict it: "Between the nodes are places where the
> amplitude is doubled. So the places
> with doubled amplitude are standing. Pressure pulse travel.
> In antennas is electron gas. The first place where the doubled amplitude
> (amplitude means voltage or electron density) appear is end of the
> radials.
> The next is halve wave apart from the end. Such places radiate strong
> electric waves. They are the source of radiation."

no, they are called electro-magnetic waves for a REASON! it takes BOTH fields to make up a propagating wave. So it is not the ends that radiate, it is the whole length where there are both electric and magnetic fields generated in smooth transitions of the sine wave, not in pulses.

2277. Re: Standing waves

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-23 01:12:09 UTC
From: Art Unwin <arthurunwin@gmail.com>
Message-ID: <7b7e16de-fa43-4279-aeff-1e6aaaecd4dd@j9g2000vbp.googlegroups.com>
Source record: 12889

On Sep 22, 6:58 pm, "christofire" <christof...@btinternet.com> wrote:
> "Art Unwin" <arthurun...@gmail.com> wrote in message
>
> news:32df18f2-006d-4ade-b1d8-97b80bf8e2bc@p9g2000vbl.googlegroups.com...
> On Sep 22, 6:28 pm, "christofire" <christof...@btinternet.com> wrote:
>
>
>
> > "Art Unwin" <arthurun...@gmail.com> wrote in message
>
> >news:9eaf5504-1d95-48b7-aff8-7e1070fe59a2@f33g2000vbm.googlegroups.com...
> > On Sep 22, 6:51 am, "christofire" <christof...@btinternet.com> wrote:
>
> > > "Art Unwin" <arthurun...@gmail.com> wrote in message
>
> > - - snip - -
>
> > > * As I say, you should present your theory to sci.physics and
> > > sci.physics.research if you have any interest in checking whether it is
> > > correct, and not limit its exposure to this group. Do let us know when
> > > you
> > > have posted there.
>
> > No, that is not the choice I have made. I decided to merge a paper
> > aproach with that of a patent request . You have read one patent
> > request and you have to wait for the PTO to print out the concluding
> > application. I am sharing it with industry and not the boneheads
> > who bunch themselves into secret rooms away from those outside who
> > cannot possibly provide anything of interest. They have the common
> > interest that if it doesn't come from them.....!!!!!! Pretty much
> > the same as this group. We shall see
> > Art
>
> > * OK, at an appropriate juncture I'll invite some of them to come over and
> > take a look at what you write here (crossposting would probably be frowned
> > upon). It might be enlightening to receive the views of some physicists.
>
> > Chris
>
> If you know of any I would welcome their views. There are many retired
> educated people in this world today that turn to that which they had
> an interest with when young. Now it is difficult to get up to speed in
> different sciences because various journals get the rights of various
> papers from Universities e.t.c which are then denied to libraries and

> the public.
> This is a resource the country should assist because its costs are low
> and where all have
> large experience obtained thru their working years. Imagine
> professionals who when retired
> have twenty or more years of experience be allowed to follow and
> contribute in areas where an interest has laid dormant for so long.
> Today's efforts are applied to computers where data comes out in
> bundles which have to be sorted to determine if anything good is being
> offered by using a mish mash of arithmetic formulae that are merged
> with similar formulae from different functions. Sad, sad, sad.
>
> * It's true that a lot of effort is put into the areas that yield the
> greatest profit, and computing in one form or another does seem to have a
> grip at the moment. However, it is enlightening to take a look from time to
> time at news groups like the two I named to see the sorts of things they are
> discussing, and the _unbounded_ nature of the universe (which is what I
> wrote) is one of them. They too appear to have input from ex-professionals.
>
> Have you ever tried to obtain access to a technical library in a university
> or one of the engineering institutions? You might be surprised how easy or
> inexpensive it turns out to be. As a member of the general public I have
> access to the IET library in London to read as much as I wish, and to
> photocopy.
>
> Chris

Yes, some university libraries allow access to the public but not for
copies. These must
come from journals at quite high prices. Here you can be a member of a
professional society say IEEE but to get the journals of say antennas
and propagation then you must pay a couple of $100 to have access to
them. This is on top of the fees for the institution and the group
that you are personally a member of which also requires fees. But the
U.S. is not like being in London where you can take the tube to any
where such as the patent office library or visit the one on Birdcage
Walk (Royal Institution of Mechanical Engineers in the old days)
I am not aware of this IET that you mentioned. Here in Illinois which
is the size of the UK plus has a population that London sees every
day of the week! One library I would like to get into is on
Whitechapel road in Stepney (Queen Mary college) where extensive work
is done on antennas. Anyway what I do is to start right at the
beginning ie first principles
and with antennas stuck in a rut for so long it was a good one for me
as a retired person
to fiddle with as it was nice to talk to my buddies at BAC St Albans
and nearby towns when radio itself was a hobby for me but most have
now passed away. Now I have finished my personal antenna studies and I
will have to turn to the honey doos that have piled up over the last
few years even tho I have had a handy man come in regularly even so I

go thru periods where every thing that I own is broken and I must turn
away from my hobbies.

2278. Re: Standing waves

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-23 01:13:10 UTC
From: Dave <noone@nowhere.com>
Message-ID: <GCeum.3082$Jd7.218@nwrddc02.gnilink.net>
Source record: 12890

"Art Unwin" <arthurunwin@gmail.com> wrote in message
news:dfa7677b-17ad-4733-b2f1-cae8c34f41cf@b18g2000vbl.googlegroups.com...
On Sep 21, 7:33 pm, "christofire" <christof...@btinternet.com> wrote:

<snip crap>
>No it does not appear in Kraus book. He never followed Maxwells laws
>with respect to equilibrium.
<snip more crap>

and he had a good reason not to... because its all made up by you art, and
its totally WRONG!

2279. Re: Standing waves

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-23 01:23:23 UTC
From: Dave <noone@nowhere.com>
Message-ID: <fMeum.3083$Jd7.1587@nwrddc02.gnilink.net>
Source record: 12891

"Szczepan Bialek" <sz.bialek@wp.pl> wrote in message
news:h99mvm$9hm$1@node1.news.atman.pl...
>
> "Dave" <noone@nowhere.com>
> news:LETtm.2963$Jd7.1217@nwrddc02.gnilink.net...
>>
>> "Szczepan Bialek" <sz.bialek@wp.pl> wrote in message
>> news:h980batt1@node1.news.atman.pl...
>>>>>>
>>>>>>>In the Gas Analogy the monopole antena is exactly like the Kundt's
>>>>>>>tube.
>>>>>>
>>>>> Heaviside did the Hydraulic Analogy. All is exactly the same like in
>>>>> the fluids mechanics.
>>>>> Next the electrons were discovered. Automatically Heaviside is a
>>>>> history and the Gas Analogy is in power.
>>>>>
>>>>> But you, radio people, are very close to waves and should be easy for
>>>>> you to work out the answer for the Question:
>>>>> Which Analogy is right?
>>>>
>>>> neither analogy is 'right'. they are useful in limited circumstances
>>>> to demonstrate some basic pressure wave physics to young students. but
>>>> neither one properly reproduces electromagnetic waves.
>>>
>>> "electromagnetic waves" are paper waves. Radio waves are real waves. Now
>>> we must not know what the waves are like. Now we should estabilish from
>>> which part of the radiator radiate the radio waves.
>>> Do you agree with Richard Harisson:
>>> "At the open circuited ends of a resonant antenna there is almost double
>>> the forward voltage but zero total current due to cancellation of the
>>> dorward and reflected currents at the open circuit. At the open circuit
>>> in the wire, all the energy in the wave is transferred to the electric
>>> field."
>>> S*
>>>
>>>
>> we know what they are like, you just have to understand the mathematics.
>
> I understand. Without that it was be impossible to know that Maxwell
> proposed the displacement current to save the incompressible electric
> fluid. In Maxwell times AC current was known. To pass the incompressible
> fluid through a capacitor the displacement current is necessary. I prefere
> the compressible electrons. They compress in the plates and nothing flow

> between them. The polarization is not the macro flow.
>
>> and yes, richard's statements are true, but a bit too restrictive, it
>> doesn't HAVE to be resonant. Voltage doubles and current=0 at the end of
>> any wire fed with a time varying current, it doesn't even have to be a
>> sine wave... note the effect of sending square waves from a time domain
>> reflectometer down an open circuited wire.
>
> Yes. But antennas are in resonance.
> S*
>>
antennas don't have to be 'in resonance'.... a very short dipole radiates
almost as well as one 1/2 wavelength long... its all in the fields.

2280. Re: Standing waves

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-23 01:25:27 UTC
From: Art Unwin <arthurunwin@gmail.com>
Message-ID: <b1ff19a1-4c1f-4592-841d-6f294f55ab48@k26g2000vbp.googlegroups.com>
Source record: 12892

On Sep 22, 8:13 pm, "Dave" <no...@nowhere.com> wrote:
> "Art Unwin" <arthurun...@gmail.com> wrote in message
>
> news:dfa7677b-17ad-4733-b2f1-cae8c34f41cf@b18g2000vbl.googlegroups.com...
> On Sep 21, 7:33 pm, "christofire" <christof...@btinternet.com> wrote:
>
> <snip crap>>No it does not appear in Kraus book. He never followed Maxwells laws
> >with respect to equilibrium.
>
> <snip more crap>
>
> and he had a good reason not to... because its all made up by you art, and
> its totally WRONG!

So you are back David ! have you built that four poster antenna yet,
of steel I presume,
for the top band? Hopefully the system of yours is in a state of
equilibrium so you can tell us good things about it. Did you have to
make a ground plane system? They are not needed for a system in
equilibrium so you may have displaced a lot of moles from their
habitat for no good reason. Haven't heard you mention anymore about
that book you were writing on antennas. I assume you do not have a
chapter about equilibrium as yet. And that problem you had about the
legality of turning a static field into a dynamic field, have you made
any progress on that yet (just pulling your tail)

2281. Re: Aluminum as a ground system

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-23 01:25:32 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <m5ednSI9aLeP5CTXnZ2dnUVZ_h6dnZ2d@giganews.com>
Source record: 12893

christofire wrote:
>
> Isn't aluminium in the presence of air naturally coated with a thin layer of
> aluminium oxide which doesn't conduct? In which case aluminium might be
> fine for lightning conductors but hopeless for RF. What will the tower
> carry? ... if it's all VHF and upwards then there's probably no problem.
>
> Chris

Yes, aluminum is immediately coated by a few-molecule-thick layer of aluminum oxide when exposed to air. It's a non-porous, brittle, ceramic material commonly used for hybrid circuit substrates and for sandpaper grit, among other things. It's why aluminum, despite its extreme chemical activity, doesn't corrode -- unless the environment is capable of dissolving the aluminum oxide, which some are. Aluminum oxide is an excellent dielectric, into at least the microwave range.

But an insulating film doesn't make a conductor "hopeless" -- after all, the most perfect bare conductor is surrounded -- "coated" if you will -- by air.

Nor does a highly conductive coating degrade a conductor's performance. Only a layer of poorly conductive material of sufficient thickness is detrimental.

Roy Lewallen

2282. Re: Standing waves

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-23 01:32:44 UTC
From: tom <news4792@taring.org>
Message-ID: <4ab97b1d$0$42840$8046368a@newsreader.iphouse.net>
Source record: 12894

Dave wrote:
>> Yes. But antennas are in resonance.
>> S*
>>>
> antennas don't have to be 'in resonance'.... a very short dipole
> radiates almost as well as one 1/2 wavelength long... its all in the
> fields.

As I tried to make Art understand with respect to yagis, it's not necessarily resonant (or even usually), it's matched. By the matching network.

It was like releasing excess nitrogen containing waste into the wind, like all things are with Art.

See wall, hit with head, repeat.

tom
K0TAR

2283. Re: Standing waves

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-23 01:47:00 UTC
From: tom <news4792@taring.org>
Message-ID: <4ab97e0c$0$28124$8046368a@newsreader.iphouse.net>
Source record: 12895

Art Unwin wrote:
> So you are back David ! have you built that four poster antenna yet,
> of steel I presume,
> for the top band? Hopefully the system of yours is in a state of
> equilibrium so you can tell us good things about it. Did you have to
> make a ground plane system? They are not needed for a system in
> equilibrium

Wow! No ground system needed for top band. The AM broadcasters are going to be all over this. Art, you are about to become very very rich. This overturns every measurement ever made on AM broadcast antenna arrays. You should be very proud that hundreds of engineers and their measurements were wrong.

Again, congratulations.

tom
K0TAR

2284. Re: 80 / 160 mt

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-23 01:52:08 UTC
From: KD7HB <co_farmer@yahoo.com>
Message-ID: <8000f187-4e5e-463a-9cc4-f5cf5216fcfe@13g2000prl.googlegroups.com>
Source record: 12896

On Sep 22, 12:55 pm, "Steve" <St...@altrochenospam.com> wrote:
> I am speachless ...! http://www.youtube.com/watch?v=gEKLVgU1B50

Awsome!

KD7HB

2285. Re: Standing waves

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-23 02:01:39 UTC
From: Art Unwin <arthurunwin@gmail.com>
Message-ID: <b7c664e2-c301-4aeb-bf27-40908ec6161b@o36g2000vbl.googlegroups.com>
Source record: 12897

On Sep 22, 8:32 pm, tom <news4...@taring.org> wrote:
> Dave wrote:
> >> Yes. But antennas are in resonance.
> >> S*
>
> > > antennas don't have to be 'in resonance'.... a very short dipole
> > > radiates almost as well as one 1/2 wavelength long... its all in the
> > > fields.
>
> As I tried to make Art understand with respect to yagis, it's not
> necessarily resonant (or even usually), it's matched. By the matching
> network.
>
> It was like releasing excess nitrogen containing waste into the wind,
> like all things are with Art.
>
> See wall, hit with head, repeat.
>
> tom
> K0TAR

And you think I didn't know that like it was a personal secret of
yours?
I don't even remember discussing yagis with you. I moved away from
those years ago when I was building antennas with 80 foot booms and a
dozen or more elements all made of fishing poles with aluminum foil
surfaces. Now I am interested in antennas the size that Chip works
with but not with the same aproach. In fact I am committed to having
antennas made that are small enough for those with small gardens to
use, where how much money or land that you have allow you to run over
others is not a measure of ones skills. As for you you just sit on the
side lines with nothing to offer but insults since you appear to live
alone berift of friends. Try smiling instead of just growling and get
a life.

2286. Re: Standing waves

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-23 02:22:48 UTC
From: tom <news4792@taring.org>
Message-ID: <4ab986d9$0$42840$8046368a@newsreader.iphouse.net>
Source record: 12898

Art Unwin wrote:

>> As I tried to make Art understand with respect to yagis, it's not
>> necessarily resonant (or even usually), it's matched. By the matching
>> network.
>>
>> It was like releasing excess nitrogen containing waste into the wind,
>> like all things are with Art.
>>
>> See wall, hit with head, repeat.
>>
>> tom
>> K0TAR
>
> And you think I didn't know that like it was a personal secret of
> yours?
> I don't even remember discussing yagis with you. I moved away from
> those years ago when I was building antennas with 80 foot booms and a
> dozen or more elements all made of fishing poles with aluminum foil
> surfaces. Now I am interested in antennas the size that Chip works
> with but not with the same aproach. In fact I am committed to having
> antennas made that are small enough for those with small gardens to
> use, where how much money or land that you have allow you to run over
> others is not a measure of ones skills. As for you you just sit on the
> side lines with nothing to offer but insults since you appear to live
> alone berift of friends. Try smiling instead of just growling and get
> a life.

Well, let me refresh your memory on yagis and resonance. It was a LONG
time ago, September 2 2009. Here's the copy.

>> It is possible to have a resonance at the match frequency, but unusual.
>> Run a couple yagis through Eznec and check the driven element impedence.
>> For instance, the NBS yagi that comes with Eznec. At 50.125 it's
>> 11.7+j5.9, not very resonant. I have a 222 yagi that has a DE longer
>> than the reflector, also unusual, but it works fine.
>>
>> tom
>> K0TAR
>
> My goodness. This is the silliest thing I have heard in years.
> A yagi has a bandwidth based around a resonant frequency which is the
> change over point

> around which the impedance is not measured by the resistance alone.
> If the feed radiator is devoid of any proximitry effect then its
> material length differs from that of an array where the proximetry
> actions exists. Thus a yagi driven element is resonant and different
> from a driven element alone because of the proximitry effect. If your
> radiator impedance is 11.7 +j5.9 then you are not at the point of
> resonance which must be solely resistive. Modify the proximetry effect
> to make it resonant.
> This is exactly what you did by using a short length reflector at a
> abnormal distance from the driven element. Methinks you regard only 50
> ohms as being resonant where anything different from that is not
> resonant. Tom you are nuts!

Well, let's take a look at some yagis from known companies, the US National Bureau of Standards and some well known hams. This is a small subset of the yagis I have models for. Almost all are HF or low VHF so we don't have to get into an argument over proper boom correction factors. Yes, something else you've never heard of, Art.

Cushcraft

Model Impedance at design frequency

215 23.9+j6.4
17B2 27.4+j8.3
20-3CD 17.9-12.0
20-4CD 18.7-j17.7
617-6B 36.4+j11.5
A147-11 24.9+j6.1
A50-5 28.6-j20.1
A50-5S 36.7-j10.9
A50-6S 25.2-j19.0

US NBS

NBS122 20.0-j4.8
NBS32 25.2-j7.6

HyGain

HG105BA 33.4-j26.0
HG155BA 20.1-j7.6
HG175CA 21.4-j27.0
HG204BA 25.8-j20.7
HG205CA 20.7-j22.4
HG215DX 27.7-j29.2

M Squared (or M^2)

2M5WL 24.9-j33.9
2M7 31.6-j10.4
6M2.5WL 40,2+j9.5

DL6WU (note this is the grandfather of the great 2m/70cm designs
like K2RIW, K1FO, and M^2 among others)

DL6WU 34.4-11.4

W1JR

W1JR3170 15.8-j17.7
W1JR66 29.2+j24.6

Note that none of these are particularly close to resonance at the
design frequency.

Art, you don't know what you're talking about. As usual.

Remember now Art?

tom
K0TAR

2287. cordless phone range

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-23 02:47:17 UTC
From: David Hare-Scott <secret@nospam.com>
Message-ID: <h9c28a$3l9$1@news.albasani.net>
Source record: 12899

I have a 5.8GHz digital cordless phone system (two handsets and base station) that has reasonable range. It works fine inside the house and within about 30-50m of the house outside. The house is steel frame clad with cementitious planking and plasterboard lining, and has a steel roof.

Is it possible to improve the range of the handsets outside the house using simple supplementary aerials or by relocating the base station? If so where might I find design details?

I am competent with tools (I built the house) but don't know much about radio.

David

2288. Re: Standing waves

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-23 02:58:32 UTC
From: Art Unwin <arthurunwin@gmail.com>
Message-ID: <3cb4be72-dd08-402a-8918-2d096710105a@r36g2000vbn.googlegroups.com>
Source record: 12900

On Sep 22, 9:22 pm, tom <news4...@taring.org> wrote:
> Art Unwin wrote:
> >> As I tried to make Art understand with respect to yagis, it's not
> >> necessarily resonant (or even usually), it's matched. By the matching
> >> network.
>
> >> It was like releasing excess nitrogen containing waste into the wind,
> >> like all things are with Art.
>
> >> See wall, hit with head, repeat.
>
> >> tom
> >> K0TAR
>
> > And you think I didn't know that like it was a personal secret of
> > yours?
> > I don't even remember discussing yagis with you. I moved away from
> > those years ago when I was building antennas with 80 foot booms and a
> > dozen or more elements all made of fishing poles with aluminum foil
> > surfaces. Now I am interested in antennas the size that Chip works
> > with but not with the same aproach. In fact I am committed to having
> > antennas made that are small enough for those with small gardens to
> > use, where how much money or land that you have allow you to run over
> > others is not a measure of ones skills. As for you you just sit on the
> > side lines with nothing to offer but insults since you appear to live
> > alone berift of friends. Try smiling instead of just growling and get
> > a life.
>
> Well, let me refresh your memory on yagis and resonance. It was a LONG
> time ago, September 2 2009. Here's the copy.
>
> ---------------------------------
>
> >> It is possible to have a resonance at the match frequency, but unusual.
> >> Run a couple yagis through Eznec and check the driven element impedence.
> >>   For instance, the NBS yagi that comes with Eznec. At 50.125 it's
> >> 11.7+j5.9, not very resonant. I have a 222 yagi that has a DE longer
> >> than the reflector, also unusual, but it works fine.
> >>
> >> tom
> >> K0TAR
> >
> > My goodness. This is the silliest thing I have heard in years.
> > A yagi has a bandwidth based around a resonant frequency which is the

> > change over point
> > around which the impedance is not measured by the resistance alone.
> > If the feed radiator is devoid of any proximitry effect then its
> > material length differs from that of an array where the proximetry
> > actions exists. Thus a yagi driven element is resonant and different
> > from a driven element alone because of the proximitry effect. If your
> > radiator impedance is 11.7 +j5.9 then you are not at the point of
> > resonance which must be solely resistive. Modify the proximetry effect
> > to make it resonant.
> > This is exactly what you did by using a short length reflector at a
> > abnormal distance from the driven element. Methinks you regard only 50
> > ohms as being resonant where anything different from that is not
> > resonant. Tom you are nuts!
>
> Well, let's take a look at some yagis from known companies, the US
> National Bureau of Standards and some well known hams. This is a small
> subset of the yagis I have models for. Almost all are HF or low VHF so
> we don't have to get into an argument over proper boom correction
> factors. Yes, something else you've never heard of, Art.
>
> Cushcraft
>
> Model   Impedance at design frequency
>
> 215   23.9+j6.4
> 17B2   27.4+j8.3
> 20-3CD 17.9-12.0
> 20-4CD 18.7-j17.7
> 617-6B 36.4+j11.5
> A147-11 24.9+j6.1
> A50-5   28.6-j20.1
> A50-5S 36.7-j10.9
> A50-6S 25.2-j19.0
>
> US NBS
>
> NBS122 20.0-j4.8
> NBS32   25.2-j7.6
>
> HyGain
>
> HG105BA 33.4-j26.0
> HG155BA 20.1-j7.6
> HG175CA 21.4-j27.0
> HG204BA 25.8-j20.7
> HG205CA 20.7-j22.4
> HG215DX 27.7-j29.2
>
> M Squared (or M^2)
>

> 2M5WL   24.9-j33.9
> 2M7   31.6-j10.4
> 6M2.5WL 40,2+j9.5
>
> DL6WU (note this is the grandfather of the great 2m/70cm designs
>   like K2RIW, K1FO, and M^2 among others)
>
> DL6WU   34.4-11.4
>
> W1JR
>
> W1JR3170 15.8-j17.7
> W1JR66 29.2+j24.6
>
> Note that none of these are particularly close to resonance at the
> design frequency.
>
> Art, you don't know what you're talking about. As usual.
>
> ----------------------------------
>
> Remember now Art?
>
> tom
> K0TAR

I really don't know what the point is that you are trying to describe.
Statements like the "design frequency "of the above antenna don't
really make sense if you do not provide what the intended design
frequency was in the first place.
On top of that, all the antennas that you point to could all be made
resonant in the right type of environment. Really there is more
important things than just getting rid of that which is to get rid of
your SWR meter since bandwidth, gain and many other things force one
into different judgements. All that you show may well be very good
designs but it is surely not a recommendation to avoid radiators that
are resonant in favor of those that are not exactly resonant as your
list shows

Is it possible that your definition of resonance means a resistive
impedance of fifty ohms?

You have made similar errors in the past is why I ask.

All antenna requirements have to be weighted to achieve what the
designer is aiming for, but nowhere is the degree of achievements
shown compared to the designers needs. So what exactly are your
judgement parameters of a good antenna and are they considered
universal for all environments?
I have given you a good opportunity to show off your talents with
respect to antennas Let's see how you use it or will you decline for

fear of exposure to the group
and fall back on a insult or two as you normally do ?

2289. Re: Standing waves

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-23 03:13:13 UTC
From: Art Unwin <arthurunwin@gmail.com>
Message-ID: <285b226f-b1f8-40a5-a2d8-79a81b18be0b@j9g2000vbp.googlegroups.com>
Source record: 12801

On Sep 22, 8:47 pm, tom <news4...@taring.org> wrote:
> Art Unwin wrote:
> > So you are back David ! have you built that four poster antenna yet,
> > of steel I presume,
> > for the top band? Hopefully the system of yours is in a state of
> > equilibrium so you can tell us good things about it. Did you have to
> > make a ground plane system? They are not needed for a system in
> > equilibrium
>
> Wow! No ground system needed for top band. The AM broadcasters are
> going to be all over this. Art, you are about to become very very rich.
> This overturns every measurement ever made on AM broadcast antenna
> arrays. You should be very proud that hundreds of engineers and their
> measurements were wrong.
>
> Again, congratulations.
>
> tom
> K0TAR

No congratulations necessary. The methods will be available to all
amateurs when the PTO print out comes about. All of this represents a
different aproach than that taken before me. If it is 90 % in error
where only 10% is useful that's fine by me as it represents an advance
supplied by an amateur who wasn't detered from experimenting by
others.
If I feel that something that is taken for granted is in error just
because an author had it printed in a book I will always step forward
if I feel the emperer does not wear any clothes.
Which of you have the courage to stand along side me knowing full well
your character will be dismantled before the true facts become known?

2290. Re: Aluminium oxide removal

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-23 05:22:56 UTC
From: tk5ep Patrick Egloff <pegloff@gmail.com>
Message-ID: <mn.b9ba7d993c30dbe8.71462@gmail.com>
Source record: 12802

Dans son message prï¿œcï¿œdent, John Ferrell a ï¿œcrit :
> On Tue, 22 Sep 2009 13:26:58 +0200, tk5ep <pegloff@gmail.com> wrote:
>
>> Hi All,
>>
>> A bit trivial but very common problem...
>> I got a free 203BA i had to remove from a tower. It has been there for
>> years.
>> All parts are OK except that i can't dismantle some elements. Certain
>> tube junctions are corroded despite some tape protection, and the
>> elements are like soldered.
>>
>> Is there a safe way to remove the aluminium oxide so i can disassemble
>> the elements for transportation ?
>>
>> I've been told that letting petroleum seep between the elements would
>> help. But that can take days or ... weeks...
>>
>> I'm sure, you all had this problem one day and that someone found a
>> "good" solution.
>>
>> Thanks for any comments,
>> 73, Patrick TK5EP
>>
> I like to use a source of heat like a propane torch to loosen up the
> joints. You will need gloves as well, the aluminum conducts heat very
> fast...

Hi John,

Thanks for your suggestion.
I'm surprised to receive so few answers to a problem that seemed very
trivial to me...
You can get dozens of answers for a patent problem but only one to a
daily problem that every ham has encountered at least once in his life
... ^^

Thanks and 73,
Patrick

2291. Re: cordless phone range

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-23 05:28:37 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <sdcjb5dt74avbi8kamdejl9upon86ktrjt@4ax.com>
Source record: 12803

On Wed, 23 Sep 2009 12:47:17 +1000, "David Hare-Scott"
<secret@nospam.com> wrote:

>Is it possible to improve the range of the handsets outside the house using
>simple supplementary aerials or by relocating the base station? If so where
>might I find design details?

Hi David,

I'm astonished you get as far as you claim. To get further can be
achieved, but the manufacturer and the FCC both conspire to make that
a difficult job (you don't see any antenna jacks do you?).

73's
Richard Clark, KB7QHC

2292. Re: cordless phone range

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-23 05:32:30 UTC
From: VK2KC <vk2kc@bigpond.com>
Message-ID: <4ab9b2f1$0$12717$5a62ac22@per-qv1-newsreader-01.iinet.net.au>
Source record: 12804

Apart from installing higher gain antennae on each unit, there is nothing
you can do.
The steel frame will act like a Faraday shield.
How far do you want the phone to work?
John
"David Hare-Scott" <secret@nospam.com> wrote in message
news:h9c28a$3l9$1@news.albasani.net...
>I have a 5.8GHz digital cordless phone system (two handsets and base
>station) that has reasonable range. It works fine inside the house and
>within about 30-50m of the house outside. The house is steel frame clad
>with cementitious planking and plasterboard lining, and has a steel roof.
>
> Is it possible to improve the range of the handsets outside the house
> using simple supplementary aerials or by relocating the base station? If
> so where might I find design details?
>
> I am competent with tools (I built the house) but don't know much about
> radio.
>
> David
>

2293. Re: Aluminium oxide removal

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-23 05:40:20 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <6jcjb5dbu7rp4nm793he1v1hho8j1fa5gi@4ax.com>
Source record: 12805

On Wed, 23 Sep 2009 07:22:56 +0200, tk5ep Patrick Egloff
<pegloff@gmail.com> wrote:

>Thanks for your suggestion.
>I'm surprised to receive so few answers to a problem that seemed very
>trivial to me...
>You can get dozens of answers for a patent problem but only one to a
>daily problem that every ham has encountered at least once in his life

Practical problems have practical solutions - you got the most common
one that works. Same advice works for getting aluminum wheels off
brake hubs. That's pretty common too. Or get a bigger hammer.

If you want more correspondence, ask for a patented method - and then
try sifting the details from the obscure responses. There may even be
a method employing the weak force generated by the crippled Large
Hadron Accelerator. The corriolus force (twisting) might work too.

73's
Richard Clark, KB7QHC

2294. Re: cordless phone range

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-23 06:37:19 UTC
From: David Hare-Scott <secret@nospam.com>
Message-ID: <h9cfrl$ln0$1@news.albasani.net>
Source record: 12806

> "David Hare-Scott" <secret@nospam.com> wrote in message
> news:h9c28a$3l9$1@news.albasani.net...
>> I have a 5.8GHz digital cordless phone system (two handsets and base
>> station) that has reasonable range. It works fine inside the house
>> and within about 30-50m of the house outside. The house is steel
>> frame clad with cementitious planking and plasterboard lining, and
>> has a steel roof.
>>
>> Is it possible to improve the range of the handsets outside the house
>> using simple supplementary aerials or by relocating the base
>> station? If so where might I find design details?
>>
>> I am competent with tools (I built the house) but don't know much
>> about radio.
>>
>> David

VK2KC wrote:
> Apart from installing higher gain antennae on each unit, there is
> nothing you can do.
> The steel frame will act like a Faraday shield.
> How far do you want the phone to work?
> John

150m would be nice if it can be done without too much trouble.

David

2295. Re: Standing waves

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-23 06:59:59 UTC
From: Jeff Liebermann <jeffl@cruzio.com>
Message-ID: <94gjb51pa5qc8c0lbi61v0g5s7cpavdsrk@4ax.com>
Source record: 12807

On Tue, 22 Sep 2009 18:12:09 -0700 (PDT), Art Unwin
<arthurunwin@gmail.com> wrote:

>Yes, some university libraries allow access to the public but not for
>copies. These must
>come from journals at quite high prices. Here you can be a member of a
>professional society say IEEE but to get the journals of say antennas
>and propagation then you must pay a couple of $100 to have access to
>them. This is on top of the fees for the institution and the group
>that you are personally a member of which also requires fees.

Ummm... IEEE full membership is now $175/year. Membership in the
Antennas and Progagation group is $24/year.
<http://www.ieee.org/web/membership/Cost/dues.html>
That's about 4000 pages for the extra $24.

If you are a retired former IEEE member, currently unemployed,
disabled, or are working for only peanuts or stock options, you can
get up to a 50% discount on dues.
<http://www.ieee.org/web/membership/Cost/special_circumstances.html>

You can see the articles in each past issue at:
<http://ieeexplore.ieee.org/xpl/RecentIssue.jsp?puNumber=8>

If you're a cheap tightwad non-member, like me, you can buy individual
articles ala carte for $29 each:
<http://ieeexplore.ieee.org/guide/g_tools_apo.jsp>

If you don't mind just older papers, a member can buy the DVD with
everything from AP-S from 1952-2000:
<http://www.ict.csiro.au/aps/cdrom.htm>
for $100.

If you're a non-member, you really pay hansomly for the printed
publications.
<http://www.ieee.org/portal/cms_docs_iportals/iportals/publications/subscriptions/info/IEE
E_Sub_Price_List_2010.pdf>
For example, the Antenna and Propagation IEEE Transactions for a year
(12 issues) costs $1,200.

--
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Santa Cruz CA 95060 http://802.11junk.com
Skype: JeffLiebermann AE6KS 831-336-2558

2296. Re: high power 4:1 balun

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-23 07:04:14 UTC
From: Owen Duffy <none@no.where>
Message-ID: <Xns9C8FADA729E3Dnonenowhere@61.9.191.5>
Source record: 12808

Roy Lewallen <w7el@eznec.com> wrote in
news:HrqdnZjRf4zl0yTXnZ2dnUVZ_qudnZ2d@giganews.com:

...
> A properly designed transformer has ...

I think the most common 4:1 balun in use is the Rutroff 4:1`balun.

If it is constructed as a bifilar winding on a ferrite core, and the distance between wires is much less than the distance between turns (which is commonly the case), it can be though of as a transmission line wound on a core.

Rutroff suggested the transmission line equivalent in his original article.

I have developed a transmission line model and solution in the draft article at http://www.vk1od.net/balun/Ruthroff/RU1-4.htm . It predicts both low frequency and high frequency departure from ideal characteristics, and predicts core loss with different loads. The model suggests that balun efficiency can easily be below 50% on extreme loads using some typical commercial constructions. The model results have been validated on a small number of prototype baluns.

Owen

2297. Re: Standing waves

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-23 10:13:33 UTC
From: Szczepan Białek <sz.bialek@wp.pl>
Message-ID: <h9ch4m$nt0$1@node1.news.atman.pl>
Source record: 12809

"Richard Clark" <kb7qhc@comcast.net> wrote
news:5o3ib5172vqk81so7b61qlkmuc2ll8g1c9@4ax.com...
>
> I'm glad to see you shed that nonsense about hydraulics. As you
> understood that topic far less than RF (which is in itself on very
> shaky ground), it wouldn't have done to poison the well.
>
> This poor understanding is quite obvious by your last comment above.

I was absent. You wrote:
">All is exactly the same like in the fluids mechanics.

"Exactly" makes it very, very easy to show how an analogy fails:
Describe the laminar flow in terms of
the Reynolds number for
the interface between RF and a Biconical Antenna
and
the interface between RF and a thin wire Antenna."

Maxwell's math is the same as for fluid:

"Maxwell's equations are simply a re-arrangement of relationships worked
out by Faraday in respect of charge and only verified at low speed.
Maxwell discovered that the relationships could be arranged in a form
which mirrored the mathematical description of a fluid"

In fluid are whirls. The magnetic field is like whirl. But not for all
scientists.
"Maxwell's equations" were wrote by Heaviside.
S*

2298. Re: Standing waves

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-23 10:21:56 UTC
From: Szczepan Białek <sz.bialek@wp.pl>
Message-ID: <h9chkfnue1@node1.news.atman.pl>
Source record: 12810

"Dave" <noone@nowhere.com> wrote
news:fMeum.3083$Jd7.1587@nwrddc02.gnilink.net...
>
> "Szczepan Bialek" <sz.bialek@wp.pl> wrote in message
> news:h99mvm$9hm$1@node1.news.atman.pl...

>>>>>>>>In the Gas Analogy the monopole antena is exactly like the Kundt's
>>>>>>>>tube.
>>>>
>>>
> antennas don't have to be 'in resonance'.... a very short dipole radiates
> almost as well as one 1/2 wavelength long... its all in the fields.

In my antenna radiate the end where the voltage is doubled. In your
something alse. What?
S*
>

2299. Re: Standing waves

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-23 10:46:29 UTC
From: Szczepan Białek <sz.bialek@wp.pl>
Message-ID: <h9cj2g$o5a$1@node1.news.atman.pl>
Source record: 12811

"Richard Fry" <rfry@adams.net> wrote
news:ddc5f438-c0e6-429f-80d3-e07e96311e7f@o13g2000vbl.googlegroups.com...
On Sep 22, 3:34 am, Szczepan Biaďż˝ek <sz.bia...@wp.pl> wrote:

>> Up to now the acoustic analogy is fully applicable.

>Not if one understands the physics of radiation.

Physics of radiation is unknown. Antennas are the nice apparatus to analyse
it.

>> But it is experimentally proved. Stationary charge - electric field,
> Moving charge - magnetic field.

>Untrue, and I challenge you to cite any credible experimental data
that you think proves your belief.

>Far-field EM radiation is produced only by the current flow on the
antenna, and that radiation contains BOTH the electric and the
magnetic fields.

For me the magnetic field is the illusion.

>You may have missed the accurate description posted by Chris, and
pasted below.

"The acceleration of charge in an antenna results almost entirely from
the
applied potential difference at its terminals. The radiated fields
result
from the alternating current effectively passing through the radiation
resistance, and all the other, reactive, fields have no direct effect
on the
radiation resistance, or the component of the current that passes
through it
in phase with the voltage that is developed across it, which together,
of
course, represent the radiated power. The reactive fields affect the
terminal impedance and a large imaginary part can upset the device
trying to
send power into the antenna, but that is more of a system issue. The
alternating current that passes through the radiation resistance is
composed
of charge that moves in time with each RF cycle, accelerating and
decelerating accordingly. The electrostatic field developed between
the
ends of a half-wave dipole reaches its maximum value a quarter of a

cycle
later than the voltage at the drive point so any effect it has on the
charge
in the antenna elements during each cycle must be reactive, and it
doesn't
affect the radiation resistance or the radiated wave."

My description is shorter:
The supply unit sends the voltage pulses (in opposite phase) in the
transmissing line. If such pulses collide the voltage is doubled and the
strong radiation take place. In straight radiator the forward pulse collides
with the reflected. In folded dipoles with that from the other wire.
S*

2300. Re: Standing waves

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-23 10:56:26 UTC
From: Szczepan Białek <sz.bialek@wp.pl>
Message-ID: <h9cjl2$o7n$1@node1.news.atman.pl>
Source record: 12812

"Cecil Moore" <nospam@w5dxp.com> wrote
news:nq9um.68047$u76.23259@newsfe10.iad...
> Szczepan Biaďż˝ek wrote:
>> Each dipole antenna radiate two times the applied frequency, ...
>
> Sorry, 2*sin(2wt) <> sin(wt)
>
> Here's the question: Is the radiated RF wave in phase
> with the standing wave current or in phase with the
> standing wave voltage? The radiated RF wave cannot be
> in phase with both since they are 90 degrees out of
> phase on the standing wave antenna.

In the Gas analogy radiate only the doubled voltage. The doubling take place
in the ends of the two radiators. The two spherical waves are radiated. So
some receiver antennas can work on doubled frequency (Luxembourg effect).
S*

2301. Re: Standing waves

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-23 11:05:31 UTC
From: Szczepan Białek <sz.bialek@wp.pl>
Message-ID: <h9ck63$o9t$1@node1.news.atman.pl>
Source record: 12813

"Richard Fry" <rfry@adams.net> wrote
news:7c13262e-ed2c-44bd-bd22-05c16163e0cf@e18g2000vbe.googlegroups.com...
On Sep 22, 1:44 pm, Szczepan Biaďž˝ek <sz.bia...@wp.pl> wrote:
>> > If what you are saying were really happening,
> > an antenna would radiate two times the applied frequency,
> > but it obviously doesn't.
>
>> We do not have the both. But we have the Luxembourg effect. Each dipole
> antena radiate two times the applied frequency, The pulses from the ends
> are 180 degrees apart.

>So then, Szczepan, should transmissions using such antennas, and
expecting to be received on frequency "X" transmit on frequency "X" /
2 ? Note that such is not the reality.

It happened in 1930. The Luxembourg LW were received on MW radio sets.

>Some low-level radiation from the transmit antenna may exist at twice
the carrier frequency, but in almost all cases it arises from
insufficient suppression of the 2nd harmonic of, and in the
transmitter.

The Luxembourg effect is only possible if the both ends of the dipole are
"visible". The mast was on the tip top.

>And in NO case is it produced as you describe above.

It is easy to check. Now no vertical LW masts. But everybody has a
horizontal dipole.
S*

2302. Re: cordless phone range

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-23 11:06:49 UTC
From: Bob Bob <bob3bob3@suddenlink.net>
Message-ID: <j4cpo6-5va.ln1@p400bob.personal.cox.net>
Source record: 12818

Mount the base unit outside the house, high and clear with good LOS to wherever you want to use it? You may need another unit on the other side of the house.... <grin>

Height and removal of path obstructions all help.

Also think about mounting it behind a window. There will be some loss but it might be better than the walls. Experiment!

Cheers Bob VK2YQA

David Hare-Scott wrote:

>
> 150m would be nice if it can be done without too much trouble.
>
> David
>
>
>

2303. Re: Standing waves

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-23 11:14:19 UTC
From: Szczepan Białek <sz.bialek@wp.pl>
Message-ID: <h9ckmj$oe6$1@node1.news.atman.pl>
Source record: 12814

"Richard Fry" <rfry@adams.net> wrote
news:5c58a0b3-1746-421f-be39-33aa9130f49b@f10g2000vbf.googlegroups.com...
On Sep 22, Szczepan Biaďż˝ek <sz.bia...@wp.pl> wrote:

>> But what radiate in 0.05WL dipole? There the
> "maximum radiation" is in the transmission line (1/4WL from the end).
> The feed point is also in the transmissing line.

>Then later the same day he wrote:

>> The feed point is the part of the transmissing line and not radiate.

>Pick one of the above comments, only, Szczepan.

>The feed points are terminals of the antenna. On center-fed dipoles
that are 1/2WL or less in length, antenna current is highest at those
terminals.

Highest antenna current do not means high enough to radiate. The high
current is in transmissing line of the short antennas.
In 0.05 no currents at all at the feed point.

>> How long are the folded dipoles and the
> loop antennas? Are there the short version?

>They can be any length, but some lengths have better input
characteristics and/or more useful radiation patterns than others.

Are a loop antennas 0.05WL?
S*

2304. Re: Standing waves

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-23 11:42:20 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <FQnum.18670$944.17292@newsfe09.iad>
Source record: 12815

tom wrote:
> Note that none of these are particularly close to resonance at the
> design frequency.

Yagis do have a resonant frequency but that frequency
is not at the design frequency. At the resonant frequency,
the forward gain and F/B ratio are not optimum. At the
optimum forward gain frequency and/or F/B ratio frequency,
the Yagi, sans matching network, is not resonant.
--
73, Cecil, IEEE, OOTC, http://www.w5dxp.com

2305. Re: Standing waves

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-23 11:48:01 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <_Vnum.18677$944.9202@newsfe09.iad>
Source record: 12817

Art Unwin wrote:
> On top of that, all the antennas that you point to could all be made
> resonant in the right type of environment.

Point is, the Yagi radiation pattern sucks at the resonant
frequency, f(r). When one meets the designed-for radiation
pattern, i.e. gain, F/B ratio, beamwidth, etc., the Yagi is
NOT resonant at the design frequency.
--
73, Cecil, IEEE, OOTC, http://www.w5dxp.com

2306. Re: cordless phone range

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-23 11:48:02 UTC
From: JIMMIE <JIMMIEDEE123@YAHOO.COM>
Message-ID: <2e57b79d-749c-4d44-9038-5554d06036c3@o21g2000vbl.googlegroups.com>
Source record: 12816

On Sep 22, 10:47 pm, "David Hare-Scott" <sec...@nospam.com> wrote:
> I have a 5.8GHz digital cordless phone system (two handsets and base
> station) that has reasonable range. It works fine inside the house and
> within about 30-50m of the house outside. The house is steel frame clad
> with cementitious planking and plasterboard lining, and has a steel roof.
>
> Is it possible to improve the range of the handsets outside the house using
> simple supplementary aerials or by relocating the base station? If so where
> might I find design details?
>
> I am competent with tools (I built the house) but don't know much about
> radio.
>
> David

That is about the same range I get on mine. I used to put my base
station upstairs to improve the range. This worked well enough to fill
some areas in my yard that were not covered. Some of the range
extending antennas for wireless routers may help. I think they are in
the same frequency range.

Jimmie

2307. Re: Standing waves

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-23 12:16:18 UTC
From: Richard Fry <rfry@adams.net>
Message-ID: <c9d2b985-6c1f-412e-bb1a-5ddce9c6b256@p15g2000vbl.googlegroups.com>
Source record: 12819

On Sep 23, 6:05 am, Szczepan Białek <sz.bia...@wp.pl> wrote:

> The Luxembourg effect is only possible if the both ends of the dipole are
> "visible". The mast was on the tip top.

The Luxemburg effect is not produced by a dipole.

It has been ascribed to be produced in the ionosphere when two very strong EM waves cross-modulate. More likely it occurs when co-located, high power transmitters cross-modulate in their output stages due to coupling between their antennas.

> Now no vertical LW masts. But everybody has a
> horizontal dipole.

A horizontal dipole produces horizontally polarized EM radiation, which has very high propagation loss for the ground wave.

For this reason vertical polarization is universally used for LW and MW signals.

RF

2308. Re: Standing waves

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-23 12:16:49 UTC
From: tom <news4792@taring.org>
Message-ID: <4aba11a7$0$28118$8046368a@newsreader.iphouse.net>
Source record: 12820

Cecil Moore wrote:
> tom wrote:
>> Note that none of these are particularly close to resonance at the
>> design frequency.
>
> Yagis do have a resonant frequency but that frequency
> is not at the design frequency. At the resonant frequency,
> the forward gain and F/B ratio are not optimum. At the
> optimum forward gain frequency and/or F/B ratio frequency,
> the Yagi, sans matching network, is not resonant.

Agreed, although it has become popular to make designs with about 50+j0
driven elements lately. I think it's to make them simpler and lighter
because, as you say, the other characteristics are not optimum if you do.

tom
K0TAR

2309. Re: Standing waves

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-23 12:29:35 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <Twoum.188461$O23.107278@newsfe11.iad>
Source record: 12821

Szczepan Białż˝ek wrote:
> In my antenna radiate the end where the voltage is doubled. In your
> something alse. What?

Unfortunately, the voltage doubling is accompanied by
transmission line currents at the ends of the antenna
which are known not to radiate. The reason is obvious.

When two currents are equal in magnitude and opposite
in phase, they do not radiate (much) because their fields
engage in destructive interference. These currents
are commonly known as transmission line currents but
also exist at the ends of a dipole as forward and
reflected currents.

When the phases of two currents are equal they engage
in constructive interference and radiate. These currents
are commonly known as antenna currents and exist at
the middle of a dipole that is equal to or less than
0.5WL long.

Unfortunately for your theory, since the standing wave
voltage is ~90 degrees out of phase with the standing
wave current (in standing wave antennas), the higher
the standing wave voltage the greater the destructive
interference between the forward and reverse currents,
i.e. the higher the voltage, the lower the radiation.

Sorry, but that is a simple fact of physics. If you
want the ends of a dipole to radiate, you need to
terminate those ends in the characteristic impedance
of the antenna in order to prevent transmission line
currents on the antenna.

If one models a 1/2WL dipole with the center 1/4WL part
horizontal and the 1/8WL ends vertical, one will get
a magnitude more horizontal radiation from the center
half of the antenna than vertical radiation from the
vertical half of the antenna. That's easy proof that the
center of a 1/2WL dipole radiates more than the ends.
The vertical radiation is 10 dB down from the horizontal
radiation even though equal lengths of horizontal and
vertical wire exists. Is EZNEC wrong?

Running the above dipole at double the frequency
results in equal currents in each 1/8WL of antenna and

indeed, the vertical radiation equals the horizontal
radiation.
--
73, Cecil, IEEE, OOTC, http://www.w5dxp.com

2310. Re: Standing waves

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-23 12:29:56 UTC
From: Richard Fry <rfry@adams.net>
Message-ID: <ab676d92-27ad-4ebb-8e4a-ed629a4de6b1@l35g2000vba.googlegroups.com>
Source record: 12822

On Sep 23, 6:14 am, Szczepan Białek <sz.bia...@wp.pl> wrote:

> Highest antenna current do not means high enough to radiate. The high
> current is in transmissing line of the short antennas.
> In 0.05 no currents at all at the feed point.

If there is no current at the feedpoint terminals of a 0.05WL dipole
then there is no current anywhere else in it, and there would be no
radiation. Obviously that is not the reality.

The current distribution in such short dipoles is triangular in form:
highest at the center, and zero at the ends of the dipole arms.

RF

2311. Re: cordless phone range

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-23 12:52:11 UTC
From: Ralph E Lindberg <n7bsn@callsign.net>
Message-ID: <n7bsn-AF413C.05521123092009@individual.net>
Source record: 12823

In article <h9cfrl$ln0$1@news.albasani.net>,
"David Hare-Scott" <secret@nospam.com> wrote:

>
> 150m would be nice if it can be done without too much trouble.
>
> David

I get about that range (house to barn), but the house is wood-framed.
The system I am using has the base in the house and a 2nd base in the
barn. It's designed to put a phone in the "shop" without wiring

--

Personal e-mail is the n7bsn but at amsat.org
This posting address is a spam-trap and seldom read
RV and Camping FAQ can be found at
http://www.ralphandellen.us/rv

2312. Re: cordless phone range

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-23 14:16:36 UTC
From: JB <nospam@goofball.net>
Message-ID: <85qum.3250$tl3.2459@nwrddc01.gnilink.net>
Source record: 12824

My answer was to find a 900 MHz unit at a thrift store.

2313. Re: Standing waves

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-23 14:38:42 UTC
From: Registered User <n4jvp@ix.netcom.com>
Message-ID: <nb6kb5tsj6kje4i3dbmtapens4pbf2o9qf@4ax.com>
Source record: 12825

On Tue, 22 Sep 2009 16:59:19 -0700 (PDT), Art Unwin
<arthurunwin@gmail.com> wrote:

>On Sep 22, 5:30ï¿½pm, Registered User <n4...@ix.netcom.com> wrote:
>> On Tue, 22 Sep 2009 13:24:17 -0700 (PDT), Art Unwin
>>
>> <arthurun...@gmail.com> wrote:
>>
>> >Well look at how salvage yards sort out metals into different
>> >enclosures.
>> >They apply a displacement current ï¿½to a conveyor where each piece of
>> >metal is elevated with spin such that it lands in the appropriate
>> >enclosure which is dependent on the resistivity of the metal elevated.
>>
>> This isn't exactly how such systems work. Abstractly the system is a
>> metal detector and a sorting table hanging off a CAN. A controller at
>> the other end of the CAN 'reads' the discriminator and 'writes' to the
>> sorter. The writes open and close ejector nozzles. These are the magic
>> devices that cause the material to 'elevate with spin'.
>>
>> >This method of elevating scrap for recovery has been used for years
>> >and it is the same action that is applied to particles for radiation.
>> >Why would you need a citation for a practice that is well known and in
>> >use?
>>
>> Because you might be wishing your agenda into how you propose things
>> work. Who'da thunk that!
>
>Interesting. Can you point to an article or something on the web that
>describes what you
>say. For myself I have only run into articles by special purpose
>machine manufacturers
>who deal with sorting machines for scrap yards which deals with many
>materials including plastics , glass etc as well as different metallic
>materials. This sorting aproach that you mention sounds rather
>interesting if they are relying on magic or voodoo!

There is no magic or voodoo involved with a controller area network.

There are all manners of industrial separators and practically all are
custom purposed for the user and the particular type of refuse
stream(s) they will be dealing with. It's certainly not a
one-size-fits-all industry. Most use a combination of methodologies.
Magnetic eddy currents are one means and their use in the industry
only goes back a couple of decades.

In a nutshell here is how eddy currents are primarily used in materials sorting.

As the eddy current roller spins it creates alternating polar fields. When inert (non-metallic) material enters a field a field of the same charge is generated around the object. As the roller spins the next field is of opposite charge to the field of the object and the object is repulsed. The momentum provided by the conveyor belt added to the repulsive force changes the trajectory of the object as it leaves the end of the conveyor belt. As a consequence inert objects travel further off the end of the belt.

Non-ferrous metals do not benefit from a charged field and fall straight down due to good old gravity. Ferrous metals are attracted to the roller and remain on the conveyor belt until they move past the roller on the underside of the table. Then those materials also fall straight down but at a different location from the non-ferrous metals.

http://tinyurl.com/meo9py

2314. Re: Standing waves

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-23 15:17:26 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <elekb5p2bjrpk8v7q9nht6rmpmhjotb4gb@4ax.com>
Source record: 12826

On Wed, 23 Sep 2009 12:13:33 +0200, Szczepan Bia?ek <sz.bialek@wp.pl>
wrote:

>"Exactly" makes it very, very easy to show how an analogy fails:
>Describe the laminar flow in terms of
>the Reynolds number for
>the interface between RF and a Biconical Antenna
>and
>the interface between RF and a thin wire Antenna."

We've already determined you don't know how to do this, and that you
don't have the vaguest idea.

My guess is that you don't even understand the few simple terms in the
quote above. Can you tell us what laminar means? How about
interface? Your response is wholly devoid of their discussion, so I
suppose you cannot except to quote someone else - unfortunately that
does not reveal knowledge.

If you cannot give us a Reynolds number (something like any mechanical
engineer like Art can do - well, yes, I admit that is an unwarranted
presumption on my part), then you may as well let your boat drift on.

73's
Richard Clark, KB7QHC

2315. Re: Standing waves

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-23 15:20:47 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <22fkb5pjadhmki593gtnsfl00k7cvf1gq2@4ax.com>
Source record: 12827

On Wed, 23 Sep 2009 07:16:49 -0500, tom <news4792@taring.org> wrote:

>Cecil Moore wrote:
>> tom wrote:
>>> Note that none of these are particularly close to resonance at the
>>> design frequency.
>>
>> Yagis do have a resonant frequency but that frequency
>> is not at the design frequency. At the resonant frequency,
>> the forward gain and F/B ratio are not optimum. At the
>> optimum forward gain frequency and/or F/B ratio frequency,
>> the Yagi, sans matching network, is not resonant.

That's about as useful as saying you do not obtain the maximum miles per gallon in your car when the ashtray is half full or when the carpets are at their optimal brushed out nap.

73's
Richard Clark, KB7QHC

2316. Re: Standing waves

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-23 15:25:12 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <kbfkb556obqc8ta9al2rtg1ijqturjkhaj@4ax.com>
Source record: 12829

On Tue, 22 Sep 2009 23:59:59 -0700, Jeff Liebermann <jeffl@cruzio.com>
wrote:

>For example, the Antenna and Propagation IEEE Transactions for a year
>(12 issues) costs $1,200.

Or you can go to the library and read (and copy) them for free.

Oh, and yes, If you have access to an engineering library on campus.

Oh, and yes, if they let you back on campus..... Sorry, some (Art)
have spit on too many professors.

73's
Richard Clark, KB7QHC

2317. Re: Standing waves

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-23 15:26:09 UTC
From: Art Unwin <arthurunwin@gmail.com>
Message-ID: <5abbe722-cf94-4a4f-9935-a3134578e246@d34g2000vbm.googlegroups.com>
Source record: 12828

On Sep 23, 9:38 am, Registered User <n4...@ix.netcom.com> wrote:
> On Tue, 22 Sep 2009 16:59:19 -0700 (PDT), Art Unwin
>
>
>
> <arthurun...@gmail.com> wrote:
> >On Sep 22, 5:30 pm, Registered User <n4...@ix.netcom.com> wrote:
> >> On Tue, 22 Sep 2009 13:24:17 -0700 (PDT), Art Unwin
>
> >> <arthurun...@gmail.com> wrote:
>
> >> >Well look at how salvage yards sort out metals into different
> >> >enclosures.
> >> >They apply a displacement current to a conveyor where each piece of
> >> >metal is elevated with spin such that it lands in the appropriate
> >> >enclosure which is dependent on the resistivity of the metal elevated.
>
> >> This isn't exactly how such systems work. Abstractly the system is a
> >> metal detector and a sorting table hanging off a CAN. A controller at
> >> the other end of the CAN 'reads' the discriminator and 'writes' to the
> >> sorter. The writes open and close ejector nozzles. These are the magic
> >> devices that cause the material to 'elevate with spin'.
>
> >> >This method of elevating scrap for recovery has been used for years
> >> >and it is the same action that is applied to particles for radiation.
> >> >Why would you need a citation for a practice that is well known and in
> >> >use?
>
> >> Because you might be wishing your agenda into how you propose things
> >> work. Who'da thunk that!
>
> >Interesting. Can you point to an article or something on the web that
> >describes what you
> >say. For myself I have only run into articles by special purpose
> >machine manufacturers
> >who deal with sorting machines for scrap yards which deals with many
> >materials including plastics , glass etc as well as different metallic
> >materials. This sorting aproach that you mention sounds rather
> >interesting if they are relying on magic or voodoo!
>
> There is no magic or voodoo involved with a controller area network.
>
> There are all manners of industrial separators and practically all are
> custom purposed for the user and the particular type of refuse

> stream(s) they will be dealing with. It's certainly not a
> one-size-fits-all industry. Most use a combination of methodologies.
> Magnetic eddy currents are one means and their use in the industry
> only goes back a couple of decades.
>
> In a nutshell here is how eddy currents are primarily used in
> materials sorting.
>
> As the eddy current roller spins it creates alternating polar fields.
> When inert (non-metallic) material enters a field a field of the same
> charge is generated around the object. As the roller spins the next
> field is of opposite charge to the field of the object and the object
> is repulsed. The momentum provided by the conveyor belt added to the
> repulsive force changes the trajectory of the object as it leaves the
> end of the conveyor belt. As a consequence inert objects travel
> further off the end of the belt.
>
> Non-ferrous metals do not benefit from a charged field and fall
> straight down due to good old gravity. Ferrous metals are attracted to
> the roller and remain on the conveyor belt until they move past the
> roller on the underside of the table. Then those materials also fall
> straight down but at a different location from the non-ferrous metals.
>
> http://tinyurl.com/meo9py

Thank you for confirming the use of eddy currents in the elevation and projection of scrap materials. My understanding is that the special purpose machinery industry has now advanced to the ability of sorting plastic and the like.

2318. Re: Standing waves

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-23 17:17:19 UTC
From: Szczepan Białek <sz.bialek@wp.pl>
Message-ID: <h9d9v2$ra6$1@node1.news.atman.pl>
Source record: 12830

"Richard Clark" <kb7qhc@comcast.net> wrote
news:elekb5p2bjrpk8v7q9nht6rmpmhjotb4gb@4ax.com...
> On Wed, 23 Sep 2009 12:13:33 +0200, Szczepan Bia?ek <sz.bialek@wp.pl>
> wrote:
>
>>"Exactly" makes it very, very easy to show how an analogy fails:
>>Describe the laminar flow in terms of
>>the Reynolds number for
>>the interface between RF and a Biconical Antenna
>>and
>>the interface between RF and a thin wire Antenna."
>
> We've already determined you don't know how to do this, and that you
> don't have the vaguest idea.
>
> My guess is that you don't even understand the few simple terms in the
> quote above. Can you tell us what laminar means? How about
> interface? Your response is wholly devoid of their discussion, so I
> suppose you cannot except to quote someone else - unfortunately that
> does not reveal knowledge.
>
> If you cannot give us a Reynolds number (something like any mechanical
> engineer like Art can do - well, yes, I admit that is an unwarranted
> presumption on my part), then you may as well let your boat drift on.

I have onmy shelf the Fluid dynamics by Dr Ludwig Prandtl. Prandtl is a big
name.
S*

2319. Re: cordless phone range

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-23 17:27:52 UTC
From: You <you@shadow.orgs>
Message-ID: <you-663CAC.09274423092009@unknown.usenetserver.com>
Source record: 12831

In article
<4ab9b2f1$0$12717$5a62ac22@per-qv1-newsreader-01.iinet.net.au>,
"VK2KC" <vk2kc@bigpond.com> wrote:

> Apart from installing higher gain antennae on each unit, there is nothing
> you can do.
> The steel frame will act like a Faraday shield.
> How far do you want the phone to work?
> John
> "David Hare-Scott" <secret@nospam.com> wrote in message
> news:h9c28a$3l9$1@news.albasani.net...
> >I have a 5.8GHz digital cordless phone system (two handsets and base
> >station) that has reasonable range. It works fine inside the house and
> >within about 30-50m of the house outside. The house is steel frame clad
> >with cementitious planking and plasterboard lining, and has a steel roof.
> >
> > Is it possible to improve the range of the handsets outside the house
> > using simple supplementary aerials or by relocating the base station? If
> > so where might I find design details?
> >
> > I am competent with tools (I built the house) but don't know much about
> > radio.
> >
> > David
> >

Not at 5.8 Ghz it won't. It will not even be seen at that frequency. Now
if the guys house was stucco/chicken wire with holes smaller that 1/4"
then maybe, but Steel Frame Members are why to long to be a worry, at
these frequencies.....

2320. Re: Standing waves

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-23 17:39:29 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <s9nkb55kigc43rdsipplp9i6kj8vpp2mbt@4ax.com>
Source record: 12832

On Wed, 23 Sep 2009 19:17:19 +0200, Szczepan Bia?ek <sz.bialek@wp.pl>
wrote:

>> If you cannot give us a Reynolds number (something like any mechanical
>> engineer like Art can do - well, yes, I admit that is an unwarranted
>> presumption on my part), then you may as well let your boat drift on.
>
>I have onmy shelf the Fluid dynamics by Dr Ludwig Prandtl. Prandtl is a big
>name.

Too big to comprehend?

73's
Richard Clark, KB7QHC

2321. Re: Standing waves

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-23 17:41:24 UTC
From: Szczepan Białek <sz.bialek@wp.pl>
Message-ID: <h9dbc7rfg1@node1.news.atman.pl>
Source record: 12833

"Cecil Moore" <nospam@w5dxp.com> wrote
news:Twoum.188461$O23.107278@newsfe11.iad...
> Szczepan Biaďż˝ek wrote:
>> In my antenna radiate the end where the voltage is doubled. In your
>> something alse. What?
>
> Unfortunately, the voltage doubling is accompanied by
> transmission line currents at the ends of the antenna
> which are known not to radiate. The reason is obvious.
>
> When two currents are equal in magnitude and opposite
> in phase, they do not radiate (much) because their fields
> engage in destructive interference. These currents
> are commonly known as transmission line currents but
> also exist at the ends of a dipole as forward and
> reflected currents.
>
> When the phases of two currents are equal they engage
> in constructive interference and radiate. These currents
> are commonly known as antenna currents and exist at
> the middle of a dipole

In the middle of todays dipole is the air. Current was in the Hertz'
apparatus.

>that is equal to or less than
> 0.5WL long.
>
> Unfortunately for your theory, since the standing wave
> voltage is ~90 degrees out of phase with the standing
> wave current (in standing wave antennas), the higher
> the standing wave voltage the greater the destructive
> interference between the forward and reverse currents,
> i.e. the higher the voltage, the lower the radiation.

In one antenna can be only one mechanism.
In my antenna the current radiation is very weak.
>
> Sorry, but that is a simple fact of physics. If you
> want the ends of a dipole to radiate, you need to
> terminate those ends in the characteristic impedance
> of the antenna in order to prevent transmission line
> currents on the antenna.

Doubled voltage do the work. Current not.
>
> If one models a 1/2WL dipole with the center 1/4WL part
> horizontal and the 1/8WL ends vertical, one will get
> a magnitude more horizontal radiation from the center
> half of the antenna than vertical radiation from the
> vertical half of the antenna. That's easy proof that the
> center of a 1/2WL dipole radiates more than the ends.
> The vertical radiation is 10 dB down from the horizontal
> radiation even though equal lengths of horizontal and
> vertical wire exists. Is EZNEC wrong?

Radiation depends on the shape of the ends. Thin vertical wire radiate in
horizontal plane. Tipped (big ball) vertical wire omnidirectional.
>
> Running the above dipole at double the frequency
> results in equal currents in each 1/8WL of antenna and
> indeed, the vertical radiation equals the horizontal
> radiation.

Look at the Kundt's tube. At doubled frequency in the horizontal parts the
new sources (doubled voltage) appear.
The sources on the horizontal wires radiate in all direstion perpendicular
to the wires.

S*

2322. Re: Standing waves

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-23 17:41:38 UTC
From: Jeff Liebermann <jeffl@cruzio.com>
Message-ID: <uqlkb551nbr1j6p5o31rpevq70jd18n6dk@4ax.com>
Source record: 12834

On Wed, 23 Sep 2009 08:25:12 -0700, Richard Clark <kb7qhc@comcast.net>
wrote:

>On Tue, 22 Sep 2009 23:59:59 -0700, Jeff Liebermann <jeffl@cruzio.com>
>wrote:
>
>>For example, the Antenna and Propagation IEEE Transactions for a year
>>(12 issues) costs $1,200.
>
>Or you can go to the library and read (and copy) them for free.

The local Santa Cruz libraries are in serious financial trouble. The
main library has severely limited hours, while the satellite branches
are only open two to five days per week.
<http://www.santacruzpl.org/news/2009/jun/09/new-hours-all-branches-effective-july-1-2009/
>
None of the local libraries stock IEEE AP-S Transactions.

>Oh, and yes, If you have access to an engineering library on campus.

I joined the UCSC "Friends of the Library" association in order to
obtain an account. $35 to $60/year.
<http://giving.ucsc.edu/giving_detail.php?web_id=631>
Most IEEE Transactions are available online from off campus.
<http://library.ucsc.edu/gateways/gateways-for-visitors-and-neighbors>
Most colleges have similar arrangements. I would also join my alumni
association (Cal Poly, Pomona), which offers similar privileges, but
find the local college more convenient. However, there's a catch.
Most of the online IEEE AP-S Transactions are about a year or more
behind. The various libraries seem to prefer annual subscriptions,
which means most recent issues are often unavailable. If that
happens, I either pay the price of the download (only if desperate),
or borrow an issue from a friend with a subscription.

>Oh, and yes, if they let you back on campus..... Sorry, some (Art)
>have spit on too many professors.

Most of the stuff is available online. No need to visit the campus.
However, when I do, the real problem is parking. There isn't much
available. Going to the UCSC library is a major expedition for me.

I suspect that Art will be ok at a library, as long as he doesn't
bring his soap box and attract attention by loudly denouncing the
content of the physics, antenna design, or grammar books.

--
Jeff Liebermann jeffl@cruzio.com

150 Felker St #D http://www.LearnByDestroying.com
Santa Cruz CA 95060 http://802.11junk.com
Skype: JeffLiebermann AE6KS 831-336-2558

2323. Re: Standing waves

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-23 17:54:30 UTC
From: Jeff Liebermann <jeffl@cruzio.com>
Message-ID: <55okb5tfibka4fu9t81jhl2pg84auac85i@4ax.com>
Source record: 12835

On Wed, 23 Sep 2009 10:41:38 -0700, Jeff Liebermann <jeffl@cruzio.com>
wrote:

>I joined the UCSC "Friends of the Library" association in order to
>obtain an account. $35 to $60/year.
><http://giving.ucsc.edu/giving_detail.php?web_id=631>

I went to re-join. Now it's $75/year.
<http://library.ucsc.edu/giving/friends/friends-of-the-library-membership-benefits>
Sigh...

--
Jeff Liebermann jeffl@cruzio.com
150 Felker St #D http://www.LearnByDestroying.com
Santa Cruz CA 95060 http://802.11junk.com
Skype: JeffLiebermann AE6KS 831-336-2558

2324. Re: Standing waves

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-23 18:00:57 UTC
From: Szczepan Białek <sz.bialek@wp.pl>
Message-ID: <h9dcgtrjq1@node1.news.atman.pl>
Source record: 12836

"Richard Fry" <rfry@adams.net> wrote
news:c9d2b985-6c1f-412e-bb1a-5ddce9c6b256@p15g2000vbl.googlegroups.com...
On Sep 23, 6:05 am, Szczepan Biaďż˝ek <sz.bia...@wp.pl> wrote:

>> The Luxembourg effect is only possible if the both ends of the dipole are
> "visible". The mast was on the tip top.

>The Luxemburg effect is not produced by a dipole.

It was the vertical 1/2WL dipole. The doubled frequency was received in
England (I am not sure).
The same was in Warsaw (but collapsed - now is the monopole mast 1/4WL). The
doubled frequency was received in Austria.

>It has been ascribed to be produced in the ionosphere when two very
strong EM waves cross-modulate. More likely it occurs when co-
located, high power transmitters cross-modulate in their output stages
due to coupling between their antennas.

Now you have my description. Which one do you prefer?

>> Now no vertical LW masts. But everybody has a
> horizontal dipole.

>A horizontal dipole produces horizontally polarized EM radiation,
which has very high propagation loss for the ground wave.

>For this reason vertical polarization is universally used for LW and
MW signals.

Are now vertical dipole masts 1/2WL?

Frequency doubling is at all waves. To observe the frequency doubling the
both ends must have the same possibilities. The vertical dipoles have ends
on difeferent altitudes.
S*

2325. Re: Standing waves

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-23 18:06:26 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <Sstum.186609$sC1.107831@newsfe17.iad>
Source record: 12837

Richard Clark wrote:
> That's about as useful as saying you do not obtain the maximum miles
> per gallon in your car when the ashtray is half full or when the
> carpets are at their optimal brushed out nap.

Nope, it's as useful as saying one cannot get the
advertised miles per gallon when one is driving
the car uphill at 80 mph. Miles per gallon is
related to incline and speed. Frequency, gain,
and F/B ratio are related. I surprised you don't
know that.
--
73, Cecil, IEEE, OOTC, http://www.w5dxp.com

2326. Re: Standing waves

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-23 18:12:39 UTC
From: Szczepan Białek <sz.bialek@wp.pl>
Message-ID: <h9dd6qrmr1@node1.news.atman.pl>
Source record: 12838

"Richard Fry" <rfry@adams.net> wrote
news:ab676d92-27ad-4ebb-8e4a-ed629a4de6b1@l35g2000vba.googlegroups.com...
On Sep 23, 6:14 am, Szczepan Biaďž˝ek <sz.bia...@wp.pl> wrote:

>> Highest antenna current do not means high enough to radiate. The high
> current is in transmissing line of the short antennas.
>. In 0.05 no currents at all at the feed point

>If there is no current at the feedpoint terminals of a 0.05WL dipole
then there is no current anywhere else in it, and there would be no
radiation. Obviously that is not the reality.

The simplest dipole is a transmissing line (the two wires).The standing
waves are always 1/2WL apart. The max current is always 1/4WL from the
standing waves. " In 0.05 no currents at all at the feed point" means, of
course, that the current is very very small.

>The current distribution in such short dipoles is triangular in form:
highest at the center, and zero at the ends of the dipole arms.

No such oddity in the reality.
S*

2327. Re: Standing waves

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-23 18:18:39 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <v2pkb5tr8j9aoh2r0kccp3r0n8qabg508v@4ax.com>
Source record: 12839

On Wed, 23 Sep 2009 10:41:38 -0700, Jeff Liebermann <jeffl@cruzio.com>
wrote:

>>Oh, and yes, if they let you back on campus..... Sorry, some (Art)
>>have spit on too many professors.
>
>Most of the stuff is available online. No need to visit the campus.
>However, when I do, the real problem is parking. There isn't much
>available. Going to the UCSC library is a major expedition for me.

Hi Jeff,

For me, its a short ride on one bus. I'm on campus twice a week. As
an Alumni, I get library privileges.

>I suspect that Art will be ok at a library, as long as he doesn't
>bring his soap box and attract attention by loudly denouncing the
>content of the physics, antenna design, or grammar books.

He would be lost in the din of the LaRouche crowd (although he might
fit in with them their Coriolis politics).

73's
Richard Clark, KB7QHC

2328. Re: Aluminium oxide removal

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-23 18:44:38 UTC
From: John Ferrell <jferrell13@triad.rr.com>
Message-ID: <gfpkb5pl30a6oursja956okgngi7u0e5dh@4ax.com>
Source record: 12840

On Wed, 23 Sep 2009 07:22:56 +0200, tk5ep Patrick Egloff
<pegloff@gmail.com> wrote:

>Dans son message prï¿½cï¿½dent, John Ferrell a ï¿½crit :
>> On Tue, 22 Sep 2009 13:26:58 +0200, tk5ep <pegloff@gmail.com> wrote:
>>
>>> Hi All,
>>>
>>> A bit trivial but very common problem...
>>> I got a free 203BA i had to remove from a tower. It has been there for
>>> years.
>>> All parts are OK except that i can't dismantle some elements. Certain
>>> tube junctions are corroded despite some tape protection, and the
>>> elements are like soldered.
>>>
>>> Is there a safe way to remove the aluminium oxide so i can disassemble
>>> the elements for transportation ?
>>>
>>> I've been told that letting petroleum seep between the elements would
>>> help. But that can take days or ... weeks...
>>>
>>> I'm sure, you all had this problem one day and that someone found a
>>> "good" solution.
>>>
>>> Thanks for any comments,
>>> 73, Patrick TK5EP
>>>
>> I like to use a source of heat like a propane torch to loosen up the
>> joints. You will need gloves as well, the aluminum conducts heat very
>> fast...
>
>Hi John,
>
>Thanks for your suggestion.
>I'm surprised to receive so few answers to a problem that seemed very
>trivial to me...
>You can get dozens of answers for a patent problem but only one to a
>daily problem that every ham has encountered at least once in his life
>... ^^
>
>Thanks and 73,
>Patrick
>
Experience sharing is one of the many positive aspects of the

internet.
The picture on qrz.com is beautiful!
It is going to take a while for me to get all the way through your website. I hope to work you some day. I am not real active on Ham Radio but I expect that to increase. The delivery man just dropped off a new Ameritron AL-80B amplifier today, I am getting ready to open the box...

John Ferrell W8CCW

2329. Re: cordless phone range

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-23 18:45:31 UTC
From: KD7HB <co_farmer@yahoo.com>
Message-ID: <8222d13c-6f28-4b69-81cc-9612bd27ffbb@2g2000prl.googlegroups.com>
Source record: 12841

On Sep 22, 7:47 pm, "David Hare-Scott" <sec...@nospam.com> wrote:
> I have a 5.8GHz digital cordless phone system (two handsets and base
> station) that has reasonable range. It works fine inside the house and
> within about 30-50m of the house outside. The house is steel frame clad
> with cementitious planking and plasterboard lining, and has a steel roof.
>
> Is it possible to improve the range of the handsets outside the house using
> simple supplementary aerials or by relocating the base station? If so where
> might I find design details?
>
> I am competent with tools (I built the house) but don't know much about
> radio.
>
> David

David, before you give up, you can ALWAYS add an external antenna by
capacitively coupling the to antenna. Try this:

I live in a older triple wide manufactured home with aluminum siding.
The door bell on the front door was mechanical. There was no bell for
the back and no way to put in standard wired bells. I bought a pair of
electronic battery operated bells. The central unit always hears the
front door bell because it is 10 feet away and through glass windows.

The back door bell unit could not be heard by the control unit unless
the two doors leading to the outside were open. Not much good that
way. I cured the problem by drilling a hole just above the outside
push button unit and running a solid copper wire through the hole and
bent the end into a circle and left it close to the bell unit. Inside
the "mud room", I ran the wire several feet up and over a storm door
and along the ceiling toward the actual house. Still one aluminum
covered wall between the wire and the central bell unit. Now the
central unit always hears the back pus button unit. If it couldn't, I
was prepared to run the wire on into the house a ways.

So, try running a wire from the phone base unit to the outside of your
house. Experiment with length and placement to see if you get improved
distance. My electronic bell runs in the 300 MHz range, but may well
work for your unit, as well.

Good luck, Paul KD7HB

2330. Re: Standing waves

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-23 18:55:36 UTC
From: Richard Fry <rfry@adams.net>
Message-ID: <68f944e9-81fa-4166-a9a9-56b2f25f11e0@k26g2000vbp.googlegroups.com>
Source record: 12842

On Sep 23, 1:12 pm, Szczepan Białek <sz.bia...@wp.pl> wrote:

>" In 0.05 no currents at all at the feed point" means, of
> course, that the current is very very small.

However small it is, it is still the greatest current value that
exists on that dipole.

RF wrote:
> > The current distribution in such short dipoles is triangular in form:
> > highest at the center, and zero at the ends of the dipole arms.

S* answered:
> No such oddity in the reality.

No matter how short a dipole antenna is in wavelengths, current is
always zero at the ends of each arm of that dipole.

The current distribution on a thin, wire dipole takes the form of a
sine wave. If the antenna is short, as in this case, then the only
part of the sine that can exist is nearly linear. Hence the
~triangular shape for the total current on the dipole.

Confirm this for yourself using Figure 2-2(b) on page 2-4 of the
following link.

http://books.google.com/books?id=xTSNJhVlHGgC&pg=PT23&lpg=PT23&dq=current+on+short+antenna
&source=bl&ots=G-NjOmYXXe&sig=pAvnflM0DghQ09QMrdM_r1Rs7BU&hl=en&ei=nGy6SrrDMc2utgfk3ry4BA&
sa=X&oi=book_result&ct=result&resnum=14#v=onepage&q=current%20on%20short%20antenna&f=false

RF

2331. Re: Standing waves

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-23 19:45:39 UTC
From: Art Unwin <arthurunwin@gmail.com>
Message-ID: <c49264a0-e5d5-48d2-9197-2b4526ace480@s6g2000vbp.googlegroups.com>
Source record: 12843

On Sep 23, 12:41 pm, Jeff Liebermann <je...@cruzio.com> wrote:
> On Wed, 23 Sep 2009 08:25:12 -0700, Richard Clark <kb7...@comcast.net>
> wrote:
>
> >On Tue, 22 Sep 2009 23:59:59 -0700, Jeff Liebermann <je...@cruzio.com>
> >wrote:
>
> >>For example, the Antenna and Propagation IEEE Transactions for a year
> >>(12 issues) costs $1,200.
>
> >Or you can go to the library and read (and copy) them for free.
>
> The local Santa Cruz libraries are in serious financial trouble. The
> main library has severely limited hours, while the satellite branches
> are only open two to five days per week.
> <http://www.santacruzpl.org/news/2009/jun/09/new-hours-all-branches-ef...>
> None of the local libraries stock IEEE AP-S Transactions.

None of the public libraries in Illinois stock them either

>
> >Oh, and yes, If you have access to an engineering library on campus.
>
> I joined the UCSC "Friends of the Library" association in order to
> obtain an account. $35 to $60/year.

Now that is interesting!
Visitors can only get on line if the University have them on their
list as being invited
Time period 45 days. I understand that you can't get copies because of
copywrite laws and oversite by the societies so I assume they get
freebees.
There is some pressure on lab schools to place results on the web
since it is public money. The Governor signed a bill a little while
ago on transparency as to where the money goes
But then nobody actually follow all the laws in Chicago and down
state.

> <http://giving.ucsc.edu/giving_detail.php?web_id=631>
> Most IEEE Transactions are available online from off campus.
> <http://library.ucsc.edu/gateways/gateways-for-visitors-and-neighbors>
> Most colleges have similar arrangements. I would also join my alumni
> association (Cal Poly, Pomona), which offers similar privileges, but
> find the local college more convenient. However, there's a catch.
> Most of the online IEEE AP-S Transactions are about a year or more

> behind. The various libraries seem to prefer annual subscriptions,
> which means most recent issues are often unavailable. If that
> happens, I either pay the price of the download (only if desperate),
> or borrow an issue from a friend with a subscription.
>
> >Oh, and yes, if they let you back on campus..... Sorry, some (Art)
> >have spit on too many professors.
>
> Most of the stuff is available online. No need to visit the campus.
> However, when I do, the real problem is parking.   There isn't much
> available. Going to the UCSC library is a major expedition for me.
>
> I suspect that Art will be ok at a library, as long as he doesn't
> bring his soap box and attract attention by loudly denouncing the
> content of the physics, antenna design, or grammar books.
>
> --
> Jeff Liebermann   je...@cruzio.com
> 150 Felker St #D   http://www.LearnByDestroying.com
> Santa Cruz CA 95060http://802.11junk.com
> Skype: JeffLiebermann   AE6KS   831-336-2558

2332. Re: Standing waves

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-23 20:06:36 UTC
From: Registered User <n4jvp@ix.netcom.com>
Message-ID: <9askb5lq5tl47qk5bobf4pks0o028pcfc3@4ax.com>
Source record: 12844

On Wed, 23 Sep 2009 08:26:09 -0700 (PDT), Art Unwin
<arthurunwin@gmail.com> wrote:

>
>Thank you for confirming the use of eddy currents in the elevation and
>projection of scrap materials.
My post states (not confirms) that eddy currents can be used but they don't work in the manner you suggested. The eddy currents are not solely responsible for the "elevation and projection" and there is no "elevate with spin" either. There is certainly no confirmation that the process is "dependent on the resistivity of the metal elevated" as you suggest.

>My understanding is that the special
>purpose machinery industry has now advanced to the ability of sorting
>plastic and the like.
Your understanding based upon what? Had you done a modicum of research you would have a definitive answer about the mechanisms used in sorting plastics and other non-metallic materials.

A little research beyond glossy brochures filled with marketing-speak can go a long way in aiding your understanding. You might use a search engine to locate manufacturers of sorting systems and query the manufactures for technical details on how their various systems operate. Your idle speculation based upon incomplete information serves no purpose.
http://tinyurl.com/clxl9t

2333. Re: Standing waves

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-23 20:35:01 UTC
From: Jeff Liebermann <jeffl@cruzio.com>
Message-ID: <dq0lb5p1ohleu7juu5g3hgevf9ml62ccgf@4ax.com>
Source record: 12845

On Wed, 23 Sep 2009 12:45:39 -0700 (PDT), Art Unwin
<arthurunwin@gmail.com> wrote:

>> I joined the UCSC "Friends of the Library" association in order to
>> obtain an account. ï¿½$35 to $60/year. ï¿½

That was about 3 years ago. The price these daze is $75.
<http://library.ucsc.edu/giving/friends/friends-of-the-library-membership-benefits>
Some other changes. See corrections below.

>Now that is interesting!
>Visitors can only get on line if the University have them on their
>list as being invited
>Time period 45 days. I understand that you can't get copies because of
>copywrite laws and oversite by the societies so I assume they get
>freebees.

Chicago public library seems to have some IEEE Transactions:
<http://www.chipublib.org/search/results/?searchType=keyword&terms=IEEE&x=0&y=0>
but not Ants and Props. Typing "antenna" into the search box offers
117 books on the subject. That should keep you busy for a while.

>There is some pressure on lab schools to place results on the web
>since it is public money. The Governor signed a bill a little while
>ago on transparency as to where the money goes
>But then nobody actually follow all the laws in Chicago and down
>state.

There's nothing that prevents you from joining the UCSC or other
university library and ignoring your local problems.

>> <http://giving.ucsc.edu/giving_detail.php?web_id=631>

Sigh. The link to joining the Friends of the Library seems to be
broken.

>> However, there's a catch.
>> Most of the online IEEE AP-S Transactions are about a year or more
>> behind. ï¿½The various libraries seem to prefer annual subscriptions,
>> which means most recent issues are often unavailable. ï¿½If that
>> happens, I either pay the price of the download (only if desperate),
>> or borrow an issue from a friend with a subscription.

Things have changed in the last few years. UCSC now contracts
directly with the IEEE for their online IEEE Transactions. No more
missing recent issues. However, I can't determine if Ants and Props
are available or even if the UCSC Friends of the Library are still

active. I'll inquire shortly as this is much cheaper than joining the
IEEE.

--
Jeff Liebermann 150 Felker St #D Santa Cruz CA 95060
831-336-2558
http://802.11junk.com jeffl@cruzio.com
http://www.LearnByDestroying.com AE6KS

2334. Re: high power 4:1 balun

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-23 20:37:27 UTC
From: Owen Duffy <none@no.where>
Message-ID: <Xns9C9043629F2E6nonenowhere@61.9.191.5>
Source record: 12846

I should mention that the model and prototype measurements suggest that lossier higher μ cores may produce a more efficient device... it depends on ther things.

The tradeoff between core size, core material, number of turns etc for a given load is a complex one, more complex than implied by simple rules like "#61 is the best material for HF baluns".

Even the low frequency model of such a balun reveals this. If the balun is analysed using the techniques common used for a 50Hz or 60Hz transformer, the magnetising current (the current that flows into the transformer with no load attached) is design point. If the core is a low loss core, one could choose a relatively high mangetising current yet still have low H+E losses because the Power Factor of that magnetising current is quite low... or in the case of the RF transformer, one could use a relatively lossy material (high magnetising current Power Factor), but the higher μ of the lossier core means lower magnetising current, and the losses are acceptable.

The model I have proposed allows exploration of these different configurations, and the tools that I have developed allows solution of the problem using the core material frequency dependent characteristics.

I don't want to trivialise designing with magnetics, it is a challenge... but we can do better than simple rules like #x material is the best HF balun material... it is a very eHam approach.

Owen

BTW, the commonly held belief that powdered iron the material of choice for baluns is not soundly based. Such a view seems driven by the belief that lowest loss core material assures a good outcome. It is interesting that powdered iron has such a following, yet so little information is published on the core material compared to the ferrite materials.

2335. Re: Standing waves

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-23 20:50:48 UTC
From: Art Unwin <arthurunwin@gmail.com>
Message-ID: <26071bd3-96e1-4ea1-86c1-2bab0afdfed4@f10g2000vbf.googlegroups.com>
Source record: 12847

On Sep 23, 3:06 pm, Registered User <n4...@ix.netcom.com> wrote:
> On Wed, 23 Sep 2009 08:26:09 -0700 (PDT), Art Unwin
>
> <arthurun...@gmail.com> wrote:
>
> >Thank you for confirming the use of eddy currents in the elevation and
> >projection of scrap materials.
>
> My post states (not confirms) that eddy currents can be used but they
> don't work in the manner you suggested. The eddy currents are not
> solely responsible for the "elevation and projection" and there is no
> "elevate with spin" either. There is certainly no confirmation that
> the process is "dependent on the resistivity of the metal elevated" as
> you suggest.
>
> >My understanding is that the special
> >purpose machinery industry has now advanced to the ability of sorting
> >plastic and the like.
>
> Your understanding based upon what? Had you done a modicum of research
> you would have a definitive answer about the mechanisms used in
> sorting plastics and other non-metallic materials.
>
> A little research beyond glossy brochures filled with marketing-speak
> can go a long way in aiding your understanding. You might use a search
> engine to locate manufacturers of sorting systems and query the
> manufactures for technical details on how their various systems
> operate. Your idle speculation based upon incomplete information
> serves no purpose.http://tinyurl.com/clxl9t

Fine.
Your correct and I am wrong.That should make you feel good
It matters little to me that my thoughts are different than yours so
that is the end of it.
Have a happy day

2336. Re: high power 4:1 balun

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-23 20:58:45 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <dtedneC7PbOQESfXnZ2dnUVZ_qGdnZ2d@giganews.com>
Source record: 12848

Owen Duffy wrote:
> . . .
> Even the low frequency model of such a balun reveals this. If the balun
> is analysed using the techniques common used for a 50Hz or 60Hz
> transformer, the magnetising current (the current that flows into the
> transformer with no load attached) is design point. If the core is a low
> loss core, one could choose a relatively high mangetising current yet
> still have low H+E losses because the Power Factor of that magnetising
> current is quite low... or in the case of the RF transformer, one could
> use a relatively lossy material (high magnetising current Power Factor),
> but the higher ï¿½ of the lossier core means lower magnetising current, and
> the losses are acceptable.
> . . .

As you say, though, there are always tradeoffs. A higher magnetizing current means a lower winding impedance. In a winding connected across a transmission line, this means adding a relatively low shunt impedance across the line. In a series connected winding, as in a current balun, it means less effective choking of common mode current. Maximizing winding impedance, which also minimizes magnetizing current, is always beneficial. But as we've both pointed out, sometimes we're forced to choose a material that gives us less impedance in order to lower the loss to a level that won't cause a problem at high power levels. The price is a smaller shunt winding impedance or less effective common mode choke, and also typically a narrower operating bandwidth.

Roy Lewallen, W7EL

2337. Re: Standing waves

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-23 21:05:55 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <g6Wdnfq_0fcmECfXnZ2dnUVZ_oCdnZ2d@giganews.com>
Source record: 12849

Richard Fry wrote:
>
> No matter how short a dipole antenna is in wavelengths, current is
> always zero at the ends of each arm of that dipole.
>
> The current distribution on a thin, wire dipole takes the form of a
> sine wave. If the antenna is short, as in this case, then the only
> part of the sine that can exist is nearly linear. Hence the
> ~triangular shape for the total current on the dipole.
>
> Confirm this for yourself using Figure 2-2(b) on page 2-4 of the
> following link.
>
> http://books.google.com/books?id=xTSNJhVlHGgC&pg=PT23&lpg=PT23&dq=current+on+short+antenna&source=bl&ots=G-NjOmYXXe&sig=pAvnflM0DghQ09QMrdM_r1Rs7BU&hl=en&ei=nGy6SrrDMc2utgfk3ry4BA&sa=X&oi=book_result&ct=result&resnum=14#v=onepage&q=current%20on%20short%20antenna&f=false
>
> RF

You can also do it in a few seconds using the free EZNEC demo program. Open the Dipole1.ez example and the View Antenna display. Click the Currents (or FF Plot) button and see the current distribution in the View Antenna display. Then change the frequency to 3 MHz to make the dipole 0.05 wavelength long and click Currents or FF Plot again and see the altered current distribution. You can see the shape better by using the Current zoom control at the left of the View Antenna display.

As an additional educational exercise, compare the gains and patterns of the lossless 0.5 and 0.05 wavelength antennas.

Roy Lewallen, W7EL

2338. Re: high power 4:1 balun

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-23 21:11:02 UTC
From: Owen Duffy <none@no.where>
Message-ID: <Xns9C90491494CCAnonenowhere@61.9.191.5>
Source record: 12850

Roy Lewallen <w7el@eznec.com> wrote in
news:dtedneC7PbOQESfXnZ2dnUVZ_qGdnZ2d@giganews.com:

>
> As you say, though, there are always tradeoffs. A higher magnetizing
> current means a lower winding impedance. In a winding connected across
> a transmission line, this means adding a relatively low shunt
> impedance across the line. In a series connected winding, as in a
> current balun, it means less effective choking of common mode current.
> Maximizing winding impedance, which also minimizes magnetizing
> current, is always beneficial. But as we've both pointed out,
> sometimes we're forced to choose a material that gives us less
> impedance in order to lower the loss to a level that won't cause a
> problem at high power levels. The price is a smaller shunt winding
> impedance or less effective common mode choke, and also typically a
> narrower operating bandwidth.

Yes Roy, and none of this has visited impedance transformation... or the departure from ideal transformation that is envisaged by many if not most buyers. Choices for magnetising current and the TL Zo in my model of the R balun affect transformation at the upper and lower frequencies.

I know you have pointed out many times that shunting an antenna feed point with a resistor may improved system efficiency. At least one antenna manufacturer uses a lossy ferrite transformer to tame system efficiency in a wideband antenna... the CHA250 comes to mind.

Owen

2339. Re: Standing waves

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-23 21:44:55 UTC
From: Dave <noone@nowhere.com>
Message-ID: <rFwum.3147$Jd7.3002@nwrddc02.gnilink.net>
Source record: 12751

"Art Unwin" <arthurunwin@gmail.com> wrote in message
news:b1ff19a1-4c1f-4592-841d-6f294f55ab48@k26g2000vbp.googlegroups.com...
>So you are back David ! have you built that four poster antenna yet,
>of steel I presume, for the top band?

only 2 elements for top band, 4 for 80m out of rohn tower, and 4 for 40m out of steel pipe towers... and they all work great without any magical levitating diamagnetic solar neutrinos!

>Haven't heard you mention anymore about
>that book you were writing on antennas. I assume you do not have a
>chapter about equilibrium as yet.

i never said i was writing a book on antennas. it has some antennas in it, but its not about antennas.

2340. Re: Standing waves

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-23 21:47:41 UTC
From: Dave <noone@nowhere.com>
Message-ID: <1lwum.3148$Jd7.2903@nwrddc02.gnilink.net>
Source record: 12752

"Szczepan Bialek" <sz.bialek@wp.pl> wrote in message
news:h9d9v2$ra6$1@node1.news.atman.pl...

> I have onmy shelf the Fluid dynamics by Dr Ludwig Prandtl. Prandtl is a
> big name.
> S*
maybe in fluid dynamics, but not in electromagnetics.

2341. Re: Standing waves

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-23 21:58:19 UTC
From: K7ITM <k7itm@msn.com>
Message-ID: <2d4106b5-5a7e-460e-b2a9-cb567a5574c3@o13g2000vbl.googlegroups.com>
Source record: 12753

On Sep 17, 11:59 pm, Szczepan Białek <sz.bia...@wp.pl> wrote:
> "K7ITM" <k7...@msn.com>
wrotenews:d4c3bb73-431a-495a-a85d-c4c078ff7458@d9g2000prh.googlegroups.com...
...
> reasonably simple terms. One of the best I know is Joseph Boyer's
> pair of articles from May and June, I think it was, 1978 "Ham Radio"
> magazine: "The Antenna-Transmission Line Analog." It's a non-
> mathematical work; it will leave you with answers with not a lot to
> back them up, but they do match what we observe, as far as I
> understand it. I have these as a PDF, along with a fairly important
> section from a book referenced by the articles.
>
> You send me to library. ...

No, actually I told you that I have the article plus one of the
important references as a PDF [file]. It's certainly not worth my
effort or the net bandwidth for me to try to repeat what that article
has already done a good job with. Also, I gather from some of the
postings in this thread that you're more interested in arguing and
being negative than in reading such an article.

Cheers,
Tom

2342. Re: Standing waves

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-23 22:34:40 UTC
From: Richard Fry <rfry@adams.net>
Message-ID: <aaf6cfb1-1b61-4d3d-a636-38e8bf54b46a@o35g2000vbi.googlegroups.com>
Source record: 12754

On Sep 23, 1:12 pm, Szczepan Białek <sz.bia...@wp.pl> wrote:
> The simplest dipole is a transmissing line (the two wires).

Not so.

A transmission line with balanced currents is not a dipole, and does
not / cannot produce the radiated fields of a dipole.

Kindly confirm such by your study and accurate comprehension of
engineering texts on this subject.

RF

2343. Re: Standing waves

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-23 23:28:45 UTC
From: Richard Fry <rfry@adams.net>
Message-ID: <cf4fdbbc-1ce0-4f28-bb2a-ab8797f832bf@d4g2000vbm.googlegroups.com>
Source record: 12755

On Sep 23, 1:00 pm, Szczepan Białek <sz.bia...@wp.pl> wrote:
> Now you have my description. Which one do you prefer?

The one that can be proven by scientific principles, and shown by practical performance.

RF

2344. Re: Standing waves

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-23 23:57:30 UTC
From: tom <news4792@taring.org>
Message-ID: <4abab5dd$0$28116$8046368a@newsreader.iphouse.net>
Source record: 12756

Richard Clark wrote:
> On Wed, 23 Sep 2009 07:16:49 -0500, tom <news4792@taring.org> wrote:
>
>> Cecil Moore wrote:
>>> tom wrote:
>>>> Note that none of these are particularly close to resonance at the
>>>> design frequency.
>>> Yagis do have a resonant frequency but that frequency
>>> is not at the design frequency. At the resonant frequency,
>>> the forward gain and F/B ratio are not optimum. At the
>>> optimum forward gain frequency and/or F/B ratio frequency,
>>> the Yagi, sans matching network, is not resonant.
>
> That's about as useful as saying you do not obtain the maximum miles
> per gallon in your car when the ashtray is half full or when the
> carpets are at their optimal brushed out nap.
>
> 73's
> Richard Clark, KB7QHC

Nice attribution to me Richard, but Cecil wrote it.

And it makes a lot more sense than your statement, although he could
have worded it better.

tom
K0TAR

2345. Re: Standing waves

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-24 00:00:10 UTC
From: tom <news4792@taring.org>
Message-ID: <4abab67d$0$28116$8046368a@newsreader.iphouse.net>
Source record: 12757

Art Unwin wrote:
> On Sep 23, 3:06 pm, Registered User <n4...@ix.netcom.com> wrote:
<snip>
>> operate. Your idle speculation based upon incomplete information
>> serves no purpose.http://tinyurl.com/clxl9t
>
> Fine.
> Your correct and I am wrong.That should make you feel good
> It matters little to me that my thoughts are different than yours so
> that is the end of it.
> Have a happy day

RU 1
Art minus several thousand

Apologies to Douglas Adams for the minor ripoff.

tom
K0TAR

2346. Re: Standing waves

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-24 00:09:07 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <LMyum.11$bd1.8@newsfe04.iad>
Source record: 12758

Richard Fry wrote:
> On Sep 23, 1:12 pm, Szczepan Białż˝ek <sz.bia...@wp.pl> wrote:
>> The simplest dipole is a transmissing line (the two wires).
>
> Not so.
> A transmission line with balanced currents is not a dipole, and does
> not / cannot produce the radiated fields of a dipole.

Yes, no matter what the conditions on an ideal transmission
line, the two currents are equal in magnitude and opposite
phase. Therefore, zero radiation from an ideal transmission
line.

At the ends of a 1/2WL dipole, the forward current and
reflected currents are equal in amplitude and opposite
phase. Therefore, destructive interference with no
radiation.

At the center of a 1/2WL dipole, the forward current
and reflected current are in phase and interfere
constructively. Therefore, RADIATION!
--
73, Cecil, IEEE, OOTC, http://www.w5dxp.com

2347. Re: Standing waves

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-24 00:10:27 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <%Nyum.12$bd1.3@newsfe04.iad>
Source record: 12759

tom wrote:
> And it makes a lot more sense than your statement, although he could
> have worded it better.

Sorry, sometimes I write in Texan rather than English.:-)
--
73, Cecil, IEEE, OOTC, http://www.w5dxp.com

2348. Re: Standing waves

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-24 00:37:39 UTC
From: Richard Fry <rfry@adams.net>
Message-ID: <5fa070f0-6110-484b-8168-063c3e195c01@g23g2000vbr.googlegroups.com>
Source record: 12760

On Sep 23, 7:09 pm, Cecil Moore <nos...@w5dxp.com> wrote:
> At the ends of a 1/2WL dipole, the forward current and
> reflected currents are equal in amplitude and opposite
> phase. Therefore, destructive interference with no
> radiation.
>
> At the center of a 1/2WL dipole, the forward current
> and reflected current are in phase and interfere
> constructively. Therefore, RADIATION!

Just to note that far-field radiation is produced, to some extent,
from all distances between the two ends of a 1/2WL linear dipole and
its feedpoint terminals.

RF

2349. Re: Standing waves

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-24 00:41:54 UTC
From: tom <news4792@taring.org>
Message-ID: <4abac0ae$0$42840$8046368a@newsreader.iphouse.net>
Source record: 12761

Cecil Moore wrote:
> tom wrote:
>> And it makes a lot more sense than your statement, although he could
>> have worded it better.
>
> Sorry, sometimes I write in Texan rather than English.:-)

Apology accepted. And I know you can't help it. ;)

2350. Re: Standing waves

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-24 01:07:14 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <iDzum.19854$944.18147@newsfe09.iad>
Source record: 12762

Richard Fry wrote:
> Just to note that far-field radiation is produced, to some extent,
> from all distances between the two ends of a 1/2WL linear dipole and
> its feedpoint terminals.

Yes, if I am not mistaken, MOM assumes that the radiation
from each segment is proportional to the net current in
the segment. The maximum radiation comes from the segment
in which the forward and reflected currents are in phase.
The minimum radiation comes from the segment in which the
forward and reflected currents are out of phase.
--
73, Cecil, IEEE, OOTC, http://www.w5dxp.com

2351. Re: Standing waves

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-24 01:09:16 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <7Fzum.19855$944.19194@newsfe09.iad>
Source record: 12763

tom wrote:
> Cecil Moore wrote:
>> Sorry, sometimes I write in Texan rather than English.:-)
>
> Apology accepted. And I know you can't help it. ;)

Yep, Ah rekon Ah'm gonna amble over yonder directly.
--
73, Cecil, IEEE, OOTC, http://www.w5dxp.com

2352. Re: Standing waves

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-24 01:19:58 UTC
From: tom <news4792@taring.org>
Message-ID: <4abac99a$0$42841$8046368a@newsreader.iphouse.net>
Source record: 12764

Cecil Moore wrote:
> tom wrote:
>> Cecil Moore wrote:
>>> Sorry, sometimes I write in Texan rather than English.:-)
>>
>> Apology accepted. And I know you can't help it. ;)
>
> Yep, Ah reckon Ah'm gonna amble over yonder directly.

Oh you silly Texans.

2353. Re: Standing waves

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-24 01:44:21 UTC
From: Richard Fry <rfry@adams.net>
Message-ID: <3326d04c-59d8-495d-a545-ff89be305561@f33g2000vbm.googlegroups.com>
Source record: 12765

On Sep 23, 5:46 am, Szczepan Białek <sz.bia...@wp.pl> wrote:

> Physics of radiation is unknown.

Perhaps to you at this point, but not to many others who read the
posts here and elsewhere.

RF

2354. Re: cordless phone range

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-24 01:55:27 UTC
From: David Hare-Scott <secret@nospam.com>
Message-ID: <h9ejit$t8$1@news.albasani.net>
Source record: 12766

You wrote:
> In article
> <4ab9b2f1$0$12717$5a62ac22@per-qv1-newsreader-01.iinet.net.au>,
> "VK2KC" <vk2kc@bigpond.com> wrote:
>
>> Apart from installing higher gain antennae on each unit, there is
>> nothing you can do.
>> The steel frame will act like a Faraday shield.
>> How far do you want the phone to work?
>> John
>> "David Hare-Scott" <secret@nospam.com> wrote in message
>> news:h9c28a$3l9$1@news.albasani.net...
>>> I have a 5.8GHz digital cordless phone system (two handsets and base
>>> station) that has reasonable range. It works fine inside the
>>> house and within about 30-50m of the house outside. The house is
>>> steel frame clad with cementitious planking and plasterboard
>>> lining, and has a steel roof.
>>>
>>> Is it possible to improve the range of the handsets outside the
>>> house using simple supplementary aerials or by relocating the base
>>> station? If so where might I find design details?
>>>
>>> I am competent with tools (I built the house) but don't know much
>>> about radio.
>>>
>>> David
>>>
>
> Not at 5.8 Ghz it won't. It will not even be seen at that frequency.
> Now if the guys house was stucco/chicken wire with holes smaller that
> 1/4" then maybe, but Steel Frame Members are why to long to be a
> worry, at these frequencies.....

The apetures in the frame are mostly about 1200mm by 600m and the members are 38mmx75mm. I expected that the signal would go right through with little interferance but I wanted check with the experts. If that is the case it seems to me that moving the base station outside the frame a bit which does little to alter the line of sight to handsets 50m away will not do very much good. Would you agree?

David

2355. Re: cordless phone range

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-24 01:59:11 UTC
From: David Hare-Scott <secret@nospam.com>
Message-ID: <h9ejpuvo1@news.albasani.net>
Source record: 12767

KD7HB wrote:
> On Sep 22, 7:47 pm, "David Hare-Scott" <sec...@nospam.com> wrote:
>> I have a 5.8GHz digital cordless phone system (two handsets and base
>> station) that has reasonable range. It works fine inside the house
>> and within about 30-50m of the house outside. The house is steel
>> frame clad with cementitious planking and plasterboard lining, and
>> has a steel roof.
>>
>> Is it possible to improve the range of the handsets outside the
>> house using simple supplementary aerials or by relocating the base
>> station? If so where might I find design details?
>>
>> I am competent with tools (I built the house) but don't know much
>> about radio.
>>
>> David
>
> David, before you give up, you can ALWAYS add an external antenna by
> capacitively coupling the to antenna. Try this:
>
> I live in a older triple wide manufactured home with aluminum siding.
> The door bell on the front door was mechanical. There was no bell for
> the back and no way to put in standard wired bells. I bought a pair of
> electronic battery operated bells. The central unit always hears the
> front door bell because it is 10 feet away and through glass windows.
>
> The back door bell unit could not be heard by the control unit unless
> the two doors leading to the outside were open. Not much good that
> way. I cured the problem by drilling a hole just above the outside
> push button unit and running a solid copper wire through the hole and
> bent the end into a circle and left it close to the bell unit. Inside
> the "mud room", I ran the wire several feet up and over a storm door
> and along the ceiling toward the actual house. Still one aluminum
> covered wall between the wire and the central bell unit. Now the
> central unit always hears the back pus button unit. If it couldn't, I
> was prepared to run the wire on into the house a ways.
>
> So, try running a wire from the phone base unit to the outside of your
> house. Experiment with length and placement to see if you get improved
> distance. My electronic bell runs in the 300 MHz range, but may well
> work for your unit, as well.
>
> Good luck, Paul KD7HB

So the picture I am getting is that I coil some insulated wire around the base station's stubby aerial a few times and then run it outside the house and up high. Then play around with length and placement. Is that the idea? Is the guage of the wire significant?

David

2356. HELP WITH LADDER LINE CALCULATIONS.

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-24 03:03:22 UTC
From: justme <jbleaux@gmail.com>
Message-ID: <35d89q.lva.17.2@news.alt.net>
Source record: 12797

Although the formulae did not copy properly, if one wants to help me with this, they can go to the link below for the proper fomatting of these formulae. I would really appreciate it.

Thank you.

j/b

d= .0808 (12 gauge stranded copper)
S= 6 inches
r=Effective dielectric constant (Air = 1.00054)

Here is the Wikipedia link for these formulae:
http://unblockmoney.info/browse.php?b=5&u=Oi8vZW4ud2lraXBlZGlhLm9yZy93aWtpL0xhZGRlcl9saW5l

The formula to calculate the impedance of ladder line is:

The formula to calculate the impedance of open (air dielectric) ladder line is:

The formula to calculate the distance between conductors of open ladder line is:

Where:
Z0 = Impedance.
S = Center to center distance between wires.
d = Diameter of the wire.
r = Effective dielectric constant (Air = 1.00054).
The unit of measure for S and d are not critical as long as they are the same.

I GET DIFFERENT RESULTS WHEN COMPARING TO A GRAPH.

2357. HELP WITH LADDER LINE CALCULATIONS.

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-24 03:03:41 UTC
From: justme <jbleaux@gmail.com>
Message-ID: <35d89q.lva.17.3@news.alt.net>
Source record: 12796

Although the formulae did not copy properly, if one wants to help me with this, they can go to the link below for the proper fomatting of these formulae. I would really appreciate it.

Thank you.

j/b

d= .0808 (12 gauge stranded copper)
S= 6 inches
r=Effective dielectric constant (Air = 1.00054)

Here is the Wikipedia link for these formulae:
http://unblockmoney.info/browse.php?b=5&u=Oi8vZW4ud2lraXBlZGlhLm9yZy93aWtpL0xhZGRlcl9saW5l

The formula to calculate the impedance of ladder line is:

The formula to calculate the impedance of open (air dielectric) ladder line is:

The formula to calculate the distance between conductors of open ladder line is:

Where:
Z0 = Impedance.
S = Center to center distance between wires.
d = Diameter of the wire.
r = Effective dielectric constant (Air = 1.00054).
The unit of measure for S and d are not critical as long as they are the same.

I GET DIFFERENT RESULTS WHEN COMPARING TO A GRAPH.

2358. HELP WITH LADDER LINE CALCULATIONS.

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-24 03:03:47 UTC
From: justme <jbleaux@gmail.com>
Message-ID: <35d89r.lva.17.4@news.alt.net>
Source record: 12798

Although the formulae did not copy properly, if one wants to help me with this, they can go to the link below for the proper fomatting of these formulae. I would really appreciate it.

Thank you.

j/b

d= .0808 (12 gauge stranded copper)
S= 6 inches
r=Effective dielectric constant (Air = 1.00054)

Here is the Wikipedia link for these formulae:
http://unblockmoney.info/browse.php?b=5&u=Oi8vZW4ud2lraXBlZGlhLm9yZy93aWtpL0xhZGRlcl9saW5l

The formula to calculate the impedance of ladder line is:

The formula to calculate the impedance of open (air dielectric) ladder line is:

The formula to calculate the distance between conductors of open ladder line is:

Where:
Z0 = Impedance.
S = Center to center distance between wires.
d = Diameter of the wire.
r = Effective dielectric constant (Air = 1.00054).
The unit of measure for S and d are not critical as long as they are the same.

I GET DIFFERENT RESULTS WHEN COMPARING TO A GRAPH.

2359. Re: Aluminum as a ground system

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-24 05:48:42 UTC
From: Ed <Huckleberry_REMOVE_@bigvalley.net>
Message-ID: <Xns9C8FE80D134C0Huckleberrybigvalley@74.209.136.98>
Source record: 12768

I am only interested in the long term reliability of an aluminum ground system in comparison to the more common copper system. This is for lightning suppression only, I am not addressing RF issues. I am wondering if aluminum can handle the potential surge currents that copper can... and how well does its ground conductivity work when buried, when compared to copper.

Ed K7AAT

2360. Re: Standing waves

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-24 07:05:01 UTC
From: Szczepan Białek <sz.bialek@wp.pl>
Message-ID: <h9eqen$397$1@node1.news.atman.pl>
Source record: 12769

Uďż˝ytkownik "Dave" <noone@nowhere.com> napisaďż˝ w wiadomoďż˝ci
news:1Iwum.3148$Jd7.2903@nwrddc02.gnilink.net...
>
> "Szczepan Bialek" <sz.bialek@wp.pl> wrote in message
> news:h9d9v2$ra6$1@node1.news.atman.pl...
>
>> I have onmy shelf the Fluid dynamics by Dr Ludwig Prandtl. Prandtl is a
>> big name.
>> S*
> maybe in fluid dynamics, but not in electromagnetics.

In each textbook on electromagnetics is wrote that the math is the same like
in fluid dynamics and in each textbook on fluid mechanism is wrote that the
math is the same as in electromagnetism. The same teache teach them. Do not
you know that?
Even famous Pointing vector was born in fluids by Umov.
S*
>

2361. Re: Standing waves

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-24 07:35:48 UTC
From: Szczepan Białek <sz.bialek@wp.pl>
Message-ID: <h9es8d$3hk$1@node1.news.atman.pl>
Source record: 12770

"K7ITM" <k7itm@msn.com> wrote
news:2d4106b5-5a7e-460e-b2a9-cb567a5574c3@o13g2000vbl.googlegroups.com...
On Sep 17, 11:59 pm, Szczepan Biaďż˝ek <sz.bia...@wp.pl> wrote:
> "K7ITM" <k7...@msn.com>
> wrotenews:d4c3bb73-431a-495a-a85d-c4c078ff7458@d9g2000prh.googlegroups.com...
...
> reasonably simple terms. One of the best I know is Joseph Boyer's
> pair of articles from May and June, I think it was, 1978 "Ham Radio"
> magazine: "The Antenna-Transmission Line Analog." It's a non-
> mathematical work; it will leave you with answers with not a lot to
> back them up, but they do match what we observe, as far as I
> understand it. I have these as a PDF, along with a fairly important
> section from a book referenced by the articles.
>
> You send me to library. ...

No, actually I told you that I have the article plus one of the
important references as a PDF [file]. It's certainly not worth my
effort or the net bandwidth for me to try to repeat what that article
has already done a good job with. Also, I gather from some of the
postings in this thread that you're more interested in arguing and
being negative than in reading such an article.

I have used "library" many times in my posts in meaning "read something". I
am here to collect the arguments that EM is useless. So I am interested only
in troubles in explanation of antennas behaviour. You should agree that now
we should analize the behaviour of electrons in antennas. The first antenna
(Hertz experiment) was made before discovery of electrons. But electronic
oscillators use electrons which travel in vacuume . They have the charge and
the mass. In antennas are the same.
S*

2362. Re: Standing waves

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-24 10:34:38 UTC
From: Richard Fry <rfry@adams.net>
Message-ID: <9ac79c02-ef63-428d-9553-e52945d47e84@m20g2000vbp.googlegroups.com>
Source record: 12771

On Sep 24, 2:35 am, Szczepan Białek <sz.bia...@wp.pl> wrote:

> I am here to collect the arguments that EM is useless. So I am interested
> only in troubles in explanation of antennas behaviour.

Suggest that you gather, study and accurately evaluate all such
relevant information before you decide whether or not "EM is useless."

RF

2363. Re: Standing waves

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-24 11:32:04 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <0NIum.13657$tG1.5059@newsfe22.iad>
Source record: 12772

Szczepan Białˇżˇek wrote:
> Even famous Pointing vector was born in fluids by Umov.

It's "Poynting" vector, named after John Henry Poynting.

http://en.wikipedia.org/wiki/Poynting_vector
--
73, Cecil, IEEE, OOTC, http://www.w5dxp.com

2364. Re: Aluminum as a ground system

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-24 13:07:44 UTC
From: Michael Coslo <mjc5@psu.edu>
Message-ID: <h9fqv3$jo7s$1@tr22n12.aset.psu.edu>
Source record: 12773

Ed wrote:
> I am only interested in the long term reliability of an aluminum ground
> system in comparison to the more common copper system. This is for
> lightning suppression only, I am not addressing RF issues. I am wondering
> if aluminum can handle the potential surge currents that copper can... and
> how well does its ground conductivity work when buried, when compared to
> copper.

For surge currents only, Al would need to be thicker than Cu of equal handling capacity. If you are stressing things to the max, Al has a lower melting point.

It would work for RF ground also. The oxide layer would not affect the performance. Lots of us use insulated copper wire for ground radials.

Only concern I would have is that the electrical connections are properly made. AL's talent for oxidizing has been a problem in the past with house wiring.

- 73 de Mike N3LI -

2365. Re: Aluminium oxide removal

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-24 13:10:31 UTC
From: Michael Coslo <mjc5@psu.edu>
Message-ID: <h9fr47$jo7s$2@tr22n12.aset.psu.edu>
Source record: 12774

Richard Clark wrote:

The corriolus force (twisting) might work too.

Well, done, sir, well done!

- 73 de Mike N3LI -

2366. Re: Aluminium oxide removal

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-24 13:31:00 UTC
From: Michael Coslo <mjc5@psu.edu>
Message-ID: <h9fsan$jo7u$1@tr22n12.aset.psu.edu>
Source record: 12775

tk5ep Patrick Egloff wrote:

> Thanks for your suggestion.
> I'm surprised to receive so few answers to a problem that seemed very
> trivial to me...
> You can get dozens of answers for a patent problem but only one to a
> daily problem that every ham has encountered at least once in his life

Well, its pretty hard to improve on John's method. 8^)

In the interest of furthering the conversation, it might turn to what to do about that corrosion and general poor looks of the aluminum at present

Some folks advise using steel wool to remove the surface tarnish, others caution that particles of steel will embed themselves in the tubing and cause rust.

There is brass wool that would negate that, as well as Stainless or copper wool.

If you really wanted to pretty the thing up, you could chuck the elements in a drill and use aluminum polish.

One thing that I might try the next time I have to do this is to use some motorcycle wheel cleaner on the tubing. It works a trick on my bike's wheels. You spray it on, then brush it around, then rinse it off. Wear gloves and don't let it sit too long, as it's a bit caustic.

Then the really big thing is upon re-assembly, you'll really want to use some oxide prevention creme on every joint. I've bought some at the local Hardware store, it's inexpensive and a tube will last a lifetime. Sounds like the original assembly didn't use that.

-73 de Mike N3LI -

2367. Re: Aluminium oxide removal

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-24 13:32:28 UTC
From: Michael Coslo <mjc5@psu.edu>
Message-ID: <h9fsdc$jo7u$2@tr22n12.aset.psu.edu>
Source record: 12776

John Ferrell wrote:
>
> The picture on qrz.com is beautiful!
> It is going to take a while for me to get all the way through your
> website. I hope to work you some day. I am not real active on Ham
> Radio but I expect that to increase. The delivery man just dropped off
> a new Ameritron AL-80B amplifier today, I am getting ready to open the
> box...

Gonna bark big, eh?

- 73 de N3LI -

2368. Re: Aluminium oxide removal

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-24 14:19:35 UTC
From: "Audio1@teranews.com" <Audio1@audio.net>
Message-ID: <YdLum.105931$Y83.83344@newsfe21.iad>
Source record: 12777

Michael Coslo wrote:
> Richard Clark wrote:
>
> The corriolus force (twisting) might work too.
>
>
> Well, done, sir, well done!

Not that well, he could have spelled it correctly,
http://en.wikipedia.org/wiki/Coriolis_effect

2369. Re: Aluminium oxide removal

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-24 14:44:33 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <tb1nb5l71o65n9tcrag0fmk26ie0un5dno@4ax.com>
Source record: 12778

On Thu, 24 Sep 2009 10:19:35 -0400, "Audio1@teranews.com"
<Audio1@audio.net> wrote:

>Michael Coslo wrote:
>> Richard Clark wrote:
>>
>> The corriolus force (twisting) might work too.
>>
>>
>> Well, done, sir, well done!
>
>Not that well, he could have spelled it correctly,
>http://en.wikipedia.org/wiki/Coriolis_effect

It was spelled according to the British-American system of Illinoise.

73's
Richard Clark, KB7QHC

2370. Re: Aluminum as a ground system

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-24 15:54:44 UTC
From: christofire <christofire@btinternet.com>
Message-ID: <tMGdnSNPYIDTCybXnZ2dnUVZ8uWdnZ2d@bt.com>
Source record: 12779

"Michael Coslo" <mjc5@psu.edu> wrote in message
news:h9fqv3$jo7s$1@tr22n12.aset.psu.edu...
> Ed wrote:
>> I am only interested in the long term reliability of an aluminum ground
>> system in comparison to the more common copper system. This is for
>> lightning suppression only, I am not addressing RF issues. I am
>> wondering if aluminum can handle the potential surge currents that copper
>> can... and how well does its ground conductivity work when buried, when
>> compared to copper.
>
>
> For surge currents only, Al would need to be thicker than Cu of equal
> handling capacity. If you are stressing things to the max, Al has a lower
> melting point.
>
> It would work for RF ground also. The oxide layer would not affect the
> performance. Lots of us use insulated copper wire for ground radials.
>

The OP referred to a 'vault ground ring', not radials.

Furze is a major supplier of lightning protection products in the UK and
they don't favour aluminium for earth connections:
http://www.furse.com/elp/earprod.htm. I understand copper and
copper-plated-steel is still used for neutral earth connections by UK
electric power supply companies as well - the oxide layer on aluminium and
its alloys, if present, must have some value of breakdown voltage and
anything that elevates neutral above earth that can be avoided has to be a
bad thing.

Chris

2371. Re: Aluminium oxide removal

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-24 15:56:52 UTC
From: christofire <christofire@btinternet.com>
Message-ID: <5fSdnQC13LBXCybXnZ2dnUVZ8qydnZ2d@bt.com>
Source record: 12780

"Richard Clark" <kb7qhc@comcast.net> wrote in message
news:tb1nb5l71o65n9tcrag0fmk26ie0un5dno@4ax.com...
> On Thu, 24 Sep 2009 10:19:35 -0400, "Audio1@teranews.com"
> <Audio1@audio.net> wrote:
>
>>Michael Coslo wrote:
>>> Richard Clark wrote:
>>>
>>> The corriolus force (twisting) might work too.
>>>
>>>
>>> Well, done, sir, well done!
>>
>>Not that well, he could have spelled it correctly,
>>http://en.wikipedia.org/wiki/Coriolis_effect
>
> It was spelled according to the British-American system of Illinoise.
>
> 73's
> Richard Clark, KB7QHC

* 'Two countries separated by the same language'.

Chris

2372. Re: Aluminium oxide removal

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-24 16:01:19 UTC
From: christofire <christofire@btinternet.com>
Message-ID: <zcmdnSo8ntdLCibXnZ2dnUVZ8jGdnZ2d@bt.com>
Source record: 12781

"Michael Coslo" <mjc5@psu.edu> wrote in message
news:h9fsan$jo7u$1@tr22n12.aset.psu.edu...
> tk5ep Patrick Egloff wrote:
>
>> Thanks for your suggestion.
>> I'm surprised to receive so few answers to a problem that seemed very
>> trivial to me...
>> You can get dozens of answers for a patent problem but only one to a
>> daily problem that every ham has encountered at least once in his life
>
>
>
> Well, its pretty hard to improve on John's method. 8^)
>
> In the interest of furthering the conversation, it might turn to what to
> do about that corrosion and general poor looks of the aluminum at present
>
> Some folks advise using steel wool to remove the surface tarnish, others
> caution that particles of steel will embed themselves in the tubing and
> cause rust.
>
> There is brass wool that would negate that, as well as Stainless or copper
> wool.

Those 3M 'Scotchbrite' pads work well too. There's a surface treatment that used to be known as 'alochrome' (or similar spelling) in the UK that does wonderful things to aluminium alloy surfaces - it's just a dip (but its probably a combination of substances prohibited by the HSE nowadays).

Chris

2373. Re: cordless phone range

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-24 16:09:21 UTC
From: KD7HB <co_farmer@yahoo.com>
Message-ID: <b611f365-0024-4a3f-8374-97bab4709389@o9g2000prg.googlegroups.com>
Source record: 12782

On Sep 23, 6:59 pm, "David Hare-Scott" <sec...@nospam.com> wrote:
> KD7HB wrote:
> > On Sep 22, 7:47 pm, "David Hare-Scott" <sec...@nospam.com> wrote:
> >> I have a 5.8GHz digital cordless phone system (two handsets and base
> >> station) that has reasonable range. It works fine inside the house
> >> and within about 30-50m of the house outside. The house is steel
> >> frame clad with cementitious planking and plasterboard lining, and
> >> has a steel roof.
>
> >> Is it possible to improve the range of the handsets outside the
> >> house using simple supplementary aerials or by relocating the base
> >> station? If so where might I find design details?
>
> >> I am competent with tools (I built the house) but don't know much
> >> about radio.
>
> >> David
>
> > David, before you give up, you can ALWAYS add an external antenna by
> > capacitively coupling the to antenna. Try this:
>
> > I live in a older triple wide manufactured home with aluminum siding.
> > The door bell on the front door was mechanical. There was no bell for
> > the back and no way to put in standard wired bells. I bought a pair of
> > electronic battery operated bells. The central unit always hears the
> > front door bell because it is 10 feet away and through glass windows.
>
> > The back door bell unit could not be heard by the control unit unless
> > the two doors leading to the outside were open. Not much good that
> > way. I cured the problem by drilling a hole just above the outside
> > push button unit and running a solid copper wire through the hole and
> > bent the end into a circle and left it close to the bell unit. Inside
> > the "mud room", I ran the wire several feet up and over a storm door
> > and along the ceiling toward the actual house. Still one aluminum
> > covered wall between the wire and the central bell unit. Now the
> > central unit always hears the back pus button unit. If it couldn't, I
> > was prepared to run the wire on into the house a ways.
>
> > So, try running a wire from the phone base unit to the outside of your
> > house. Experiment with length and placement to see if you get improved
> > distance. My electronic bell runs in the 300 MHz range, but may well
> > work for your unit, as well.
>
> > Good luck, Paul KD7HB

>
> So the picture I am getting is that I coil some insulated wire around the
> base station's stubby aerial a few times and then run it outside the house
> and up high. Then play around with length and placement. Is that the idea?
> Is the guage of the wire significant?
>
> David

Don't coil it around, just place it near to the antenna. At the most,
just a single loop around the base of the antenna. Gauge is not
important.

Paul

2374. Re: Aluminium oxide removal

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-24 16:49:04 UTC
From: tk5ep Patrick Egloff <pegloff@gmail.com>
Message-ID: <mn.c4697d990d121145.71462@gmail.com>
Source record: 12783

Michael Coslo a exprimï¿œ avec prï¿œcision :
> tk5ep Patrick Egloff wrote:
>
>> Thanks for your suggestion.
>> I'm surprised to receive so few answers to a problem that seemed very
>> trivial to me...
>> You can get dozens of answers for a patent problem but only one to a daily
>> problem that every ham has encountered at least once in his life
>
>
>
> Well, its pretty hard to improve on John's method. 8^)
>
> In the interest of furthering the conversation, it might turn to what to do
> about that corrosion and general poor looks of the aluminum at present
>
> Some folks advise using steel wool to remove the surface tarnish, others
> caution that particles of steel will embed themselves in the tubing and cause
> rust.
>
> There is brass wool that would negate that, as well as Stainless or copper
> wool.
>
> If you really wanted to pretty the thing up, you could chuck the elements in
> a drill and use aluminum polish.
>
> One thing that I might try the next time I have to do this is to use some
> motorcycle wheel cleaner on the tubing. It works a trick on my bike's wheels.
> You spray it on, then brush it around, then rinse it off. Wear gloves and
> don't let it sit too long, as it's a bit caustic.
>
> Then the really big thing is upon re-assembly, you'll really want to use some
> oxide prevention creme on every joint. I've bought some at the local Hardware
> store, it's inexpensive and a tube will last a lifetime. Sounds like the
> original assembly didn't use that.
>
> -73 de Mike N3LI -

Hi all,

Thanks for these constructive answers...
My problem is that a local ham passed away and his widow asked me to
remove all antennas.
The only yagi he had was a 203BA. For transportation and reuse of this
antenna, i need to dismantle it. I was not able the separate the boom

in 2 pieces nor could i dismantle 3 half elements.

My first problem is the do that without breaking or deforming something. Once this has been done i will clean the element parts that have to be in contact together. I will leave the other parts corroded by the aluminium oxide which is makes good "natural" protection.

I will try to heat the joints, all my other efforts did not help... Unfortunately i could not carry the parts in my small car and i have to wait the widows return to continue my work.

I was thinking of a chemical solution to remove the oxide without any pain, but i think i will continue as far : "may the force be with you".

Thanks,

2375. Re: Standing waves

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-24 16:57:56 UTC
From: Szczepan Białek <sz.bialek@wp.pl>
Message-ID: <h9ft6a$8b3$1@node1.news.atman.pl>
Source record: 12784

"Richard Fry" <rfry@adams.net> wrote
news:9ac79c02-ef63-428d-9553-e52945d47e84@m20g2000vbp.googlegroups.com
On Sep 24, 2:35 am, Szczepan Biaďż˝ek <sz.bia...@wp.pl> wrote:

>> I am here to collect the arguments that EM is useless. So I am interested
> only in troubles in explanation of antennas behaviour.

>Suggest that you gather, study and accurately evaluate all such
relevant information before you decide whether or not "EM is useless."

Maxwell was the genius Such are almost always right. He assumed that
electricity is the incompressible massless fluid. But up to now nobody has
isolated the pure electricity. We use only the charged bodies. The electrons
are also like charged bodies. They have mass. EM was made for space. We here
analyse the electrons in the conductors. If electrons are not a pure
electricity when the EM is useless for conductors. Maxwell wrote the
"Treatise on electricity and magnetism" not "Electrodynamics of charged
bodies".
It seems that EM is useless for antennas. I do not know what is in space.
May be that there EM is usefull.
How do you see it?
S*

2376. Re: Standing waves

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-24 17:27:46 UTC
From: Szczepan Białek <sz.bialek@wp.pl>
Message-ID: <h9fuu4$8je$1@node1.news.atman.pl>
Source record: 12785

"Cecil Moore" <nospam@w5dxp.com> wrote
news:0NIum.13657$tG1.5059@newsfe22.iad...
> Szczepan Biaďż˝ek wrote:
>> Even famous Pointing vector was born in fluids by Umov.
>
> It's "Poynting" vector, named after John Henry Poynting.
>
> http://en.wikipedia.org/wiki/Poynting_vector
"The Umov-Poynting vector[6] discovered by Nikolay Umov in 1874 describes
energy flux in liquid and elastic media in a completely generalized view."

Poynting "discovered" it in 1884.
"He was the developer and eponym of the Poynting vector, which describes the
direction and magnitude of electromagnetic energy flow and is used in the
Poynting theorem, a statement about energy conservation for electric and
magnetic fields. This work was first published in 1884. "

The same is with Maxwell math. Helmholtz wrote such for his whirls.
Many people are thinking in the same time about the same think.
I am not alone in the "Acoustic analogy".
S*

2377. Re: cordless phone range

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-24 17:37:26 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <odbnb59cvqdcuda7ikhhpmtqarp289m6r3@4ax.com>
Source record: 12786

On Wed, 23 Sep 2009 11:45:31 -0700 (PDT), KD7HB <co_farmer@yahoo.com>
wrote:

>So, try running a wire from the phone base unit to the outside of your
>house. Experiment with length and placement to see if you get improved
>distance. My electronic bell runs in the 300 MHz range, but may well
>work for your unit, as well.

Any wire that is excited at a wavelength where the wire is
significantly longer than one wavelength, then this wire stands the
high chance of turning into an end fire antenna. This means if that
wire goes up, so will the signal - straight up (with any number of
very minor lobes in all other directions).

73's
Richard Clark, KB7QHC

2378. Re: cordless phone range

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-24 17:57:19 UTC
From: KD7HB <co_farmer@yahoo.com>
Message-ID: <3fa0f926-e86d-4c46-9bee-a5282e334f33@y28g2000prd.googlegroups.com>
Source record: 12787

On Sep 24, 10:37 am, Richard Clark <kb7...@comcast.net> wrote:
> On Wed, 23 Sep 2009 11:45:31 -0700 (PDT), KD7HB <co_far...@yahoo.com>
> wrote:
>
> >So, try running a wire from the phone base unit to the outside of your
> >house. Experiment with length and placement to see if you get improved
> >distance. My electronic bell runs in the 300 MHz range, but may well
> >work for your unit, as well.
>
> Any wire that is excited at a wavelength where the wire is
> significantly longer than one wavelength, then this wire stands the
> high chance of turning into an end fire antenna. This means if that
> wire goes up, so will the signal - straight up (with any number of
> very minor lobes in all other directions).
>
> 73's
> Richard Clark, KB7QHC

Hi, Richard.
I learned of this trick many years ago, 1960's time frame. Portland drilled a second tunnel through a ridge on West Burnside street, making it two lanes each direction. Drivers began complaining that their radio reception always went out when they entered the tunnel. Duh!!! Everyone said nothing could be done, This was the way radio worked.

One engineer said he could fix it. They mounted insulators in the tunnel ceiling, and strung a wire the full length of the tunnel. On the East side, they ran the wire up somewhere on the hillside. I never was able to determine just where it went. The antenna picked up the local am/fm signals and radiated them in the tunnel. Drivers could continue to listen to the radio when they went into the tunnel. Volume was reduced sometimes, but reception continued.

I wonder if hf and vhf ham radio operation is possible in the tunnel?

I see the same wire trick in other tunnels. The I-90 tunnels East of Seattle have the wire.

Paul, KD7HB

2379. Re: cordless phone range

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-24 18:15:03 UTC
From: You <you@shadow.orgs>
Message-ID: <you-64CDFE.10145824092009@unknown.usenetserver.com>
Source record: 12788

In article
<b611f365-0024-4a3f-8374-97bab4709389@o9g2000prg.googlegroups.com>,
KD7HB <co_farmer@yahoo.com> wrote:

> Don't coil it around, just place it near to the antenna. At the most,
> just a single loop around the base of the antenna. Gauge is not
> important.
>
> Paul

and you call yourself a Ham? Just where did you get the idea that you
can couple to a 5.8 Ghz Antenna, by wrapping a loop around it, and then
feed an External Antenna? Sonny, this may work for you, at 0.0 - 200 Mhz,
but it sure isn't going to work at 5.8 Ghz.

2380. Re: Aluminum as a ground system

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-24 18:33:51 UTC
From: You <you@shadow.orgs>
Message-ID: <you-EDD01B.10335124092009@unknown.usenetserver.com>
Source record: 12789

In article <Xns9C8FE80D134C0Huckleberrybigvalley@74.209.136.98>,
Ed <Huckleberry_REMOVE_@bigvalley.net> wrote:

> I am only interested in the long term reliability of an aluminum ground
> system in comparison to the more common copper system. This is for
> lightning suppression only, I am not addressing RF issues. I am wondering
> if aluminum can handle the potential surge currents that copper can... and
> how well does its ground conductivity work when buried, when compared to
> copper.
>
> Ed K7AAT

For Lightning Protection Aluminum is NOT the grounding material of
choice. Higher resistance per foot. (Less conductivity) and the Oxide
boundary layer, make it unsuitable for this type of use. For RF Grounding
use, it will work just as well as copper as the Oxide layer really has
no effect at RF Frequencies.

2381. Re: Aluminum as a ground system

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-24 18:42:02 UTC
From: dplatt@radagast.org
Message-ID: <q4rso6-l42.ln1@radagast.org>
Source record: 12790

In article <h9fqv3$jo7s$1@tr22n12.aset.psu.edu>,
Michael Coslo <mjc5@psu.edu> wrote:

>Only concern I would have is that the electrical connections are
>properly made. AL's talent for oxidizing has been a problem in the past
>with house wiring.

A good point.

The National Electric Code has some fairly specific requirements for how grounding system connections must be made. Soldering is not permitted, as the high temperatures which can occur at such connections during a lighting strike can blow the soldered connection apart. Strong mechanical connections, or welding (e.g. "CadWeld" thermite-type welding) is required.

I just ran across the following:

http://www.homeinspector.org/resources/journals/Intro-Electrical-Grounding.pdf

It indicates that the NEC forbids the use of aluminum conductors for grounding "where in direct contact with masonry or earth. Aluminum conductors require 18 inches of clearance from earth." (NEC paragraphs 250-91a and 250-92a are cited).

There's also a note on the citation: "ATJ note: we have field reports of complete failure of uninsulated bare aluminum grounding conductor wire when it was not properly protected from corrosion - for example where left touching a masonry foundation wall."

It sounds to me as using aluminum wire as a lightning ground system is a poor idea.

--
Dave Platt <dplatt@radagast.org> AE6EO
Friends of Jade Warrior home page: http://www.radagast.org/jade-warrior
I do _not_ wish to receive unsolicited commercial email, and I will
boycott any company which has the gall to send me such ads!

2382. Re: Aluminum as a ground system

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-24 18:56:05 UTC
From: Jeff Liebermann <jeffl@cruzio.com>
Message-ID: <63fnb5hc44ihn7lkp5ejsl1ut2v5l0cfpd@4ax.com>
Source record: 12791

On 22 Sep 2009 23:19:40 GMT, Ed <Huckleberry_REMOVE_@bigvalley.net>
wrote:

> QUESTION: Are aluminum ground systems becoming common? Are they
>reliable, even after absorbing some heavy strikes? Any other comments?
> Ed K7AAT on the Oregon Coast

I've never seen any that use aluminum wire. Everything I've seen and
what little I've done was copper wire for both mountain top and home
grounding.

The National Fire Protection Association (NFPA) has guidelines such
things. See NFPA 780 "Standard For Installation Of Lightning
Protection Systems 2004". It describes protection for people,
building, and property from lightning damage.
<http://www.atmo.arizona.edu/students/courselinks/spring07/atmo589/articles/NFPA_780_2004.
pdf>
1.1MByte PDF. Several sections mention aluminum use.

Googling merrily...

<http://everything2.com/title/aluminum+wire>
The only problem you have to consider is that you cannot
allow the wire to enter the structure because exploding
aluminum can cause a fire.

<http://electrical.about.com/od/electricalsafety/a/lightningprotectionlightningrods.htm>
The underground connection to the lightning protection system must
be made with copper wire because underground connections should not
be made with aluminum wire. Aluminum wire will corrode when placed
in the ground. The National Electrical Code requires the aluminum
wire connection be at least 18 inches above the ground [NEC Section
250.64(A)] with a bi-metal splice. This connects to an eight-foot
copper ground rod at least two feet from th home's exterior wall.
There must be a minimum of two ground rods installed to the system
on opposite ends of the home, with one near the service entrance
ground rod so it can be bonded to this ground rod. This ensures
that there is a common ground between all ground rods. This should
make the connecting copper wire length between the ground rod and
aluminum cable approximately four feet long. Place the ground rods
diagonally on either end of the house, not exceeding 100 feet
between the two ground rods. If this distance is exceeded,
additional ground rods must be added to ensure proper grounding.

<http://www.glenmartin.com/catalog/lightning.htm>
They use copper wire, but the lightning rod points are aluminum.

<http://www.lightningrodparts.com/faq.html>
(13) Will Aluminum Wire/Cable and Rods work as well as Copper?
It should as long as the installation rules are followed.
Certainly Copper is a better conductor than aluminum but
the Aluminum cable is larger than the copper therefore making
up for aluminum's lesser conductivity.

(24) BASIC INSTALLATION DETAILS:
No Structure shall have less than 2 ground rods (Aluminum wire
should not be underground)

--
Jeff Liebermann jeffl@cruzio.com
150 Felker St #D http://www.LearnByDestroying.com
Santa Cruz CA 95060 http://802.11junk.com
Skype: JeffLiebermann AE6KS 831-336-2558

2383. Re: Aluminum as a ground system

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-24 18:56:05 UTC
From: Ed <Huckleberry_REMOVE_@bigvalley.net>
Message-ID: <Xns9C907968583E2Huckleberrybigvalley@198.186.192.196>
Source record: 12792

Below is good information, but only applies to electrical systems' grounding... not commercial radio vault lightning ground systems. Also, the aluminum system I came across certainly had crimp or other mechanical bonding methods which avoids the connection issues discussed in the NEC.

I have no control or great concern on this, but was surprised to see aluminum for my first time. I just wondered if it was common.

Ed K7AAT

.

> The National Electric Code has some fairly specific requirements for
> how grounding system connections must be made. Soldering is not
> permitted, as the high temperatures which can occur at such
> connections during a lighting strike can blow the soldered connection
> apart. Strong mechanical connections, or welding (e.g. "CadWeld"
> thermite-type welding) is required.
>
> I just ran across the following:
>
> http://www.homeinspector.org/resources/journals/Intro-Electrical-Grou
> nding.pdf
>
> It indicates that the NEC forbids the use of aluminum conductors for
> grounding "where in direct contact with masonry or earth. Aluminum
> conductors require 18 inches of clearance from earth." (NEC
> paragraphs 250-91a and 250-92a are cited).
>
> There's also a note on the citation: "ATJ note: we have field
> reports of complete failure of uninsulated bare aluminum grounding
> conductor wire when it was not properly protected from corrosion - for
> example where left touching a masonry foundation wall."
>
> It sounds to me as using aluminum wire as a lightning ground system
> is a poor idea.
>

2384. Lightning Arrestors Question

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-24 19:15:01 UTC
From: Robert11 <rgsros@xnotme.invalid>
Message-ID: <h9ggfl$44o$1@news.eternal-september.org>
Source record: 12793

Hi,

Saw a picture somewhere of an in-line lightning protector for a HF radio
receive only antenna.
Coax style.
Apparently has the typical gas tube, and when activated shorts the center
conductor to the braid.

Was wondering a bit about this.

I seem to remember in the old days, there was always a third tap on these
sort of things that you ran a solid ground to, e.g., a water pipe.

Does merely shorting to the braid provide "good" protection ?

Any thoughts would be appreciated.

Also want to ask: what about voltage surges of a few hundred volts or so
induced on an antenna lead from a nearby lightning strike perhaps
.
The levels way below what would trip a gas tube I would imagine, but still
more than enough to ruin a front end of a receiver.

How does one protect against these without breaking the bank doing so ?

Thanks,
Bob

2385. Re: Aluminum as a ground system

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-24 19:33:26 UTC
From: Art Unwin <arthurunwin@gmail.com>
Message-ID: <4d50f0aa-c985-469e-9157-2fa46bf735b5@y20g2000vbk.googlegroups.com>
Source record: 12794

On Sep 24, 1:56 pm, Ed <Huckleberry_REMO...@bigvalley.net> wrote:
> Below is good information, but only applies to electrical systems'
> grounding... not commercial radio vault lightning ground systems. Also,
> the aluminum system I came across certainly had crimp or other mechanical
> bonding methods which avoids the connection issues discussed in the NEC.
>
> I have no control or great concern on this, but was surprised to see
> aluminum for my first time. I just wondered if it was common.
>
> Ed K7AAT
>
> .
>
> > The National Electric Code has some fairly specific requirements for
> > how grounding system connections must be made. Soldering is not
> > permitted, as the high temperatures which can occur at such
> > connections during a lighting strike can blow the soldered connection
> > apart. Strong mechanical connections, or welding (e.g. "CadWeld"
> > thermite-type welding) is required.
>
> > I just ran across the following:
>
> > http://www.homeinspector.org/resources/journals/Intro-Electrical-Grou
> > nding.pdf
>
> > It indicates that the NEC forbids the use of aluminum conductors for
> > grounding "where in direct contact with masonry or earth. Aluminum
> > conductors require 18 inches of clearance from earth." (NEC
> > paragraphs 250-91a and 250-92a are cited).
>
> > There's also a note on the citation: "ATJ note: we have field
> > reports of complete failure of uninsulated bare aluminum grounding
> > conductor wire when it was not properly protected from corrosion - for
> > example where left touching a masonry foundation wall."
>
> > It sounds to me as using aluminum wire as a lightning ground system
> > is a poor idea.

The only time in my life that I saw aluminum corrosion was when I
spotted aluminum tubing sticking out of the ground at the house. It
just made a pile of aluminum dust!
I have no idea how a ground plane would work if the aluminum opened up
in time in different places, so sticking with copper seems the best
way to go. If I had a problem with radiation my mind would be pointing

at the aluminum every time so why the hassle?
You never know what state your ground is in these days because the
builders spread building garbage aound before they spread the grass !
Now we have acid rain to think about.

2386. Re: Lightning Arrestors Question

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-24 19:51:38 UTC
From: Owen Duffy <none@no.where>
Message-ID: <Xns9C913B9E3AED2nonenowhere@61.9.191.5>
Source record: 12799

"Robert11" <rgsros@xnotme.invalid> wrote in
news:h9ggfl$44o$1@news.eternal-september.org:

> Hi,
>
> Saw a picture somewhere of an in-line lightning protector for a HF
> radio receive only antenna.
> Coax style.
> Apparently has the typical gas tube, and when activated shorts the
> center conductor to the braid.
>
> Was wondering a bit about this.
>
> I seem to remember in the old days, there was always a third tap on
> these sort of things that you ran a solid ground to, e.g., a water
> pipe.
>
> Does merely shorting to the braid provide "good" protection ?
>
> Any thoughts would be appreciated.
>
> Also want to ask: what about voltage surges of a few hundred volts or
> so induced on an antenna lead from a nearby lightning strike perhaps
> .
> The levels way below what would trip a gas tube I would imagine, but
> still more than enough to ruin a front end of a receiver.

There are two issues, the differential impulse, and the common mode
impulse.

The shunt gas discharge tube will fire on the differential impulse
voltage, although relatively slowly, even if it includes a radioactive
isotope to assist ionisation.

More importantly perhaps is that there is likely to be a substantial
common mode current impulse and that will induce a transient voltage
gradient in your grounding system. That transient may cause potential
differences across equipment interfaces generally, possibly sufficient to
damage them. There is also a risk of injury or death to persons.

The type of suppressor you describe does precious little to deal with the
common mode current impulse. The 'third wire' assists shunting common
mode current to ground before entering the equipment room.

>
> How does one protect against these without breaking the bank doing so

> ?

Disconnect antenna conductors when not in use, and do not use them unless the probability of lighting is low?

Owen

2387. Re: Standing waves

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-24 19:52:19 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <%5Qum.3290$bd1.681@newsfe04.iad>
Source record: 12795

Szczepan Białż˝ek wrote:
> It seems that EM is useless for antennas. I do not know what is in
> space. May be that there EM is usefull.

EM (photonic) waves travel at the speed of light in the medium.
EM (photonic) waves do not travel inside conductors. EM (photonic)
waves travel in space near to the surface of a conductor. For an
HF wire antenna, the photonic waves travel in the space surrounding
the wire and some is radiated. For a wire transmission line, the
fields of the photonic waves tend to cancel and not much is radiated.
For a wave guide, the photonic waves travel in the space on the
inside of the wave guide and very little energy escapes the conductive
sides of the wave guide.

The purpose of using a conductor with free electrons is that the
free electrons are capable of emitting EM waves in the form of
photons.

1. Without the photons, there would be no radiation.

2. Without the free electrons, there would be no photons.

3. Without the metal conductor, there would be no free electrons.

It is a very simple cause and effect chain from the aluminum or
copper antenna to the release of photons as radiation. I think
my 12 year old grandson could understand the principles involved.
--
73, Cecil, IEEE, OOTC, http://www.w5dxp.com

2388. Re: Standing waves

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-24 19:55:43 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <a9Qum.3291$bd1.114@newsfe04.iad>
Source record: 12800

Szczepan Białż˝ek wrote:
>
> "Cecil Moore" <nospam@w5dxp.com> wrote

>> Szczepan Białż˝ek wrote:
>>> Even famous Pointing vector was born in fluids by Umov.
>>
>> It's "Poynting" vector, named after John Henry Poynting.

> Poynting "discovered" it in 1884.

You completely missed the "Poynt". See above. :-)
--
73, Cecil, IEEE, OOTC, http://www.w5dxp.com

2389. Re: HELP WITH LADDER LINE CALCULATIONS.

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-24 19:59:17 UTC
From: justme <jbleaux@gmail.com>
Message-ID: <35d8jm.v86.19.2@news.alt.net>
Source record: 12651

Sorry for the triple posting, I didn't think they got through.

Surely, someone on here knows these formulae and how to work them.

THANK YOU.

j/b
"justme" <jbleaux@gmail.com> wrote in message
news:35d89q.lva.17.2@news.alt.net...
> Although the formulae did not copy properly, if one wants to help me with
> this, they can go to the link below for the proper fomatting of these
> formulae. I would really appreciate it.
>
> Thank you.
>
> j/b
>
>
> d= .0808 (12 gauge stranded copper)
> S= 6 inches
> r=Effective dielectric constant (Air = 1.00054)
>
>
> Here is the Wikipedia link for these formulae:
>
http://unblockmoney.info/browse.php?b=5&u=Oi8vZW4ud2lraXBlZGlhLm9yZy93aWtpL0xhZGRlcl9saW5l
>
> The formula to calculate the impedance of ladder line is:
>
>
>
>
>
>
> The formula to calculate the impedance of open (air dielectric) ladder
> line
> is:
>
>
>
> The formula to calculate the distance between conductors of open ladder
> line
> is:
>
>
>

> Where:
> Z0 = Impedance.
> S = Center to center distance between wires.
> d = Diameter of the wire.
> r = Effective dielectric constant (Air = 1.00054).
> The unit of measure for S and d are not critical as long as they are the
> same.
>
> I GET DIFFERENT RESULTS WHEN COMPARING TO A GRAPH.
>
>
>
>
>
>

2390. Re: HELP WITH LADDER LINE CALCULATIONS.

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-24 20:02:38 UTC
From: Owen Duffy <none@no.where>
Message-ID: <Xns9C913D7BBA4A1nonenowhere@61.9.191.5>
Source record: 12653

"justme" <jbleaux@gmail.com> wrote in news:35d89r.lva.17.4@news.alt.net:

> Although the formulae did not copy properly, if one wants to help me
> with this, they can go to the link below for the proper fomatting of
> these formulae. I would really appreciate it.
>
> Thank you.
>
> j/b
>
...

I read all three posts, and it was a bit hard to understand your problem.

Firstly, the formulae on the Wiki page that use the log term are approximations of the function using the cosh term, and the approximation is poor for small S/d.

Have a look at the calculator at http://www.vk1od.net/calc/tl/twllc.htm , it uses the cosh term in its calcs. BTW, the metric equivalent of your example is 2mm wires spaced 150mm.

Owen

2391. Re: Lightning Arrestors Question

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-24 20:03:50 UTC
From: Mike Kaliski <michael.kaliski@tesco.net>
Message-ID: <fJOdnWpyYvc2TSbXnZ2dnUVZ8nidnZ2d@bt.com>
Source record: 12652

Hi Bob,

It takes about 100 volts for the neon tube to strike. The back to back diodes in the receiver antenna input should protect against this. The duration of a lightning strike is so brief that insufficient heat will be generated to destroy the diodes.
BUT
The neon or any spark gap protection device cannot protect against a direct lightning strike, only a near miss.

Shorting the coax centre to the braid may not be good electrical practice but will provide sufficient protection for all practical purposes against static build up and lightning strikes within around 100 yards from your antenna.

When at sea in the merchant navy a similar system did withstand a direct hit while I was in the radio room. The whole room lit up with a blue glow and there was a terrific crash from the antenna switching box as the strike arced to the ground through the ship's superstructure. Probably helped to have 20,000 tons of steel in contact with the ocean!

The receiver (Marconi Apollo - wadley loop tuning and digital frequency readout on nixie tubes) blanked for about 5 seconds and then came back. Marconi know how to build stuff in those days. :-)

Any protection is better than nothing, a spark gap (old automobile spark plug) or small neon tube, a couple of back to back diodes and a 5 megohm or higher resistor across the diodes to provide a static discharge path will do the job for pennies.

Regards

Mike G0ULI

"Robert11" <rgsros@xnotme.invalid> wrote in message
news:h9ggfl$44o$1@news.eternal-september.org...
> Hi,
>
> Saw a picture somewhere of an in-line lightning protector for a HF radio
> receive only antenna.
> Coax style.
> Apparently has the typical gas tube, and when activated shorts the center
> conductor to the braid.
>
> Was wondering a bit about this.
>
> I seem to remember in the old days, there was always a third tap on these

> sort of things that you ran a solid ground to, e.g., a water pipe.
>
> Does merely shorting to the braid provide "good" protection ?
>
> Any thoughts would be appreciated.
>
> Also want to ask: what about voltage surges of a few hundred volts or so
> induced on an antenna lead from a nearby lightning strike perhaps
> .
> The levels way below what would trip a gas tube I would imagine, but still
> more than enough to ruin a front end of a receiver.
>
> How does one protect against these without breaking the bank doing so ?
>
> Thanks,
> Bob
>

2392. Re: HELP WITH LADDER LINE CALCULATIONS.

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-24 20:04:11 UTC
From: Owen Duffy <none@no.where>
Message-ID: <Xns9C913DBEEA178nonenowhere@61.9.191.5>
Source record: 12654

Owen Duffy <none@no.where> wrote in
news:Xns9C913D7BBA4A1nonenowhere@61.9.191.5:

...
> Firstly, the formulae on the Wiki page that use the log term are
> approximations of the function using the cosh term, and the
> approximation is poor for small S/d.
>
> Have a look at the calculator at
> http://www.vk1od.net/calc/tl/twllc.htm , it uses the cosh term in its
> calcs. BTW, the metric equivalent of your example is 2mm wires spaced
> 150mm.

cosh above should be acosh!

Owen

2393. Re: HELP WITH LADDER LINE CALCULATIONS.

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-24 20:11:26 UTC
From: Owen Duffy <none@no.where>
Message-ID: <Xns9C913EF99FBC5nonenowhere@61.9.191.5>
Source record: 12655

... not doing too well thismorning, too eager to get out to breakfast.

I also meant to note that the log formula is 276log(S/d) using the same notation as the acosh formula.

The authors have cobbled formulas from different places, and they do not use a consistent meaning for S and d.

But, use the acosh formula for close spacings.

Owen

2394. Re: Lightning Arrestors Question

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-24 20:18:33 UTC
From: Owen Duffy <none@no.where>
Message-ID: <Xns9C91402E67909nonenowhere@61.9.191.5>
Source record: 12657

"Mike Kaliski" <michael.kaliski@tesco.net> wrote in
news:fJOdnWpyYvc2TSbXnZ2dnUVZ8nidnZ2d@bt.com:

...
> Any protection is better than nothing,

... unless it lulls you into a false sense of security ...

> a spark gap (old automobile
> spark plug) or small neon tube, a couple of back to back diodes and a
> 5 megohm or higher resistor across the diodes to provide a static
> discharge path will do the job for pennies.

as most of these may.

I do recall taking an early (probably the first) Collins digitally tuned receiver to a coast radio station for evaluation. It had inverse parallel diodes across the RF amp input for protection of the FETs and was totally unusable as when the on-site 500kHz transmitter was keyed up, it wiped out all of the receivers (not just this one) with broadband noise. It took a few minutes to realise what was causing ALL of the ROs to hear the station callsign, not as a beat note, but as noise as if it was near to where they were listening and just needed to be tuned in. Whilst the Collins was connected to an antenna, it caused havoc, even if powered off!

Beware of the effects of inverse parallel diodes across the antenna.

Owen

2395. Re: Standing waves

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-24 20:21:44 UTC
From: Art Unwin <arthurunwin@gmail.com>
Message-ID: <e3b8a125-9c94-4d30-a160-ea163ad96cfb@e18g2000vbe.googlegroups.com>
Source record: 12656

On Sep 24, 12:27 pm, Szczepan Białek <sz.bia...@wp.pl> wrote:
> "Cecil Moore" <nos...@w5dxp.com> wrotenews:0NIum.13657$tG1.5059@newsfe22.iad...>
Szczepan Bia³ek wrote:
> >> Even famous Pointing vector was born in fluids by Umov.
>
> > It's "Poynting" vector, named after John Henry Poynting.
>
> >http://en.wikipedia.org/wiki/Poynting_vector
>
> "The Umov-Poynting vector[6] discovered by Nikolay Umov in 1874 describes
> energy flux in liquid and elastic media in a completely generalized view."
>
> Poynting "discovered" it in 1884.
> "He was the developer and eponym of the Poynting vector, which describes the
> direction and magnitude of electromagnetic energy flow and is used in the
> Poynting theorem, a statement about energy conservation for electric and
> magnetic fields. This work was first published in 1884. "
>
> The same is with Maxwell math. Helmholtz wrote such for his whirls.
> Many people are thinking in the same time about the same think.
> I am not alone in the "Acoustic analogy".
> S*
You are correct in your analysis on transmission lines and radiation
and also with your linkage to other sciences such as water flow,
lamina make up.
Einstein made the connection to the standard model and it's four
forces. These are in constant use in our Universe so yes the
mathematics are intertwined. But there are many things we do not
understand about electricity and magnetics such as the fields that are
generated consist of.......what? Mass, elastic energy e.t.c?
So at this point it would be futile to rid yourself of EM as you would
also be ridding yourself
of 1/4 of the Standard model which has not entered the Universe as a
garbage thing.
To join the mathematics as applied by the Standard model to sciences
of the Universe is very idealistic but doable. But at the same time
mathematics has lead us to this present stage with respect to
radiation where with all the tools that scientists have now have not
been able to close gaps in radiation as we know it to this day. Look
at radiation and try to connect it to light and heat emmisions. The
last two science see them as rays, For
radiation ala antennas it is seen as waves, magnetic waves when we
know that intersections of such create distortions, deflections and
even cancellation. So why not begin with one of these problems from

first principles to find a single opening of contention to build a new theory upon. The odds are that the required evidence is already out there
where it is constituted on both mathematics and observation thru the ages rather than something that popped out of a computer where you have to do all the observations from scratch as to where this new formula fits in. Since you are looking at acoustics why not start with PV=WRT
which actually consists of forces stated in the standard model and thus force
constituents of all the sciences, a treasure chest of guide lines and information. You are searching for the new where all on this group resist change from the old. Your treasure chest does not lie here only minefieldsand decaying sign posts.
Regards

2396. Re: HELP WITH LADDER LINE CALCULATIONS.

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-24 20:24:43 UTC
From: Tim Shoppa <shoppa@trailing-edge.com>
Message-ID: <7fa41d9d-8ecc-495a-8e5b-eaa765e07e4e@p15g2000vbl.googlegroups.com>
Source record: 12658

On Sep 23, 11:03 pm, "justme" <jble...@gmail.com> wrote:
> I GET DIFFERENT RESULTS WHEN COMPARING TO A GRAPH.

Exact impedance of ladder line is usually unimportant. It is so low-loss, that even large impedance mismatches do not result in any appreciable transmission line losses.

Another thing, base 10 log and natural log often are confused.

Tim N3QE

2397. Re: HELP WITH LADDER LINE CALCULATIONS.

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-24 20:46:02 UTC
From: Owen Duffy <none@no.where>
Message-ID: <Xns9C9144D7210C3nonenowhere@61.9.191.5>
Source record: 12659

Owen Duffy <none@no.where> wrote in news:Xns9C913EF99FBC5nonenowhere@61.9.191.5:

> The authors have cobbled formulas from different places, and they do not
> use a consistent meaning for S and d.

Sorry, I was wrong there, they are 'correct'... 276log(2*6/0.08) gives 600 ohms which is the correct answer.

Check that the graph you are referencing uses the same meaning for the two dimensions.

Owen

2398. Re: Aluminium oxide removal

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-24 20:54:32 UTC
From: Michael Coslo <mjc5@psu.edu>
Message-ID: <h9gmad$540q$1@tr22n12.aset.psu.edu>
Source record: 12660

Audio1@teranews.com wrote:
> Michael Coslo wrote:
>> Richard Clark wrote:
>>
>> The corriolus force (twisting) might work too.
>>
>>
>> Well, done, sir, well done!
>
> Not that well, he could have spelled it correctly,

In the time honored tradition of destroying a joke by explaining it, Richard made a remark about the OP's noting that other threads get a lot more traction, namely the Coriolis thread of Arts'. That one had a lot of posts. The twisting was the obvious reference to Arts' theory, which was combined and brought home with the necessary twist on the antenna elements. Finally, the spelling - well, Art has been known to make a few spelling mistakes. We're talking three levels of joke in one here!

> http://en.wikipedia.org/wiki/Coriolis_effect

2399. Re: HELP WITH LADDER LINE CALCULATIONS.

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-24 21:03:09 UTC
From: Art Unwin <arthurunwin@gmail.com>
Message-ID: <73b90534-4085-48d7-8832-78e73c791e86@e18g2000vbe.googlegroups.com>
Source record: 12661

On Sep 24, 3:46 pm, Owen Duffy <n...@no.where> wrote:
> Owen Duffy <n...@no.where> wrote in news:Xns9C913EF99FBC5nonenowhere@
> 61.9.191.5:
>
> > The authors have cobbled formulas from different places, and they do not
> > use a consistent meaning for S and d.
>
> Sorry, I was wrong there, they are 'correct'... 276log(2*6/0.08) gives 600
> ohms which is the correct answer.
>
> Check that the graph you are referencing uses the same meaning for the two
> dimensions.
>
> Owen

Close one end and then measure the impedance. If you are making your
own you will eventually have to do it anyway to determine your
matching system

2400. Re: HELP WITH LADDER LINE CALCULATIONS.

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-24 21:22:56 UTC
From: steveeh131047 <google@karinya.net>
Message-ID: <11c60904-d961-4e70-9b60-51e8a463fb89@o13g2000vbl.googlegroups.com>
Source record: 12662

On Sep 24, 9:24 pm, Tim Shoppa <sho...@trailing-edge.com> wrote:
> On Sep 23, 11:03 pm, "justme" <jble...@gmail.com> wrote:
>
> > I GET DIFFERENT RESULTS WHEN COMPARING TO A GRAPH.
>
> Exact impedance of ladder line is usually unimportant. It is so low-
> loss, that even large impedance mismatches do not result in any
> appreciable transmission line losses.
>
> Another thing, base 10 log and natural log often are confused.
>
> Tim N3QE

Not so!

For example in this month's QST magazine there's an article on using a 40m full-wave loop on 80m. The designer uses a series quarter-wave section of 450 ohm ladderline to make the impedance "more manageable". He quotes 300+j8000 at the antenna end of the ladderline. Now plug those values into Owen's calculator, using something like Wireman 551 for the line, and you'll get 7dB of feedline loss.

73,
Steve G3TXQ

2401. Re: Aluminum as a ground system

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-24 21:38:39 UTC
From: Roger D Johnson <n1rj~@roadrunner.com>
Message-ID: <AFRum.192268$8B7.98116@newsfe20.iad>
Source record: 12663

Ed wrote:
> I am only interested in the long term reliability of an aluminum ground
> system in comparison to the more common copper system. This is for
> lightning suppression only, I am not addressing RF issues. I am wondering
> if aluminum can handle the potential surge currents that copper can... and
> how well does its ground conductivity work when buried, when compared to
> copper.
>
> Ed K7AAT
>
If you're talking lightning, you're talking RF!

73, Roger

2402. Re: HELP WITH LADDER LINE CALCULATIONS.

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-24 22:31:07 UTC
From: Owen Duffy <none@no.where>
Message-ID: <Xns9C9156A889938nonenowhere@61.9.191.5>
Source record: 12664

steveeh131047 <google@karinya.net> wrote in news:11c60904-d961-4e70-9b60-51e8a463fb89@o13g2000vbl.googlegroups.com:

...
> For example in this month's QST magazine there's an article on using a
> 40m full-wave loop on 80m. The designer uses a series quarter-wave
> section of 450 ohm ladderline to make the impedance "more manageable".
> He quotes 300+j8000 at the antenna end of the ladderline. Now plug
> those values into Owen's calculator, using something like Wireman 551
> for the line, and you'll get 7dB of feedline loss.

Steve,

It may even be worse than that as TLLC models skin effect in a homogenouse conductor, and some ladder lines use copper clad steel that will have higher loss at the low end of HF where the coating thickness is less than several skin depths. This is especially true of the more expensive stranded CCS types.

But, yes... QST runs stories from time to time that reinforce the myth that ladder line is so good that you *never* need to consider its loss.

Here is are reviews of a couple of older articles discussing the relative merits of ladder line and coax:

http://vk1od.net/blog/?p=316

http://vk1od.net/transmissionline/LOLL/

Owen

2403. Re: cordless phone range

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-24 22:37:20 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <9rsnb5tk21gbtpo0h62gigmtdvjur5tvt6@4ax.com>
Source record: 12665

On Thu, 24 Sep 2009 10:57:19 -0700 (PDT), KD7HB <co_farmer@yahoo.com>
wrote:

>Hi, Richard.
>I learned of this trick many years ago, 1960's time frame. Portland
>drilled a second tunnel through a ridge on West Burnside street,
>making it two lanes each direction. Drivers began complaining that
>their radio reception always went out when they entered the tunnel.
>Duh!!! Everyone said nothing could be done, This was the way radio
>worked.
>
>One engineer said he could fix it. They mounted insulators in the
>tunnel ceiling, and strung a wire the full length of the tunnel. On
>the East side, they ran the wire up somewhere on the hillside. I never
>was able to determine just where it went. The antenna picked up the
>local am/fm signals and radiated them in the tunnel. Drivers could
>continue to listen to the radio when they went into the tunnel. Volume
>was reduced sometimes, but reception continued.
>
>I wonder if hf and vhf ham radio operation is possible in the tunnel?
>
>I see the same wire trick in other tunnels. The I-90 tunnels East of
>Seattle have the wire.
>
>Paul, KD7HB

Hi Paul,

You can get the same thing going through the tunnel north of the
Golden Gate bridge (this from my experience of 50 years ago).

What these couplings are, for AM at least, are evanescent waves, what
current science calls Plasmons. Others here cut and paste reports of
Tunneling (of the relativistic kind, not the hole in a mountain kind)
- all the same thing, none of which is understood by those who simply
push the copy button on a Xerox.

As the frequency rises, however, it is harder to propagate that energy
90 degrees off the wire unless you are within one quarter to one third
of a wavelength away (which now brings rise to parasitic coupling - as
I said all of this is the same stuff).

73's
Richard Clark, KB7QHC

2404. Re: HELP WITH LADDER LINE CALCULATIONS.

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-24 23:01:43 UTC
From: steveeh131047 <google@karinya.net>
Message-ID: <f5d0a13c-66db-4ae4-acdc-9b07fa4ced50@q14g2000vbi.googlegroups.com>
Source record: 12666

Owen,

I've e-mailed comments to the QST "Technical Correspondence" team concerning the failure to mention ladderline losses in the loop article - it'll be interesting to see if they respond with any comments in a future edition.

73,
Steve G3TXQ

2405. Re: Aluminum as a ground system

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-24 23:18:51 UTC
From: Ed <Huckleberry_REMOVE_@bigvalley.net>
Message-ID: <Xns9C90A5F554357Huckleberrybigvalley@198.186.192.196>
Source record: 12667

```
>>
> If you're talking lightning, you're talking RF!
>
> 73, Roger
>

Roger, Lightning is DC. How could it be " RF " if it has no
"frequency" ?

Ed

.
```

2406. Re: Aluminum as a ground system

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-24 23:35:58 UTC
From: christofire <christofire@btinternet.com>
Message-ID: <5JGdnbN7PavsnyHXnZ2dnUVZ8qKdnZ2d@bt.com>
Source record: 12668

"Ed" <Huckleberry_REMOVE_@bigvalley.net> wrote in message
news:Xns9C90A5F554357Huckleberrybigvalley@198.186.192.196...
>
>>>
>> If you're talking lightning, you're talking RF!
>>
>> 73, Roger
>>
>
> Roger, Lightning is DC. How could it be " RF " if it has no
> "frequency" ?
>
>
> Ed

A lightning bolt is a transient so its current must be composed of components having a wide range frequencies. Consequently lightning conductors need small self-inductance as well as small resistance to work properly.

Chris

2407. Re: Standing waves

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-25 00:00:33 UTC
From: Richard Fry <rfry@adams.net>
Message-ID: <7ca4d776-cd9b-4aec-b9a4-d3dd09d98c2f@h30g2000vbr.googlegroups.com>
Source record: 12669

On Sep 24, 3:21 pm, Art Unwin <arthurun...@gmail.com> wrote
to confirm the posts of Szczepan Białek (a.k.a."S*"):

> You are correct in your analysis on transmission lines and radiation...

That may be your opinion, Art.

S* may find it supportive.

But if you hope that anyone else will accept your opinion, you will
need to provide the literal proof of such using the known, and proven
principles of physics.

RF

2408. Re: Aluminum as a ground system

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-25 00:54:15 UTC
From: Dave <noone@nowhere.com>
Message-ID: <XwUum.3458$tl3.655@nwrddc01.gnilink.net>
Source record: 12670

```
"Ed" <Huckleberry_REMOVE_@bigvalley.net> wrote in message
news:Xns9C90A5F554357Huckleberrybigvalley@198.186.192.196...
>
>>>
>> If you're talking lightning, you're talking RF!
>>
>> 73, Roger
>>
>
> Roger, Lightning is DC. How could it be " RF " if it has no
> "frequency" ?

lightning has MANY frequencies from DC to many MHz.
```

2409. Re: Aluminum as a ground system

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-25 01:53:38 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <mpVum.442934$Ta5.415791@newsfe15.iad>
Source record: 12671

Ed wrote:
> Lightning is DC. How could it be " RF " if it has no
> "frequency" ?

Fourier analysis of pulsed DC?
--
73, Cecil, IEEE, OOTC, http://www.w5dxp.com

2410. Re: Aluminum as a ground system

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-25 08:04:05 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <65WdnQy2CPDh5CHXnZ2dnUVZ_vednZ2d@giganews.com>
Source record: 12672

Ed wrote:
>
> Roger, Lightning is DC. How could it be " RF " if it has no
> "frequency" ?
>
>
> Ed

If you're not convinced after reading the responses, turn on your radio the next time a lightning storm is anywhere nearby -- or for that matter, anywhere within skip propagation range. Then explain how it is your radio is hearing DC.

Roy Lewallen, W7EL

2411. Re: Aluminum as a ground system

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-25 08:27:15 UTC
From: Owen Duffy <none@no.where>
Message-ID: <Xns9C91BBB9B3876nonenowhere@61.9.191.5>
Source record: 12674

Roy Lewallen <w7el@eznec.com> wrote in
news:65WdnQy2CPDh5CHXnZ2dnUVZ_vednZ2d@giganews.com:

> Ed wrote:
>>
>> Roger, Lightning is DC. How could it be " RF " if it has no
>> "frequency" ?
>>
>>
>> Ed
>
> If you're not convinced after reading the responses, turn on your radio
> the next time a lightning storm is anywhere nearby -- or for that
> matter, anywhere within skip propagation range. Then explain how it is
> your radio is hearing DC.
>
> Roy Lewallen, W7EL
>

Indeed Roy, rather than argue that lightning doesn't contain AC
components, one could more cogently argue that it is *not* DC.

It is evident that many hams treat lighting as DC in the design of their
lightning protection system (eg small conductor diameter, sharp bends,
loops, u-turns etc in down conductors), but if you pick up the simplest
models for analysing a lightning down conductor, they treat it as excited
by a double ramp current, and the down conductor as an inducance.

Such a model is not a DC model.

Owen

2412. Re: Standing waves

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-25 08:27:34 UTC
From: Szczepan Białek <sz.bialek@wp.pl>
Message-ID: <h9hjkt$ga8$1@node1.news.atman.pl>
Source record: 12673

"Art Unwin" <arthurunwin@gmail.com> wrote
news:e3b8a125-9c94-4d30-a160-ea163ad96cfb@e18g2000vbe.googlegroups.com...
On Sep 24, 12:27ďż˝ pm, Szczepan BiaĹ□ek <sz.bia...@wp.pl> wrote:
> "Cecil Moore" <nos...@w5dxp.com>
> wrotenews:0NIum.13657$tG1.5059@newsfe22.iad...> Szczepan BiaÂłek wrote:
> >> Even famous Pointing vector was born in fluids by Umov.
>
>> > It's "Poynting" vector, named after John Henry Poynting.
>
> >http://en.wikipedia.org/wiki/Poynting_vector
>
>> "The Umov-Poynting vector[6] discovered by Nikolay Umov in 1874 describes
> energy flux in liquid and elastic media in a completely generalized view."
>
>> Poynting "discovered" it in 1884.
> "He was the developer and eponym of the Poynting vector, which describes
> the
> direction and magnitude of electromagnetic energy flow and is used in the
> Poynting theorem, a statement about energy conservation for electric and
> magnetic fields. This work was first published in 1884. "
>
>> The same is with Maxwell math. Helmholtz wrote such for his whirls.
> Many people are thinking in the same time about the same think.
> I am not alone in the "Acoustic analogy".
> S*
>You are correct in your analysis on transmission lines and radiation
and also with your linkage to other sciences such as water flow,
lamina make up.
>Einstein made the connection to the standard model and it's four
forces. These are in constant use in our Universe so yes the
mathematics are intertwined. But there are many things we do not
understand about electricity and magnetics such as the fields that are
generated consist of.....what? Mass, elastic energy e.t.c?
>So at this point it would be futile to rid yourself of EM as you would
also be ridding yourself
of 1/4 of the Standard model which has not entered the Universe as a
garbage thing.
>To join the mathematics as applied by the Standard model to sciences
of the Universe is very idealistic but doable. But at the same time
mathematics has lead us to this present stage with respect to
radiation where with all the tools that scientists have now have not
been able to close gaps in radiation as we know it to this day. Look
at radiation and try to connect it to light and heat emmisions. The

last two science see them as rays, For
radiation ala antennas it is seen as waves, magnetic waves when we know that intersections of such create distortions, deflections and even cancellation. So why not begin with one of these problems from first principles to find a single opening of contention to build a new theory upon. The odds are that the required evidence is already out there
where it is constituted on both mathematics and observation thru the ages rather than something that popped out of a computer where you have to do all the observations from scratch as to where this new formula fits in. Since you are looking at acoustics why not start with PV=WRT
which actually consists of forces stated in the standard model and thus force
constituents of all the sciences, a treasure chest of guide lines and information. You are searching for the new where all on this group resist change from the old.

They are the practicians. They know the evidences. Only teachers "resist change from the old."
I know evidences about the Gas analogy from the pneumonic control systems and many others branches.
Now I am collecting the evidences from the radio waves people that the voltage radiate not current. I pick-up a lot.

>Your treasure chest does not lie here only
minefieldsand decaying sign posts.
>
Regards
S*

2413. re:Aluminum as a good ground system

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-25 09:10:32 UTC
From: Cyclone651 <rollie@iowatelecom.net>
Message-ID: <h9i1ebvaq1@news.netins.net>
Source record: 12675

When using aluminum, always use one wire size larger than what is specified for copper wire. I've seen aluminum used in telephone company ground fields for years, I don't think the corrosion is any worse than copper. Always use a no-oxide "grease" when connecting aluminum to a different metal, like copper or a lot of corrosion will occur. Do a "Google" search on the subject and you'll probably find all the information you want.

2414. Re: cordless phone range

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-25 09:51:56 UTC
From: Bob Bob <bob3bob3@suddenlink.net>
Message-ID: <ugguo6-cr5.ln1@p400bob.personal.cox.net>
Source record: 12676

Hi Paul

More for interest rather than on topic.

I use to work for the company that did a tunnel rebroadcast systems for a series of motorway tunnels in Sydney (Australia) back about 5 years ago.

It had to cover a number of operating freqs, mainly AM, FM, cell phones and certain VHF/UHF comms. Most were active rebroadcast and effectively were same frequency linear repeaters. The tunnel helped not letting radiation out as well. Reradiating was done with two cables the length of the tunnel. AM was a single wire and the rest was via leaky coax. The single wire was resistive terminated at one end and coupled with some large toroidal transformer at the source end. I dont remember all the details but think that the toried had multiple inputs.

We also had a class A amplifier system on a UHF freqency. (about 401MHz from memory) It had two yagis spaced maybe 20ft apart facing opposite directions in the tunnel. Enough isolation was achieved to not cause feedback and of course we had a second pair of yagis stacked above that for the other direction.

You even find "mine comms" systems that work in a similar vein.

Interesting story about the Portland & Seatle systems, thanks!

Cheers Bob VK2YQA

KD7HB wrote:

>
> I see the same wire trick in other tunnels. The I-90 tunnels East of
> Seattle have the wire.
>
> Paul, KD7HB

2415. Re: Aluminum as a ground system

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-25 11:43:19 UTC
From: rikoski@earthlink.net
Message-ID: <rikoski-D774BB.06431925092009@news.newsrazor.net>
Source record: 12677

In article <Xns9C91BBB9B3876nonenowhere@61.9.191.5>,
Owen Duffy <none@no.where> wrote:

> Roy Lewallen <w7el@eznec.com> wrote in
> news:65WdnQy2CPDh5CHXnZ2dnUVZ_vednZ2d@giganews.com:
>
> > Ed wrote:
> >>
> >> Roger, Lightning is DC. How could it be " RF " if it has no
> >> "frequency" ?
> >>
> >>
> >> Ed
> >
> > If you're not convinced after reading the responses, turn on your radio
> > the next time a lightning storm is anywhere nearby -- or for that
> > matter, anywhere within skip propagation range. Then explain how it is
> > your radio is hearing DC.
> >
> > Roy Lewallen, W7EL
> >
>
> Indeed Roy, rather than argue that lightning doesn't contain AC
> components, one could more cogently argue that it is *not* DC.
>
> It is evident that many hams treat lighting as DC in the design of their
> lightning protection system (eg small conductor diameter, sharp bends,
> loops, u-turns etc in down conductors), but if you pick up the simplest
> models for analysing a lightning down conductor, they treat it as excited
> by a double ramp current, and the down conductor as an inducance.
>
> Such a model is not a DC model.
>
> Owen

Lightning is pulsed dc. The pulse can be examined by fourier analysis,
as every sophomore electrical engineering student knows, revealing that
the lightning pulse is made up of a superposition of ac waves of many
frequencies.

One can get away with explaining some things about lightning using
simple dc analysis but most of the interesting stuff requires ac
analysis.

And then there is the business of a nearby lightning strike raising the voltage of ground lines so that during the strike; they are no longer at ground potential. This requires ac analysis with impedances rather than resistances.

2416. Re: Aluminum as a ground system

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-25 13:28:46 UTC
From: Michael Coslo <mjc5@psu.edu>
Message-ID: <h9igie$700c$1@tr22n12.aset.psu.edu>
Source record: 12678

Dave wrote:
>
> "Ed" <Huckleberry_REMOVE_@bigvalley.net> wrote in message
> news:Xns9C90A5F554357Huckleberrybigvalley@198.186.192.196...
>>
>>>>
>>> If you're talking lightning, you're talking RF!
>>>
>>> 73, Roger
>>>
>>
>> Roger, Lightning is DC. How could it be " RF " if it has no
>> "frequency" ?
>
> lightning has MANY frequencies from DC to many MHz.

DC to daylight in fact. Well, light at least. 8^)

- 73 de Mike N3LI -

2417. Re: Aluminum as a ground system

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-25 16:33:44 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <62spb5hgjdqnin225odajkscrrn1848gp3@4ax.com>
Source record: 12679

On Fri, 25 Sep 2009 09:28:46 -0400, Michael Coslo <mjc5@psu.edu>
wrote:

>> lightning has MANY frequencies from DC to many MHz.
>
>
>DC to daylight in fact. Well, light at least. 8^)

And all this radiation happens because of a severe lack of
equilibrium.

Art can't fool Mother Nature.

73's
Richard Clark, KB7QHC

2418. Re: Aluminium oxide removal

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-25 16:50:09 UTC
From: John Ferrell <jferrell13@triad.rr.com>
Message-ID: <pqspb519ojldhsqar4pblacn7kv9od5emc@4ax.com>
Source record: 12680

On Thu, 24 Sep 2009 09:32:28 -0400, Michael Coslo <mjc5@psu.edu>
wrote:

> The delivery man just dropped off
>> a new Ameritron AL-80B amplifier today, I am getting ready to open the
>> box...
>
>
>
>Gonna bark big, eh?
>
>
> - 73 de N3LI -
In my 48 years of Amateur Radio this is a new direction. I have never
had more than 100 watts available.
Besides, it was a 49 year anniversary present from the XYL!

John Ferrell W8CCW

2419. Re: Aluminum as a ground system

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-25 17:09:06 UTC
From: Ed <Huckleberry_REMOVE_@bigvalley.net>
Message-ID: <Xns9C916744E4591Huckleberrybigvalley@198.186.192.196>
Source record: 12681

>> If you're not convinced after reading the responses, turn on your
>> radio the next time a lightning storm is anywhere nearby -- or for
>> that matter, anywhere within skip propagation range. Then explain how
>> it is your radio is hearing DC.
>>
>> Roy Lewallen, W7EL

I think we're arguing semantics on this. I spoke in pure terms... there is no argument that Lightning itself is a DC current. The fact that it is so short may bring the other RF issues to play, but that is not where my thoughts were when speaking on the DC issue..

Ed

2420. Re: Aluminum as a ground system

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-25 17:30:01 UTC
From: You <you@shadow.orgs>
Message-ID: <you-885103.09300025092009@unknown.usenetserver.com>
Source record: 12682

In article <Xns9C90A5F554357Huckleberrybigvalley@198.186.192.196>,
Ed <Huckleberry_REMOVE_@bigvalley.net> wrote:

> >>
> > If you're talking lightning, you're talking RF!
> >
> > 73, Roger
> >
>
> Roger, Lightning is DC. How could it be " RF " if it has no
> "frequency" ?
>
>
> Ed
>
>
>
>
> .

Well, actually Lightning is a Pulse of DC, which causes ANY conductor
that it reaches to "RING" which is then AC, as it dissipates...
So, it has Both components.....

2421. Re: Aluminum as a ground system

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-25 18:18:55 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <e6adnfTt3MYFlCDXnZ2dnUVZ_sOdnZ2d@giganews.com>
Source record: 12683

Ed wrote:
>>> If you're not convinced after reading the responses, turn on your
>>> radio the next time a lightning storm is anywhere nearby -- or for
>>> that matter, anywhere within skip propagation range. Then explain how
>>> it is your radio is hearing DC.
>>>
>>> Roy Lewallen, W7EL
>
>
> I think we're arguing semantics on this. I spoke in pure terms... there
> is no argument that Lightning itself is a DC current. The fact that it is
> so short may bring the other RF issues to play, but that is not where my
> thoughts were when speaking on the DC issue..
>
>
> Ed

Semantics are important when the goal is communication.

Lightning induces extreme currents in nearby conductors, and radiates strong fields covering a wide portion of the radio spectrum, both characteristics of its RF content. High voltage DC transmission lines, for example, don't. While you could correctly call lightning "pulsed DC", it's certainly not correct to say it "isn't RF". As other folks have pointed out, effective lightning protection requires a solid understanding of its RF nature.

Roy Lewallen, W7EL

2422. Re: Aluminum as a ground system

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-25 18:39:42 UTC
From: christofire <christofire@btinternet.com>
Message-ID: <p66dnbpED4vhkyDXnZ2dnUVZ8l6dnZ2d@bt.com>
Source record: 12684

<rikoski@earthlink.net> wrote in message
news:rikoski-D774BB.06431925092009@news.newsrazor.net...
> In article <Xns9C91BBB9B3876nonenowhere@61.9.191.5>,
> Owen Duffy <none@no.where> wrote:
>
>> Roy Lewallen <w7el@eznec.com> wrote in
>> news:65WdnQy2CPDh5CHXnZ2dnUVZ_vednZ2d@giganews.com:
>>
>> > Ed wrote:
>> >>
>> >> Roger, Lightning is DC. How could it be " RF " if it has no
>> >> "frequency" ?
>> >>
>> >>
>> >> Ed
>> >
>> > If you're not convinced after reading the responses, turn on your radio
>> > the next time a lightning storm is anywhere nearby -- or for that
>> > matter, anywhere within skip propagation range. Then explain how it is
>> > your radio is hearing DC.
>> >
>> > Roy Lewallen, W7EL
>> >
>>
>> Indeed Roy, rather than argue that lightning doesn't contain AC
>> components, one could more cogently argue that it is *not* DC.
>>
>> It is evident that many hams treat lighting as DC in the design of their
>> lightning protection system (eg small conductor diameter, sharp bends,
>> loops, u-turns etc in down conductors), but if you pick up the simplest
>> models for analysing a lightning down conductor, they treat it as excited
>> by a double ramp current, and the down conductor as an inducance.
>>
>> Such a model is not a DC model.
>>
>> Owen
>
> Lightning is pulsed dc. The pulse can be examined by fourier analysis,
> as every sophomore electrical engineering student knows, revealing that
> the lightning pulse is made up of a superposition of ac waves of many
> frequencies.
>
> One can get away with explaining some things about lightning using
> simple dc analysis but most of the interesting stuff requires ac

> analysis.
>
> And then there is the business of a nearby lightning strike raising the
> voltage of ground lines so that during the strike; they are no longer at
> ground potential. This requires ac analysis with impedances rather than
> resistances.

... and the mayhem that can ensue to wired services, such as telephone, when a structure at a transmitting station on a hill is struck!

Chris

2423. Re: Aluminum as a ground system

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-25 19:23:24 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <546qb5hjpr5336feq2t328mq8q5fl1i9na@4ax.com>
Source record: 12685

On 25 Sep 2009 17:09:06 GMT, Ed <Huckleberry_REMOVE_@bigvalley.net>
wrote:

> I think we're arguing semantics on this. I spoke in pure terms... there
>is no argument that Lightning itself is a DC current.

Only in the sense that for 100nS a 160M transmission is DC current.

73's
Richard Clark, KB7QHC

2424. Re: Lightning Arrestors Question

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-25 20:20:40 UTC
From: Mike Kaliski <michael.kaliski@tesco.net>
Message-ID: <wfKdnS7F1NOGuyDXnZ2dnUVZ8vidnZ2d@bt.com>
Source record: 12686

Hi Owen,

Point taken. The standard Marconi ship station fed the receive antenna through the back contacts of the key, so the receiver was always disconnected whenever the transmitter was operating. I remember having to pay about ï¿½15 extra for my CMOS TTL electronic keyer to be fitted with a changeover relay rather than direct keying so I could use it with the standard Marconi ship installation. Still working fine today after 34 years of use!

I don't recall ever operating close enough to any other stations for the diodes to cause me a problem, although I did once upset a Russian warship when operating from Angola. My signals were apparently overloading their equipment...

Regards

Mike G0ULI

"Owen Duffy" <none@no.where> wrote in message
news:Xns9C91402E67909nonenowhere@61.9.191.5...
> "Mike Kaliski" <michael.kaliski@tesco.net> wrote in
> news:fJOdnWpyYvc2TSbXnZ2dnUVZ8nidnZ2d@bt.com:
>
> ...
>> Any protection is better than nothing,
>
> ... unless it lulls you into a false sense of security ...
>
>> a spark gap (old automobile
>> spark plug) or small neon tube, a couple of back to back diodes and a
>> 5 megohm or higher resistor across the diodes to provide a static
>> discharge path will do the job for pennies.
>
> as most of these may.
>
> I do recall taking an early (probably the first) Collins digitally tuned
> receiver to a coast radio station for evaluation. It had inverse parallel
> diodes across the RF amp input for protection of the FETs and was totally
> unusable as when the on-site 500kHz transmitter was keyed up, it wiped
> out all of the receivers (not just this one) with broadband noise. It
> took a few minutes to realise what was causing ALL of the ROs to hear the
> station callsign, not as a beat note, but as noise as if it was near to
> where they were listening and just needed to be tuned in. Whilst the
> Collins was connected to an antenna, it caused havoc, even if powered
> off!

>
> Beware of the effects of inverse parallel diodes across the antenna.
>
> Owen

2425. Re: Standing waves

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-25 23:15:50 UTC
From: Walter Maxwell <walt@w2du.com>
Message-ID: <vfjqb5tuevriln7ueodi5e1rjplmgf9ek2@4ax.com>
Source record: 12687

With the Art and Szczepan show appearing with such humor on an
every-day basis, I no longer turn on the TV to watch Comedy Central.

Walt, W2DU

2426. Re: Aluminum as a good ground system

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-26 01:03:46 UTC
From: Will <whax44@gmail.com>
Message-ID: <7dab0a26-f48c-4fba-825d-8b10e4bb3dfd@o36g2000vbl.googlegroups.com>
Source record: 12688

On Sep 25, 5:10 am, "Cyclone651" <rol...@iowatelecom.net> wrote:
> When using aluminum, always use one wire size larger than what is specified
> for copper wire. I've seen aluminum used in telephone company ground fields
> for years, I don't think the corrosion is any worse than copper. Always use
> a no-oxide "grease" when connecting aluminum to a different metal, like
> copper or a lot of corrosion will occur. Do a "Google" search on the
> subject and you'll probably find all the information you want.

non sequitor.

2427. Re: Standing waves

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-26 01:04:10 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <1tpqb5l3rpim2mhdks4i1squp7piglnbjl@4ax.com>
Source record: 12689

On Fri, 25 Sep 2009 19:15:50 -0400, Walter Maxwell <walt@w2du.com>
wrote:

>With the Art and Szczepan show appearing with such humor on an
>every-day basis, I no longer turn on the TV to watch Comedy Central.
>
>Walt, W2DU

Hi Walt,

They almost re-create the "Who's on First?" skit except neither wants
to be the straight man.

73's
Richard Clark, KB7QHC

2428. Re: Ordering Pre-Made Coax Assy's & Adapters ?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-26 12:04:07 UTC
From: Slade Henson <derechim@earthlink.net>
Message-ID: <G4ednQlZ1oGlniPXnZ2dnUVZ_rCdnZ2d@earthlink.com>
Source record: 12690

I used AES Ham.
slade

"Jim Lux" <james.p.lux@jpl.nasa.gov> wrote in message
news:h98d4t$3hb$1@news.jpl.nasa.gov...
> Robert11 wrote:
>> Hi,
>>
>> Was wondering where you folks order small quantities of made up coax
>> assemblies, adapters (such as SMA to BNC) and the like from ?
>>
>
> L-com has reasonably fast service.. prices are middle of the road.

2429. Re: Aluminum as a ground system

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-26 12:08:27 UTC
From: Bruce <xxx@yyy.zzz>
Message-ID: <Xns9C9252CFD1002xxxyyyzzz@202.177.16.121>
Source record: 12691

dplatt@radagast.org (Dave Platt) wrote in
news:q4rso6-l42.ln1@radagast.org:

> In article <h9fqv3$jo7s$1@tr22n12.aset.psu.edu>,
> Michael Coslo <mjc5@psu.edu> wrote:
>
>>Only concern I would have is that the electrical connections are
>>properly made. AL's talent for oxidizing has been a problem in the
>>past with house wiring.
>
> A good point.
>
> The National Electric Code has some fairly specific requirements for
> how grounding system connections must be made. Soldering is not
> permitted, as the high temperatures which can occur at such
> connections during a lighting strike can blow the soldered connection
> apart.

I always laughed about this requirement, because if you have THAT much
energy present to do this, you're going to have much bigger problems than
that soldered joint.

2430. Re: Aluminum as a ground system

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-26 12:14:35 UTC
From: Bruce <xxx@yyy.zzz>
Message-ID: <Xns9C9253DA5C4C7xxxyyyzzz@202.177.16.121>
Source record: 12692

Jeff Liebermann <jeffl@cruzio.com> wrote in
news:63fnb5hc44ihn7lkp5ejsl1ut2v5l0cfpd@4ax.com:

> On 22 Sep 2009 23:19:40 GMT, Ed <Huckleberry_REMOVE_@bigvalley.net>
> wrote:
>
>> QUESTION: Are aluminum ground systems becoming common? Are they
>>reliable, even after absorbing some heavy strikes? Any other
>>comments?
>> Ed K7AAT on the Oregon Coast
>
> I've never seen any that use aluminum wire. Everything I've seen and
> what little I've done was copper wire for both mountain top and home
> grounding.

You can come to Florida where you'll find the lightning supression systems
on the buildings here all use about a 1" aluminum rope to interconnect all
the spikes and tie into the building ground.

73,

Bruce

2431. Re: Lightning Arrestors Question

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-26 15:39:29 UTC
From: Art Unwin <arthurunwin@gmail.com>
Message-ID: <3962a45e-38de-4693-80bd-09dbe80c4828@o35g2000vbi.googlegroups.com>
Source record: 12693

On Sep 25, 3:20 pm, "Mike Kaliski" <michael.kali...@tesco.net> wrote:
> Hi Owen,
>
> Point taken. The standard Marconi ship station fed the receive antenna
> through the back contacts of the key, so the receiver was always
> disconnected whenever the transmitter was operating. I remember having to
> pay about £15 extra for my CMOS TTL electronic keyer to be fitted with a
> changeover relay rather than direct keying so I could use it with the
> standard Marconi ship installation. Still working fine today after 34 years
> of use!
>
> I don't recall ever operating close enough to any other stations for the
> diodes to cause me a problem, although I did once upset a Russian warship
> when operating from Angola. My signals were apparently overloading their
> equipment...
>
> Regards
>
> Mike G0ULI
>
> "Owen Duffy" <n...@no.where> wrote in message
>
> news:Xns9C91402E67909nonenowhere@61.9.191.5...
>
> > "Mike Kaliski" <michael.kali...@tesco.net> wrote in
> >news:fJOdnWpyYvc2TSbXnZ2dnUVZ8nidnZ2d@bt.com:
>
> > ...
> >> Any protection is better than nothing,
>
> > ... unless it lulls you into a false sense of security ...
>
> >> a spark gap (old automobile
> >> spark plug) or small neon tube, a couple of back to back diodes and a
> >> 5 megohm or higher resistor across the diodes to provide a static
> >> discharge path will do the job for pennies.
>
> > as most of these may.
>
> > I do recall taking an early (probably the first) Collins digitally tuned
> > receiver to a coast radio station for evaluation. It had inverse parallel
> > diodes across the RF amp input for protection of the FETs and was totally
> > unusable as when the on-site 500kHz transmitter was keyed up, it wiped
> > out all of the receivers (not just this one) with broadband noise. It

> > took a few minutes to realise what was causing ALL of the ROs to hear the
> > station callsign, not as a beat note, but as noise as if it was near to
> > where they were listening and just needed to be tuned in. Whilst the
> > Collins was connected to an antenna, it caused havoc, even if powered
> > off!
>
> > Beware of the effects of inverse parallel diodes across the antenna.
>
> > Owen

I found that all very interesting. Mike stick around

2432. Re: Resaonance and minimum SWR

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-26 16:10:48 UTC
From: Art Unwin <arthurunwin@gmail.com>
Message-ID: <2d4a6233-f88f-4762-96b3-ca7245ba893c@z28g2000vbl.googlegroups.com>
Source record: 12694

On Sep 21, 1:32 am, Ian White GM3SEK <gm3...@ifwtech.co.uk> wrote:
> christofire wrote:
>
> >"Roy Lewallen" <w...@eznec.com> wrote in message
> >news:gN-dnXVyqfAOGivXnZ2dnUVZ_j9i4p2d@giganews.com...
> >> Antonio Vernucci wrote:
> >>> . . .
> >>> Under the assumption that dielectric loss is negligible, a permittivity
> >>> 2.26 time higher than that of air results in a lower inner conductor
> >>> diameter, for a given outer diameter cable and a given impedance. . .
>
> >> Yes, and this is why foamed dielectric cable has lower loss than solid
> >> dielectric cable. Not because of lower dielectric loss (at least below a
> >> few GHz), but because it has a larger center conductor for the same
> >> impedance and outside diameter.
>
> >> Roy Lewallen, W7EL
>
> >You've got it ... spread the word to all those amateurs who are hung up on
> >(negligible) dielectric loss!
>
> It isn't the amateurs so much as the advertising. Marketing departments
> highlight the foam dielectric because it's more obvious, and pretty soon
> even the manufacturers are believing their own publicity.
>
> As for the 50-ohm impedance, the reasons why it became an industry
> standard are interesting but purely historical. The reason for using it
> now is almost exclusively because it *is* an industry standard.
>
> --
>
> 73 from Ian GM3SEK   'In Practice' columnist for RadCom
(RSGB)http://www.ifwtech.co.uk/g3sek

Resonance means little. It is like reverse engineering where it is
assumed or understood that the transmission line will be 50 ohms! The
point to remember is that the less the resistive component that one
measures at the antenna the more the power is shifting over from the
resistive loss to the radiative resistance and nothing more. For
matching there is an advantage when the load is totally resistive
because the matching becomes less complicated. Obviously as more
energy is shifted over to radiative purposes it is more difficult to
feed as we do not know how to switch power transmission from a
parallel line to a singular line. But the fact remains, the less the

resistive losses the more power goes to radiation which is exactly what you are trying to achieve.

2433. Re: Resaonance and minimum SWR

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-27 00:07:52 UTC
From: tom <news4792@taring.org>
Message-ID: <4abeacbc$0$28115$8046368a@newsreader.iphouse.net>
Source record: 12695

Art Unwin wrote:
> Resonance means little.

<snip a bit>

> The point to remember is that the less the resistive component that one
> measures at the antenna the more the power is shifting over from the
> resistive loss to the radiative resistance and nothing more.

It is truly amazing the things that come from his keyboard. This one statement proves he understands nothing.

And he contradicted his previous stand on resonance, too! 2 in one blow.

tom
K0TAR

2434. Re: Standing waves

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-27 00:23:48 UTC
From: Mike Coslo <mjc5@psu.edu>
Message-ID: <h9mbai$ds04$1@tr22n12.aset.psu.edu>
Source record: 12696

Art Unwin wrote:
> On Sep 22, 3:29 pm, Mike Coslo <m...@psu.edu> wrote:
>> Richard Clark wrote:
>>> On Tue, 22 Sep 2009 10:48:43 +0200, Szczepan Bia?ek <sz.bia...@wp.pl>
>>> wrote with abysmal quoting:
>>>> It will not be easy to work out here all details.
>>>> S*
>>>> Regards
>>>> Art
>>> You guys need to get a room.
>> I think that might already be the case.
>>
>> - 73 de Mike N3LI -
>
> Mike I am certainly not wired the same as Clark as I'm married and
> have great grand children. It maybe normal for him to go into a room
> with a man but why would he paint such a picture of "S" to infer that
> he is as sick as him? I like women like any other real man
> and certainly do not condone the practices that Clark and possibly you
> would aproove of with respect to males or airport bathroom manners

Oh dear, Art. That particular little jibe is used to rib folks who agree with each other these days, and has gone way past the idea of anyone suggesting that someone else is gay.

I was myself making a very loose reference that in some cases on the internet, two different people might actually be occupying the same room in exactly the same place because sometimes two different personalities might actually be the same person.

I have no reason to suspect that you are either of these things.

- 73 de Mike N3LI -

2435. Re: Standing waves

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-27 02:23:53 UTC
From: Art Unwin <arthurunwin@gmail.com>
Message-ID: <aa6748e2-f755-4510-94bd-d8f966b237fc@33g2000vbe.googlegroups.com>
Source record: 12697

On Sep 26, 7:23 pm, Mike Coslo <m...@psu.edu> wrote:
> Art Unwin wrote:
> > On Sep 22, 3:29 pm, Mike Coslo <m...@psu.edu> wrote:
> >> Richard Clark wrote:
> >>> On Tue, 22 Sep 2009 10:48:43 +0200, Szczepan Bia?ek <sz.bia...@wp.pl>
> >>> wrote with abysmal quoting:
> >>>> It will not be easy to work out here all details.
> >>>> S*
> >>>> Regards
> >>>> Art
> >>> You guys need to get a room.
> >> I think that might already be the case.
>
> >>   - 73 de Mike N3LI -
>
> > Mike I am certainly not wired the same as Clark as I'm married and
> > have great grand children. It maybe normal for him to go into a room
> > with a man but why would he paint such a picture of "S" to infer that
> > he is as sick as him? I like women like any other real man
> > and certainly do not condone the practices that Clark and possibly you
> > would aproove of with respect to males or airport bathroom manners
>
> Oh dear, Art. That particular little jibe is used to rib folks who agree
> with each other these days, and has gone way past the idea of anyone
> suggesting that someone else is gay.
>
> I was myself making a very loose reference that in some cases on the
> internet, two different people might actually be occupying the same room
> in exactly the same place because sometimes two different personalities
> might actually be the same person.
>
> I have no reason to suspect that you are either of these things.
>
> - 73 de Mike N3LI -

I do not agree or disagree with "S". I just don't like it when people
gang up on a person while being shielded behind a keyboard. There is
absolutely no need for insults from those
who apparently know less but merges with a mob attack for personal
security but with the intent to hurt and harm.

2436. Re: Standing waves

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-27 02:52:00 UTC
From: tom <news4792@taring.org>
Message-ID: <4abed333$0$28115$8046368a@newsreader.iphouse.net>
Source record: 12698

Art Unwin wrote:
>
> I do not agree or disagree with "S". I just don't like it when people
> gang up on a person while being shielded behind a keyboard. There is
> absolutely no need for insults from those
> who apparently know less but merges with a mob attack for personal
> security but with the intent to hurt and harm.

Pot calling the kettle black.

Art Unwin wrote:
>
> Chris you are being stupid as well as acting as a fool.

tom
K0TAR

2437. Re: Aluminum as a ground system

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-27 03:00:40 UTC
From: "Sal M. Onella" <salmonella@food.poisoning.org>
Message-ID: <tzAvm.443934$Ta5.3569@newsfe15.iad>
Source record: 12699

"Cecil Moore" <nospam@w5dxp.com> wrote in message
news:mpVum.442934$Ta5.415791@newsfe15.iad...
> Ed wrote:
> > Lightning is DC. How could it be " RF " if it has no
> > "frequency" ?
>
> Fourier analysis of pulsed DC?

Sorry, I swore of that stuff as soon as I passed the final.

2438. Re: Aluminum as a ground system

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-27 03:10:08 UTC
From: "Sal M. Onella" <salmonella@food.poisoning.org>
Message-ID: <IlAvm.443935$Ta5.419632@newsfe15.iad>
Source record: 12700

"Ed" <Huckleberry_REMOVE_@bigvalley.net> wrote in message
news:Xns9C916744E4591Huckleberrybigvalley@198.186.192.196...
>
> >> If you're not convinced after reading the responses, turn on your
> >> radio the next time a lightning storm is anywhere nearby -- or for
> >> that matter, anywhere within skip propagation range. Then explain how
> >> it is your radio is hearing DC.
> >>
> >> Roy Lewallen, W7EL
>
>
> I think we're arguing semantics on this. I spoke in pure terms... there
> is no argument that Lightning itself is a DC current. The fact that it
is
> so short may bring the other RF issues to play, but that is not where my
> thoughts were when speaking on the DC issue..

Ever hear that the lightning strike is an oscillating series of
cloud-ground-cloud-ground currents? Sounds not too much like DC.

Sal

2439. Best Antenna books?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-27 14:40:49 UTC
From: ams <rca976@live.com>
Message-ID: <d908b264-9964-447e-b840-0f8af9f4df27@y10g2000prg.googlegroups.com>
Source record: 12701

Here's one person's opinion:

Amazon.com: http://xrl.us/BestAntennaBooks

2440. Re: Best Antenna books?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-27 16:05:13 UTC
From: Jeff Liebermann <jeffl@cruzio.com>
Message-ID: <jl2vb5hu8rfe93gha8b685ni0nq66vpkeb@4ax.com>
Source record: 12702

On Sun, 27 Sep 2009 07:40:49 -0700 (PDT), ams <rca976@live.com> wrote:

>Here's one person's opinion:
>
>Amazon.com: http://xrl.us/BestAntennaBooks

The list is by Alexander Shimansky UR5SAS.

I totalled the Amazon prices. $801.74. Amateur antenna design is
becoming a rich mans hobby. However, there is hope. When I look
under the "buying options" buttons, there are cheaper editions
available. I only have 3 of the 10 books listed. Sniff.

--
Jeff Liebermann jeffl@cruzio.com
150 Felker St #D http://www.LearnByDestroying.com
Santa Cruz CA 95060 http://802.11junk.com
Skype: JeffLiebermann AE6KS 831-336-2558

2441. Re: Standing waves

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-27 16:17:04 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <s73vb5t8uk2pbe9r71h03n7o3tpee303ui@4ax.com>
Source record: 12703

On Sat, 26 Sep 2009 20:23:48 -0400, Mike Coslo <mjc5@psu.edu> wrote:

>Oh dear, Art. That particular little jibe is used to rib folks who agree
>with each other these days

What a tempest in a teaspoon.

At the risk of Art summoning up another mouthful of saliva to cast
upon anything British, a quote from P.G. Wodehouse comes to mind:
"He was either a man of about 150
who was rather young for his years or
a man of about 110
who had been aged by trouble."

Pushing that saliviathan risk to the edge with Oscar Wilde:
"My dear Algy, you talk exactly as if you were a dentist.
It is very vulgar to talk like a dentist when one isn't a dentist.
It produces a false impression..."

73's
Richard Clark, KB7QHC

2442. medium waves match antenna-transmitter 50ohm system

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-27 16:43:54 UTC
From: tzitzikas <tzitzikas.50598e7@radiobanter.com>
Message-ID: <tzitzikas.50598e7@radiobanter.com>
Source record: 12707

i have an 500w medium waves transmitter (output 50ohm) at 1431khz. i
have the components and i have decide to construct this
http://www.tzitzikas.webs.com/match.JPG match system. it is ok? i must
connect the power/swr meter before this system (between transmitter and
match system) or after this system (between match system and antenna)?
my antenna is an inverted L 5l/16 antenna.
do you have to propose any better system? thank you

--
tzitzikas

2443. Re: Lightning Arrestors Question

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-27 17:12:52 UTC
From: Jeff Liebermann <jeffl@cruzio.com>
Message-ID: <qi3vb5hag1ssh517e2okuvg5239a48cbfl@4ax.com>
Source record: 12704

On Thu, 24 Sep 2009 15:15:01 -0400, "Robert11" <rgsros@xnotme.invalid>
wrote:

>Saw a picture somewhere of an in-line lightning protector for a HF radio
>receive only antenna.
>Coax style.
>Apparently has the typical gas tube, and when activated shorts the center
>conductor to the braid.

See:
<http://www.polyphaser.com/productdata.aspx?class=coax>

This is what I use on the local mountain top sites.
<http://www.polyphaser.com/cms_spol_app/Translations/English/B50.pdf>
Note that we don't have much lightening on the left coast, so I don't
have much history on how well it works. The one site where we did
take a nearby hit, managed to blow up some unprotected ethernet to
coax translators, and some cheap sacrificial ethernet switches.

Also, not all lightning protectors use a gas tube. I have an older
Polyphaser with ZnO ceramic elements. When hit with sufficient
energy, the ZnO expands and closes a gap. Polyphaser places 4 of
these in series from the center conductor to ground. My guess(tm), is
that when hit by lightning, one of them might stay shorted. 4 hits,
and it's totally shorted and must be replaced. However, I'm not sure.
I'll post a photo when I find it.

>Was wondering a bit about this.

Articles on the subject.
<http://www.polyphaser.com/technical_notes.aspx>

Ham Radio protection:
<http://www.polyphaser.com/cms_spol_app/techdocs/Ham%20Radio.pdf>
See Pg 6 for some interesting comments on receiver protection. Quoting
in part:

Coax protectors should be units that have dc blocking on the center
pin. This serves as a high pass filtering that prevents the
lightning's low frequency energy from continuing to your equipment.
The strike energy is picked off and diverted into the ground system
in a controlled way. The dc blocking ensures the operation of the
protector regardless of the input circuitry of the equipment.

Did you know that spark gap protectors with dc continuity will not
work on receivers and shunt fed duplexers? The shunt to ground
inside a receiver (coil to ground for static draining) prevents the

low frequency lightning energy from turning on the dc continuity protector. The coil shunts the energy to ground all right, but it is at the wrong place. If the coil can't handle the energy (half the coax surge energy is on the center pin), the coil will open up and the current will translate to a large open voltage source capable of arcing anywhere within the radio.

>I seem to remember in the old days, there was always a third tap on these
>sort of things that you ran a solid ground to, e.g., a water pipe.

Yep. The current needs to go somewhere to get to ground. Best through a big fat wire ending in a good ground than through your equipment. Incidentally, a water pipe is not a decent ground for lightning protection.

>Does merely shorting to the braid provide "good" protection ?

No. If lightning came down your coax cable and to shorted braid it must have a path to continue to ground. Just a shorted coax will send it through your equipment, probably through the AC power cords, and then through the house wiring. I've seen photos of the wall blown out when that happens. Bad idea.

Polyphaser also suggests that a DC short in the radio is inadequate:
<http://www.polyphaser.com/cms_spol_app/techdocs/Built-in%20Coax.pdf>

>Any thoughts would be appreciated.
>
>Also want to ask: what about voltage surges of a few hundred volts or so
>induced on an antenna lead from a nearby lightning strike perhaps
>.
>The levels way below what would trip a gas tube I would imagine, but still
>more than enough to ruin a front end of a receiver.

A high value resistor should bleed off any charges. As others have suggested, a neon lamp and/or back to back diodes, should also work.

>How does one protect against these without breaking the bank doing so ?

--
Jeff Liebermann jeffl@cruzio.com
150 Felker St #D http://www.LearnByDestroying.com
Santa Cruz CA 95060 http://802.11junk.com
Skype: JeffLiebermann AE6KS 831-336-2558

2444. Re: Best Antenna books?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-27 18:31:16 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <qcOvm.208547$sC1.85941@newsfe17.iad>
Source record: 12705

ams wrote:
> Here's one person's opinion:
> Amazon.com: http://xrl.us/BestAntennaBooks

My three favorites are there.
--
73, Cecil, IEEE, OOTC, http://www.w5dxp.com

2445. Re: Best Antenna books?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-27 22:02:55 UTC
From: christofire <christofire@btinternet.com>
Message-ID: <tb-dncTrZdSPfCLXnZ2dnUVZ8rOdnZ2d@bt.com>
Source record: 12706

"Jeff Liebermann" <jeffl@cruzio.com> wrote in message
news:jl2vb5hu8rfe93gha8b685ni0nq66vpkeb@4ax.com...
> On Sun, 27 Sep 2009 07:40:49 -0700 (PDT), ams <rca976@live.com> wrote:
>
>>Here's one person's opinion:
>>
>>Amazon.com: http://xrl.us/BestAntennaBooks
>
> The list is by Alexander Shimansky UR5SAS.
>
> I totalled the Amazon prices. $801.74. Amateur antenna design is
> becoming a rich mans hobby. However, there is hope. When I look
> under the "buying options" buttons, there are cheaper editions
> available. I only have 3 of the 10 books listed. Sniff.
>
> --
> Jeff Liebermann jeffl@cruzio.com

And I expect you're aware there's a thriving market in second-hand books via
companies such as Alibris, e.g.
http://www.alibris.com/booksearch?binding=&mtype=&keyword=antennas+for+all+applications.
That way you can gather what you need for much less money. I have purchased
books this way, stamped by parts of the US military, that are in fine
condition.

In another thread I've mentioned recently that the library of the IET
(formerly the IEE) in Savoy Place, London, is open to members of the public
free of charge to read all they have there, which is an impressive quantity
of material from throughout much of the history of radio. I daresay there
are equivalents in other countries.

Chris

2446. Re: Best Antenna books?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-27 22:26:29 UTC
From: Jeff Liebermann <jeffl@cruzio.com>
Message-ID: <g4pvb516o8679lgno4b7nqppum9g0sjd4q@4ax.com>
Source record: 12708

On Sun, 27 Sep 2009 23:02:55 +0100, "christofire"
<christofire@btinternet.com> wrote:

>"Jeff Liebermann" <jeffl@cruzio.com> wrote in message
>news:jl2vb5hu8rfe93gha8b685ni0nq66vpkeb@4ax.com...
>> On Sun, 27 Sep 2009 07:40:49 -0700 (PDT), ams <rca976@live.com> wrote:
>>
>>>Here's one person's opinion:
>>>
>>>Amazon.com: http://xrl.us/BestAntennaBooks
>>
>> The list is by Alexander Shimansky UR5SAS.
>>
>> I totalled the Amazon prices. $801.74. Amateur antenna design is
>> becoming a rich mans hobby. However, there is hope. When I look
>> under the "buying options" buttons, there are cheaper editions
>> available. I only have 3 of the 10 books listed. Sniff.

>And I expect you're aware there's a thriving market in second-hand books via
>companies such as Alibris,

Actually, I was not aware. If I needed a (used) book, I just ordered
it via Amazon. I haven't bought any paper books in several years
(bookshelf is full).

>http://www.alibris.com/booksearch?binding=&mtype=&keyword=antennas+for+all+applications.

I wish you hadn't done that. I just ordered a copy of Kraus (2nd
edition) for $25 and a 2nd copy of the ARRL Antenna Book for $19
(because it always seems to be out on loan). Sigh. I need to
practice resisting temptation. Internet shopping is far too easy.

--
Jeff Liebermann jeffl@cruzio.com
150 Felker St #D http://www.LearnByDestroying.com
Santa Cruz CA 95060 http://802.11junk.com
Skype: JeffLiebermann AE6KS 831-336-2558

2447. Re: medium waves match antenna-transmitter 50ohm system

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-27 22:51:31 UTC
From: christofire <christofire@btinternet.com>
Message-ID: <gPGdneCagN_rcSLXnZ2dnUVZ8lqdnZ2d@bt.com>
Source record: 12709

"tzitzikas" <tzitzikas.50598e7@radiobanter.com> wrote in message
news:tzitzikas.50598e7@radiobanter.com...
>
> i have an 500w medium waves transmitter (output 50ohm) at 1431khz. i
> have the components and i have decide to construct this
> http://www.tzitzikas.webs.com/match.JPG match system. it is ok? i must
> connect the power/swr meter before this system (between transmitter and
> match system) or after this system (between match system and antenna)?
> my antenna is an inverted L 51/16 antenna.
> do you have to propose any better system? thank you
>
> --
> tzitzikas

Are you allowed to operate a 500 watt transmitter in the medium wave band in your country for student radio? That sounds a lot of power to cover a campus.

What is a 51/16 antenna? ... is that 3.19 wavelengths long? ... if so, that would be inefficient as a medium wave radiator.

You'll find that a pi network, as you propose, can be made to match almost anything to anything at a spot frequency, as long as the L and Cs have sufficient range, but you might have difficulty achieving adequate uniformity over the nominal 9 kHz bandwidth of a normal medium-wave transmission (i.e. a broadcast service).

Chris

2448. Re: Best Antenna books?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-27 22:53:23 UTC
From: christofire <christofire@btinternet.com>
Message-ID: <n96dnYJ_Hep7cSLXnZ2dnUVZ8vydnZ2d@bt.com>
Source record: 12710

```
"Jeff Liebermann" <jeffl@cruzio.com> wrote in message
news:g4pvb516o8679lgno4b7nqppum9g0sjd4q@4ax.com...
> On Sun, 27 Sep 2009 23:02:55 +0100, "christofire"
> <christofire@btinternet.com> wrote:
>
>>"Jeff Liebermann" <jeffl@cruzio.com> wrote in message
>>news:jl2vb5hu8rfe93gha8b685ni0nq66vpkeb@4ax.com...
>>> On Sun, 27 Sep 2009 07:40:49 -0700 (PDT), ams <rca976@live.com> wrote:
>>>
>>>>Here's one person's opinion:
>>>>
>>>>Amazon.com: http://xrl.us/BestAntennaBooks
>>>
>>> The list is by Alexander Shimansky UR5SAS.
>>>
>>> I totalled the Amazon prices. $801.74. Amateur antenna design is
>>> becoming a rich mans hobby. However, there is hope. When I look
>>> under the "buying options" buttons, there are cheaper editions
>>> available. I only have 3 of the 10 books listed. Sniff.
>
>>And I expect you're aware there's a thriving market in second-hand books
>>via
>>companies such as Alibris,
>
> Actually, I was not aware. If I needed a (used) book, I just ordered
> it via Amazon. I haven't bought any paper books in several years
> (bookshelf is full).
>
>>http://www.alibris.com/booksearch?binding=&mtype=&keyword=antennas+for+all+applications.
>
> I wish you hadn't done that. I just ordered a copy of Kraus (2nd
> edition) for $25 and a 2nd copy of the ARRL Antenna Book for $19
> (because it always seems to be out on loan). Sigh. I need to
> practice resisting temptation. Internet shopping is far too easy.
>
>
>
> --
> Jeff Liebermann jeffl@cruzio.com
> 150 Felker St #D http://www.LearnByDestroying.com
> Santa Cruz CA 95060 http://802.11junk.com
> Skype: JeffLiebermann AE6KS 831-336-2558
```

You won't regret it!
Chris

2449. Re: Best Antenna books?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-28 05:22:56 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <8MedndjCq9Cs1V3XnZ2dnUVZ_tWdnZ2d@giganews.com>
Source record: 12711

Jeff Liebermann wrote:
> . . .
> I wish you hadn't done that. I just ordered a copy of Kraus (2nd
> edition) for $25 and a 2nd copy of the ARRL Antenna Book for $19
> (because it always seems to be out on loan). Sigh. I need to
> practice resisting temptation. Internet shopping is far too easy.

Hah, be glad you don't live close to Powell's, which has a separate technical bookstore. My wallet is always a lot thinner when I walk out of there than when I walked in.

Roy Lewallen, W7EL

2450. Re: Best Antenna books?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-28 07:16:10 UTC
From: Jeff Liebermann <jeffl@cruzio.com>
Message-ID: <d9n0c51m7mulbjj4if4lbvqplp2nra9dc2@4ax.com>
Source record: 12712

On Sun, 27 Sep 2009 22:22:56 -0700, Roy Lewallen <w7el@eznec.com>
wrote:

>Jeff Liebermann wrote:
>> . . .
>> I wish you hadn't done that. I just ordered a copy of Kraus (2nd
>> edition) for $25 and a 2nd copy of the ARRL Antenna Book for $19
>> (because it always seems to be out on loan). Sigh. I need to
>> practice resisting temptation. Internet shopping is far too easy.

>Hah, be glad you don't live close to Powell's, which has a separate
>technical bookstore. My wallet is always a lot thinner when I walk out
>of there than when I walked in.
>
>Roy Lewallen, W7EL

Many years ago, I used to make the pilgrimage to the Sunnyvale Fry's,
Ham Radio Outlet, various nearby surplus stores, and then Computer
Literacy Bookstore. After spending far too much money on books, I
started to avoid the bookstore. They solved the problem for me by
moving locations and finally closing in 2001.

A visit to San Francisco was not complete without dropping into
Stacey's bookstore on Market and Powell (after the one in Palo Alto
closed). However, the SF store closed earlier this year.
<http://www.sfgate.com/cgi-bin/article.cgi?f=/c/a/2009/01/07/BAFN154UV2.DTL>

What's left are the big chains, online vendors, and some specialty
stores. I've never been to Portland, but if I find an excuse, I'll
certainly give Powell's a visit.

--
Jeff Liebermann jeffl@cruzio.com
150 Felker St #D http://www.LearnByDestroying.com
Santa Cruz CA 95060 http://802.11junk.com
Skype: JeffLiebermann AE6KS 831-336-2558

2451. Re: Best Antenna books?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-28 07:30:20 UTC
From: Ian White GM3SEK <gm3sek@ifwtech.co.uk>
Message-ID: <tQPAv7DMYGwKFAG1@ifwtech.co.uk>
Source record: 12713

Roy Lewallen wrote:
>Jeff Liebermann wrote:
>> . . .
>> I wish you hadn't done that. I just ordered a copy of Kraus (2nd
>> edition) for $25 and a 2nd copy of the ARRL Antenna Book for $19
>> (because it always seems to be out on loan). Sigh. I need to
>> practice resisting temptation. Internet shopping is far too easy.
>
>Hah, be glad you don't live close to Powell's, which has a separate
>technical bookstore. My wallet is always a lot thinner when I walk out
>of there than when I walked in.
>

Even more expensive is to go into Powell's technical bookstore *with*
Roy Lewallen.

--

73 from Ian GM3SEK
http://www.ifwtech.co.uk/g3sek

2452. Re: Best Antenna books?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-28 12:23:27 UTC
From: rikoski@earthlink.net
Message-ID: <rikoski-8894AA.07232728092009@news.newsrazor.net>
Source record: 12714

In article <d9n0c51m7mulbjj4if4lbvqplp2nra9dc2@4ax.com>,
Jeff Liebermann <jeffl@cruzio.com> wrote:

> On Sun, 27 Sep 2009 22:22:56 -0700, Roy Lewallen <w7el@eznec.com>
> wrote:
>
> >Jeff Liebermann wrote:
> >> . . .
> >> I wish you hadn't done that. I just ordered a copy of Kraus (2nd
> >> edition) for $25 and a 2nd copy of the ARRL Antenna Book for $19
> >> (because it always seems to be out on loan). Sigh. I need to
> >> practice resisting temptation. Internet shopping is far too easy.
> >
> >Hah, be glad you don't live close to Powell's, which has a separate
> >technical bookstore. My wallet is always a lot thinner when I walk out
> >of there than when I walked in.
> >
> >Roy Lewallen, W7EL
>
> Many years ago, I used to make the pilgrimage to the Sunnyvale Fry's,
> Ham Radio Outlet, various nearby surplus stores, and then Computer
> Literacy Bookstore. After spending far too much money on books, I
> started to avoid the bookstore. They solved the problem for me by
> moving locations and finally closing in 2001.
>
> A visit to San Francisco was not complete without dropping into
> Stacey's bookstore on Market and Powell (after the one in Palo Alto
> closed). However, the SF store closed earlier this year.
> <http://www.sfgate.com/cgi-bin/article.cgi?f=/c/a/2009/01/07/BAFN154UV2.DTL>
>
> What's left are the big chains, online vendors, and some specialty
> stores. I've never been to Portland, but if I find an excuse, I'll
> certainly give Powell's a visit.

Sorry about Stacey's. Always visited Stacey's when I would visit SF. I
liked Stacey's for code and hands-on books.

At this point, my national favorite technical bookstores are MIT Press
and the MIT Coop bookstore which are across the street from each other
at the Kendall stop of the Red Line in Cambridge, Mass.

Things aren't what they used to be: The 'Quantum' on technical books is
now $100 +/-, so I think twice before buying.

How much new is there in HF; VHF and UHF antennas anyway?

If it is new; it's not going to be in a book but rather in a journal like the IEEE Antenna and Propagation.

Most of the articles in Antennas and Propagation are mathematical and don't reduce easily to hardware implementations unless one has the inclination; time and an available machine shop.

I tend to buy used from amazon.com but generally if I know in advance what I want. Their "What's Inside" can be helpful though.

I have a couple of favorite antenna books and go to those when in need but generally rely on the basic equations relating wavelength and frequency and then cut-and-try.

2453. Re: Lightning Arrestors Question

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-28 14:20:29 UTC
From: Rick <ricknj10@hotmail.com>
Message-ID: <NC3wm.3673$tl3.2502@nwrddc01.gnilink.net>
Source record: 12715

> How does one protect against these without breaking the bank doing so ?

Go on Mousers web site and look at gas tubes made by Littelfuse. Go to Littelfuses web site from the link on Mousers site and check out the specs on gas tubes. Compare them to the specs on your $50-70 commercial lightning arrestor.
Then note that what's in that little casting box is two coax connectors, one capacitor and one $2-3 gas tube and you have the answer to your question. Myth revealed.

Rick K2XT

2454. Re: Best Antenna books?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-28 15:41:48 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <uol1c5hkciivm3okdeh2icptpaltfa50r0@4ax.com>
Source record: 12716

On Mon, 28 Sep 2009 07:23:27 -0500, rikoski@earthlink.net wrote:

>How much new is there in HF; VHF and UHF antennas anyway?

New antenna design is now expressed in ï¿½m and nm wavelengths (EEEEHF).

73's
Richard Clark, KB7QHC

2455. Re: Best Antenna books?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-28 17:11:26 UTC
From: Jeff Liebermann <jeffl@cruzio.com>
Message-ID: <49q1c5tmf02t1p0eh9jp5tngdqm7csq4ob@4ax.com>
Source record: 12717

On Mon, 28 Sep 2009 07:23:27 -0500, rikoski@earthlink.net wrote:

>Things aren't what they used to be: The 'Quantum' on technical books is
>now $100 +/-, so I think twice before buying.

I charge $75/hr for my work. If a $100 book will generate 1.33 hrs of billable labor, or save me about 3 hours in wasted time, it's break even. Anything over that is profitable. The only problem is that I'm not a professional antenna designer and don't generate much revenue from antenna projects. Still it's a good way to justify splurging on books. Incidentally, I make sure I have a least one consulting job per year so that I can justify deducting the book costs on my taxes.

>How much new is there in HF; VHF and UHF antennas anyway?

Ummm.... UWB, Fractal Antennas, MIMO, direction finding, disguise antennas, telematics antennas, sectored systems (WiMax), etc. It may not be new to those in the industry, but they're new to me. Instead of looking at what's new in antennas, look at what problems need to be solved that involve antennas. Low visual impact, cram multiple interfering radios inside a cell phone, limited tower space (combiners), 4x4 MIMO in a USB dongle?, etc.

>If it is new; it's not going to be in a book but rather in a journal
>like the IEEE Antenna and Propagation.
>
>Most of the articles in Antennas and Propagation are mathematical and
>don't reduce easily to hardware implementations unless one has the
>inclination; time and an available machine shop.

True, but the math offers a great clue on how they work. At this time, an IEEE membership, plus Ant and Prop subscription will burn about $200/year. I covered the costs in a previous rant at:
<http://groups.google.com/group/rec.radio.amateur.antenna/msg/ba3e3273c2f1b5d6>
I'm still trying to find a cheaper alternative buy joining the friends of the local university library.

>I tend to buy used from amazon.com but generally if I know in advance
>what I want. Their "What's Inside" can be helpful though.

Yep. Also Google Books.

>I have a couple of favorite antenna books and go to those when in need
>but generally rely on the basic equations relating wavelength and
>frequency and then cut-and-try.

Try antenna modeling with any of an assortment of programs.
<http://www.dxzone.com/catalog/Software/Antenna_analysis/>
Cut and try works ok for low frequency antennas, where large errors
are easily tolerated. Don't try that at microwave frequencies, where
the tweaks are in fractions of a millimeter.

--
Jeff Liebermann jeffl@cruzio.com
150 Felker St #D http://www.LearnByDestroying.com
Santa Cruz CA 95060 http://802.11junk.com
Skype: JeffLiebermann AE6KS 831-336-2558

2456. Re: Best Antenna books?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-28 17:47:08 UTC
From: dplatt@radagast.org
Message-ID: <sd97p6-0dd.ln1@radagast.org>
Source record: 12718

In article <d9n0c51m7mulbjj4if4lbvqplp2nra9dc2@4ax.com>,
Jeff Liebermann <jeffl@cruzio.com> wrote:

>What's left are the big chains, online vendors, and some specialty
>stores. I've never been to Portland, but if I find an excuse, I'll
>certainly give Powell's a visit.

Powell's does mail-order, and in my experience they do it well (fast
shipping at a fair price, and they've never spammed the email address
I gave them).

--
Dave Platt <dplatt@radagast.org> AE6EO
Friends of Jade Warrior home page: http://www.radagast.org/jade-warrior
I do _not_ wish to receive unsolicited commercial email, and I will
boycott any company which has the gall to send me such ads!

2457. Re: Aluminum as a ground system

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-28 18:25:12 UTC
From: Michael Coslo <mjc5@psu.edu>
Message-ID: <h9qv2b$ms5q$1@tr22n12.aset.psu.edu>
Source record: 12719

Richard Clark wrote:
> On Fri, 25 Sep 2009 09:28:46 -0400, Michael Coslo <mjc5@psu.edu>
> wrote:
>
>>> lightning has MANY frequencies from DC to many MHz.
>>
>> DC to daylight in fact. Well, light at least. 8^)
>
> And all this radiation happens because of a severe lack of
> equilibrium.
>
> Art can't fool Mother Nature.

I once suffered a severe case of lack of equilibrium, probably related to an adolescent experiment with ethanol containing liquids. It left a lasting impression on me and I avoid the state with great prejudice.

But since I have regained my equilibrium, my friends say that I am positively radiant! Perhaps our friend speaks sooth?

- 73 de Mike N3LI -

2458. Re: Aluminum as a ground system

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-28 18:30:14 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <jtv1c5ladbt84g26jv910drck02r1mapib@4ax.com>
Source record: 12720

On Mon, 28 Sep 2009 14:25:12 -0400, Michael Coslo <mjc5@psu.edu>
wrote:

>Perhaps our friend speaks sooth?

All depends if sooth is an adjective or a noun.

The OED (a notably gay English dictionary) offers
"soothing, soft, smooth"

73's
Richard Clark, KB7QHC

2459. Re: Aluminum as a ground system

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-28 18:34:38 UTC
From: Michael Coslo <mjc5@psu.edu>
Message-ID: <h9qvju$ms5q$2@tr22n12.aset.psu.edu>
Source record: 12721

Richard Clark wrote:
> On Mon, 28 Sep 2009 14:25:12 -0400, Michael Coslo <mjc5@psu.edu>
> wrote:
>
>> Perhaps our friend speaks sooth?
>
> All depends if sooth is an adjective or a noun.
>
> The OED (a notably gay English dictionary) offers
> "soothing, soft, smooth"

Well, fine, but I'm not sharing any hotel rooms...

- 73 de Mike N3LI -

2460. Open wire feedline

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-28 18:44:45 UTC
From: Ron Walters <w4lde@numail.org>
Message-ID: <4ac103d3$0$11071$4c5efa9e@news.corp.moreusenet.net>
Source record: 12722

I am feeding a 80 meter center feed with open wire, about 100ft feed-line.

Due to some new construction work that is going to start on the back of our home this week I am forced to move the feed-line.

The original installation had about 50 ft vertical from the center of the dipole and then across and under a raised wood porch and then up to a second floor shack.

The porch is going and a new covered screened porch is replacing it.

I have three choices during construction, they are:

1. Leave the 100' feed-line coiled out in the yard and not operate. (Not a great idea)

2. Cut the feed line down to around 50' which would be temporary but then I would have to splice it later after construction.

3. Coil about 40' near the 4:1 balun, however I am concerned that the coiled feed line will act a one big inductor and change and or significantly reduce the antenna efficiency.

#3 is the easiest but I am worried about open wire feed-line coiled, thoughts please!

73 de
Ron W4LDE

2461. Re: Open wire feedline

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-28 19:44:58 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <0o8wm.17921$bP1.10462@newsfe24.iad>
Source record: 12723

Ron Walters wrote:
> #3 is the easiest but I am worried about open wire feed-line coiled,
> thoughts please!

Adjacent coils of parallel feedline should never be located
very close to each other. The minimum spacing should be a
few times the spacing between the wires.

What I do is use a dacron messenger line. For instance, if
a knot is tied in the dacron messenger line every two feet
and at each knot, the length of the parallel line is four
feet, a transmission spiral will result where 100 feet of
ladder-line can be spiraled into 50 linear feet of messenger
line. The ladder-line can be attached at the knots using
black nylon tie wraps. Hope this is understandable and helps.
--
73, Cecil, IEEE, OOTC, http://www.w5dxp.com

2462. Re: Open wire feedline

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-28 20:37:46 UTC
From: Owen Duffy <none@no.where>
Message-ID: <Xns9C9543705C1D7nonenowhere@61.9.191.5>
Source record: 12724

Ron Walters <w4lde@numail.org> wrote in
news:4ac103d3$0$11071$4c5efa9e@news.corp.moreusenet.net:

...
> 3. Coil about 40' near the 4:1 balun, however I am concerned that the
> coiled feed line will act a one big inductor and change and or
> significantly reduce the antenna efficiency.
>
> #3 is the easiest but I am worried about open wire feed-line coiled,
> thoughts please!

If you coil the transmission line so that the distance between turns is much greater than the distance between the conductors, you will not significantly alter its differential mode operation (which is its main purpose in most antenna systems).

You will alter the common mode current distribution, probably for the better. Remember that some folk use common mode chokes in systems using open wire feeder, and you will create a common mode choke by coiling the line as I described.

You could suspend the coil on a roughly horizontal span of nylon fishing line to support and space the turns.

Owen

2463. Re: Aluminum as a ground system

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-28 20:57:48 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <8o82c55e254nflbbq9169fh967sk5gtk1j@4ax.com>
Source record: 12725

On Mon, 28 Sep 2009 14:34:38 -0400, Michael Coslo <mjc5@psu.edu>
wrote:
>>> Perhaps our friend speaks sooth?
>>
>> All depends if sooth is an adjective or a noun.
>>
>> The OED (a notably gay English dictionary) offers
>> "soothing, soft, smooth"
>
>Well, fine, but I'm not sharing any hotel rooms...

Not even the same Area Code.

73's
Richard Clark, KB7QHC

2464. Re: Circular versus linear polarization

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-28 21:13:31 UTC
From: bradlington@yahoo.com
Message-ID: <05105ee6-5ec8-46bf-acae-0e80aaf9a092@g19g2000yqo.googlegroups.com>
Source record: 12726

I have been looking for a decent CP design to try out on my
repeaters .
For many years I have been looking at the reasoning for FM
broadcasters having used CP pol with great success.

I also have a small indication that linear antennas (eg:linear
collinears)and non-linear antennas(eg:folded loop dipoles) by design
may have slightly different characteristics in the far field that
tend towards a greater degree of cross/CP from the mechanical design .

Anyone had good success with installing a CP repeater antenna(2m or
70cm) to assist with the deap fade nulls in mobile uplink to the
repeater.
I want to try rhp for TX and lhp for RX - anyone tried this
combination before?

2465. Re: Circular versus linear polarization

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-28 22:22:12 UTC
From: christofire <christofire@btinternet.com>
Message-ID: <0sGdnaQgNsSKqlzXnZ2dnUVZ8m2dnZ2d@bt.com>
Source record: 12727

<bradlington@yahoo.com> wrote in message
news:05105ee6-5ec8-46bf-acae-0e80aaf9a092@g19g2000yqo.googlegroups.com...
>I have been looking for a decent CP design to try out on my
> repeaters .
> For many years I have been looking at the reasoning for FM
> broadcasters having used CP pol with great success.
>

In the UK, Band II VHF FM sound radio broadcasting began to fixed receivers using horizontal polarisation (HP) for reasons including a belief that interference from car ignition systems was predominantly vertically polarised, and because it was found easier to achieve a good omni-directional pattern in the horizontal plane from a transmitting antenna based on a vertical slot (Babinet's principle) - several such slot antennas were stacked vertically to obtain some gain and to avoid illuminating the sky.

Later, as transistors became available and vehicular VHF receivers of sensible size became practical, a new market emerged but it was poorly served by the HP transmissions*. When local radio was launched in the UK, in Band II, the new transmitters were equipped with antennas that radiated a VP component as well as HP, and in time all Band II transmissions were converted to mixed polarisation. Circular polarisation is one example of mixed polarisation, but its ability to provide cross-polar discrimination is not used in FM broadcasting.

Take a look at: http://downloads.bbc.co.uk/rd/pubs/reports/1970-35.pdf

The experience in other countries has probably been similar - same physics.

> I also have a small indication that linear antennas (eg:linear
> collinears)and non-linear antennas(eg:folded loop dipoles) by design
> may have slightly different characteristics in the far field that
> tend towards a greater degree of cross/CP from the mechanical design .
>

Huh?

* HP is less effective than VP for VHF communication with mobiles because the ever-present ground reflection has reversed polarity (i.e. it's in antiphase with the signal propagating over a direct path).

> Anyone had good success with installing a CP repeater antenna(2m or
> 70cm) to assist with the deap fade nulls in mobile uplink to the
> repeater.
> I want to try rhp for TX and lhp for RX - anyone tried this
> combination before?

If you use the same antenna for transmitting and receiving, and it is fundamentally circularly polarised, then it will provide and respond to the two different senses of CP automatically because the definition of the sense of circular polarisation depends on the direction of propagation. But do you think the horizontally-polarised component will help with deep nulls?

Chris

2466. Re: Circular versus linear polarization

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-28 23:59:41 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <dJCdnVGQr7Vz0FzXnZ2dnUVZ_o-dnZ2d@giganews.com>
Source record: 12728

christofire wrote:
> . . .
> * HP is less effective than VP for VHF communication with mobiles because
> the ever-present ground reflection has reversed polarity (i.e. it's in
> antiphase with the signal propagating over a direct path).
> . . .

Reflection of a CP wave results in a reversed CP wave only when the reflection is directly normal to the reflecting surface. That's not at all the case for typical ground reflections. What you actually get from ground reflections is an elliptically polarized wave, likely having the same sense as the impinging wave. In experiments I ran about 35 years ago, I found nearly linearly polarized waves resulting from reflection of a CP wave from a vehicle top.

A little time spent with a modeling program such as EZNEC+ can be very educational in understanding the generation and reflection of CP waves.

Roy Lewallen, W7EL

2467. Re: Circular versus linear polarization

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-29 02:49:31 UTC
From: Jeff Liebermann <jeffl@cruzio.com>
Message-ID: <vrq2c5ta8f6t3tu6fq6td8j4qa3idi22kb@4ax.com>
Source record: 12729

On Mon, 28 Sep 2009 14:13:31 -0700 (PDT), bradlington@yahoo.com wrote:

>I have been looking for a decent CP design to try out on my
>repeaters .
>For many years I have been looking at the reasoning for FM
>broadcasters having used CP pol with great success.
>
>I also have a small indication that linear antennas (eg:linear
>collinears)and non-linear antennas(eg:folded loop dipoles) by design
>may have slightly different characteristics in the far field that
>tend towards a greater degree of cross/CP from the mechanical design .

Methinks you'll be better off with eliptical polarization, where
perhaps 70% of the power is vertically polarized, and the rest is
horizontal. The idea is that most of the energy will be properly
recieved by the traditional vertically polarized mobile antenna. The
remainder will be to fill in the gaps, where the polarization changes
to something not so vertical.

Search Google patents:
<http://www.google.com/patents>
for "omnidirectional circular polarized antenna". Also, look at FM
broadcast xmit antennas. Some really strange stuff there.

>Anyone had good success with installing a CP repeater antenna(2m or
>70cm) to assist with the deap fade nulls in mobile uplink to the
>repeater.

Yes. I can't find my previous rant on the subject, so I'll try again.
Around 1968 thru 1970, I was at Cal Poly Pomona doing some experiments
with CP UHF antennas. The problem was that the local repeater was
experiencing deep Raleigh fading as mobiles moved along the San
Bernardino Freeway. The ideas was that CP would reduce these fades so
that listening to the repeater didn't sound like it was accompanied by
a machine gun. It worked but with a price. The fades were
dramatically reduced, but so was the coverage area. Antenna gain was
down at least 3dB as was maximum range for the repeater. I thought it
was a good tradeoff, but not everyone agreed. The stations that were
marginal (usually because they were too lazy to install a proper
antenna) were gone. However, the reliability of the local mobiles was
greatly improved. Range won over fade reduction and the antenna was
replaced after a few months of testing.

There was an article on the subject in "The Practical Handbook of
Amateur Radio FM and Repeaters" by Bill Pasternack and Mike Morris.
1981 by Tab Books.

<http://openlibrary.org/b/OL4421123M/practical_handbook_of_amateur_radio_FM___repeaters>
<http://www.alibris.com/booksearch?qsort=p&isbn=0830612122>
Sheesh. I paid about $5 at a hamfest.

Since it's not online, I scanned the applicable chapter, chopped out
some irrelevant junk, and posted them to:
<http://802.11junk.com/jeffl/circular-polarization/>
I'll convert them to a single PDF after I figure out why Irfanview is
generating garbage. Bug me if you have trouble reading the JPG's.

>I want to try rhp for TX and lhp for RX - anyone tried this
>combination before?

Yep. I tried that to improve TX-RX isolation. I gave up. Mounted on
a single pole, with separate phasing harnesses, I never could get the
antennas anywhere near 50 ohms. There was also just too much coupling
between the RH and LH sections for that to work. Another explanation
might be that at the time, I didn't have a clue what I was doing, but
we won't go there. The rather high VSWR certainly didn't help with
the isolation as it detuned the tx and rx cavities (formerly a
duplexer). Some rather crude testing showed that we were better off
with a single antenna, the stock duplexer, and a single CP
polarization. There was also a problem with distant stations. They
wanted to use CP on the base station to reduce the effects of
multipath (usually off the infamous L.A. smog inversion layer). That
would have required two antennas for each base station. I suggest
that you stick with one circular polarization for now.

Incidentally, note the scanned photo of the Loop Mountain site
<http://802.11junk.com/jeffl/circular-polarization/cp-02.jpg>
and compare it with the previous intermod factory and post-storm
removal exercise at:
<http://802.11junk.com/jeffl/pics/Old%20Repeaters/slides/LoopMtn02.html>
<http://802.11junk.com/jeffl/pics/Old%20Repeaters/slides/LoopMtn03.html>
One of the reasons I'm current intact and still sane is that I don't
own any repeaters and find excuses not to do any tower work.

--
Jeff Liebermann jeffl@cruzio.com
150 Felker St #D http://www.LearnByDestroying.com
Santa Cruz CA 95060 http://802.11junk.com
Skype: JeffLiebermann AE6KS 831-336-2558

2468. Re: Best Antenna books?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-29 10:46:23 UTC
From: wood@itd.nrl.navy.mil
Message-ID: <wood-2909090646230001@jbw-mac.itd.nrl.navy.mil>
Source record: 12730

In article
<d908b264-9964-447e-b840-0f8af9f4df27@y10g2000prg.googlegroups.com>, ams
<rca976@live.com> wrote:

> Here's one person's opinion:
>
> Amazon.com: http://xrl.us/BestAntennaBooks

The most comprehensive treatise on antennas, IMHO, is "Antenna Theory",
Parts I & II, by Collin and Zucker, McGraw-Hill. This two-book set is not
really intended for the hobbyist, however. The other great antenna books
in my office bookcase:

1. J.D. Kraus, "Antennas", McGraw-Hill

2. H. Jasik, "Antenna Engineering Handbook", MxGraw-Hill

3. E. Jordan & H. Balmain, "Electromagnetic Waves and Radiating Systems",
Prentice-Hall

4. R.W.P. King & C. Harrison, "Antennas and Waves: A Modern Approach",
The M.I.T. Press

5. W. L. Weeks, "Antenna Engineering", McGraw-Hill

6. S. Schelkunoff & H.T. Friis, "Antennas Theory and Practice", J. W.
Wiley & Sons

7. V. Rumsey, "Frequency Independent Antennas", Academic Press

8. P.E. Law Jr., "Shipboard Antennas", Artech House (this book deals with
antennas used by the USN)

9. Various ARRL handbooks and compendia on antennas.

Many of these references go back a number of decades and I don't know if
they're still in print. Sincerely, and 73s from N4GGO,

John Wood (Code 5550) e-mail: wood@itd.nrl.navy.mil
Naval Research Laboratory
4555 Overlook Avenue, SW
Washington, DC 20375-5337

2469. Re: Circular versus linear polarization

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-29 10:56:29 UTC
From: christofire <christofire@btinternet.com>
Message-ID: <-pOdnVlhpKZ8elzXnZ2dnUVZ8sGdnZ2d@bt.com>
Source record: 12731

"Roy Lewallen" <w7el@eznec.com> wrote in message
news:dJCdnVGQr7Vz0FzXnZ2dnUVZ_o-dnZ2d@giganews.com...
> christofire wrote:
>> . . .
>> * HP is less effective than VP for VHF communication with mobiles because
>> the ever-present ground reflection has reversed polarity (i.e. it's in
>> antiphase with the signal propagating over a direct path).
>> . . .
>
> Reflection of a CP wave results in a reversed CP wave only when the
> reflection is directly normal to the reflecting surface. That's not at all
> the case for typical ground reflections. What you actually get from ground
> reflections is an elliptically polarized wave, likely having the same
> sense as the impinging wave. In experiments I ran about 35 years ago, I
> found nearly linearly polarized waves resulting from reflection of a CP
> wave from a vehicle top.
>

No doubt, but what I wrote above was about horizontal and vertical _linear_
polarisations, HP and VP. I did wonder after I sent it if 'polarity' would
be misread as polarisation.

Chris

2470. Re: Open wire feedline

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-29 12:20:15 UTC
From: steveeh131047 <google@karinya.net>
Message-ID: <2e65d711-e7c9-44b0-8ffa-f7529390f9a8@y21g2000yqn.googlegroups.com>
Source record: 12732

Wind 4 or 5 turns around an empty plastic water butt, and keep the
turns well separated. Like Owen said, it'll also serve as a nice
common-mode choke!

73,
Steve G3TXQ

2471. Re: medium waves match antenna-transmitter 50ohm system

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-29 13:03:31 UTC
From: Wimpie <wimabctel@tetech.nl>
Message-ID: <a3b1d867-e175-4d16-ab0e-426a681bd46f@b15g2000yqd.googlegroups.com>
Source record: 12733

On 27 sep, 18:43, tzitzikas <tzitzikas.5059...@radiobanter.com> wrote:
> i have an 500w medium waves transmitter (output 50ohm) at 1431khz. i
> have the components and i have decide to construct
thishttp://www.tzitzikas.webs.com/match.JPGmatch system. it is ok? i must
> connect the power/swr meter before this system (between transmitter and
> match system) or after this system (between match system and antenna)?
> my antenna is an inverted L 51/16 antenna.
> do you have to propose any better system? thank you
>
> --
> tzitzikas

Hello,

Do you mean 16m vertical and 51m horizontal or 51m total with 16m
vertical? How big is the coverage area?

For ease of matching it is best to have a quarter wavelength (so about
51m totally). To get reasonable antenna efficiency and safe operation,
you need a ground network. For best efficiency and local coverage,
you need a large vertical part.

Without some form of grounding you will get sufficient RF voltage on
your cable (and maybe transmitter installation) that may result in
(skin)burn and other (EMC) problems.

Best way ahead is first design the antenna with ground system (local
coverage assumed). Then you can measure the impedance and maybe change
the antenna setup to get reasonable impedance. After that you can
design the matching network en select the components.

You are right; VSWR meter is between transmitter and antenna matching
unit. When you are unfamiliar with antennas and RF power, I would
recommend you to visit a local radio amateur club for advise, as with
500W AM many things can (and will) go wrong. Did you also check the
legal aspects?

Best regards,
Wim
PA3DJS
www.tetech.nl
Please remove abc in case of PM.

2472. Re: Open wire feedline

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-29 13:10:42 UTC
From: Tim Shoppa <shoppa@trailing-edge.com>
Message-ID: <8dc162d3-f960-4ed1-8318-50969cbd037f@b15g2000yqd.googlegroups.com>
Source record: 12734

On Sep 28, 2:44 pm, Ron Walters <w4...@numail.org> wrote:
> I am feeding a 80 meter center feed with open wire, about 100ft feed-line.
>
> Due to some new construction work that is going to start on the back of
> our home this week I am forced to move the feed-line.
>
> The original installation had about 50 ft vertical from the center of
> the dipole and then across and under a raised wood porch and then up to
> a second floor shack.
>
> The porch is going and a new covered screened porch is replacing it.
>
> I have three choices during construction, they are:
>
> 1. Leave the 100' feed-line coiled out in the yard and not operate.
> (Not a great idea)
>
> 2. Cut the feed line down to around 50' which would be temporary but
> then I would have to splice it later after construction.
>
> 3. Coil about 40' near the 4:1 balun, however I am concerned that the
> coiled feed line will act a one big inductor and change and or
> significantly reduce the antenna efficiency.
>
> #3 is the easiest but I am worried about open wire feed-line coiled,
> thoughts please!

#3 is less than optimal unless you actually want a big coiled piece of feedline as part of your antenna setup. There are some folks that have big coils of feedline just for impedance transformation purposes, I always think it's odd but that's what they like.

Splicing parallel feedline (whether it be homebrew ladder line or commercial window line) is not a big deal. The copper plated steel stuff is hard to bend with your bare hands but is easy enough with pliers. Splicing it with solder, and without a good mechanical twisted splice, will mean that after some flexing it will be break at the splice point. But make a good mechanical splice like in the handbook and you'll do fine.

But if you don't really need that 50 feet of feedline then why keep it? Straightest shot to the antenna will always be superior unless you want that extra 50 feet for impedance transformation or something else. Sounds like in most circumstances it'll be a win-win to keep the shorter more direct routing.

Tim.

2473. Re: medium waves match antenna-transmitter 50ohm system

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-29 13:40:12 UTC
From: "-.-. --.-" <a@a.com>
Message-ID: <h9t2nu$sn0$1@nnrp-beta.newsland.it>
Source record: 12735

"Wimpie" <wimabctel@tetech.nl> ha scritto nel messaggio
news:a3b1d867-e175-4d16-ab0e-426a681bd46f@b15g2000yqd.googlegroups.com...
>Did you also check the
> legal aspects?

I think is the last problem for those guys :)
http://www.harriku.com/photos2008/radio98_1.jpg and more on
http://kotisivu.dnainternet.net/harriku/greeks.htm

> Best regards,
> Wim
> PA3DJS

Regards,
-.-. --.-

2474. Re: Open wire feedline

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-29 14:07:02 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <Jwowm.234777$0e4.37730@newsfe19.iad>
Source record: 12736

Tim Shoppa wrote:
> But if you don't really need that 50 feet of feedline then why keep
> it? Straightest shot to the antenna will always be superior unless you
> want that extra 50 feet for impedance transformation or something
> else.

100 feet of ladder-line with an 80m dipole is easy to understand.
The dipole is 1/2WL. The ladder-line is ~1/2WL. The low 80m
feedpoint impedance tends to be reproduced at the shack end
thus making for an easy match.

However, 50 feet of ladder-line is ~1/4WL. The low 80m feedpoint
impedance tends to be transformed to ~4k ohms. Most built-in
autotuners will not handle such impedances.

100 feet of ladder-line is also a good length for multiband
operation of an 80m dipole as can be seen from this chart:

http://www.w5dxp.com/pnts130.gif

50 feet of ladder-line seems to be a good length for HF amateur
frequencies above 10 MHz - not so good for 80m and 40m.
--
73, Cecil, IEEE, OOTC, http://www.w5dxp.com

2475. Re: Open wire feedline

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-29 15:42:22 UTC
From: Tim Shoppa <shoppa@trailing-edge.com>
Message-ID: <4e966112-7310-409e-aa14-2cd36411f3bc@b2g2000yqi.googlegroups.com>
Source record: 12737

On Sep 29, 10:07 am, Cecil Moore <nos...@w5dxp.com> wrote:
> However, 50 feet of ladder-line is ~1/4WL. The low 80m feedpoint
> impedance tends to be transformed to ~4k ohms. Most built-in
> autotuners will not handle such impedances.

I personally think it's unlikely that even if someone is trapped by the fancy-pants autotuner they bought, that they probably don't need an extra fifty feet of line to deal with it. In my experience even ten extra feet of line at 80M can noticeably change the matching taps I use on my tuner if you're working in the 1/4 WL 65 foot feedline range. Of course that extra ten feet might make their fancy pants autotuner crap out on 20M, etc. and I can see how someone might start feeling like the old lady that swallowed the fly. I would rewrite the song to "swallowed the autotuner".

Tim N3QE

2476. Re: Circular versus linear polarization

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-29 17:06:55 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <p6udnf8oIOwso1_XnZ2dnUVZ_q6dnZ2d@giganews.com>
Source record: 12738

christofire wrote:
> "Roy Lewallen" <w7el@eznec.com> wrote in message
> news:dJCdnVGQr7Vz0FzXnZ2dnUVZ_o-dnZ2d@giganews.com...
>> christofire wrote:
>>> . . .
>>> * HP is less effective than VP for VHF communication with mobiles because
>>> the ever-present ground reflection has reversed polarity (i.e. it's in
>>> antiphase with the signal propagating over a direct path).
>>> . . .
>> Reflection of a CP wave results in a reversed CP wave only when the
>> reflection is directly normal to the reflecting surface. That's not at all
>> the case for typical ground reflections. What you actually get from ground
>> reflections is an elliptically polarized wave, likely having the same
>> sense as the impinging wave. In experiments I ran about 35 years ago, I
>> found nearly linearly polarized waves resulting from reflection of a CP
>> wave from a vehicle top.
>>
>
> No doubt, but what I wrote above was about horizontal and vertical _linear_
> polarisations, HP and VP. I did wonder after I sent it if 'polarity' would
> be misread as polarisation.
>
> Chris

My mistake, I apologize for misreading it. Yes, HP does reverse polarity, exactly as you say, when reflecting from the ground. Furthermore, the amplitude of the reflection is nearly the same as the incident wave (that is, the reflection coefficient is nearly -1), even when ground conductivity is relatively poor, especially at low angles. So the sum of the incident and reflected waves is near zero.

Unfortunately, the sum of a vertically polarized field and its reflection from finite conductivity ground is also nearly zero at low elevation angles, for different reasons. There is a component that propagates via surface wave, but it attenuates to essentially zero in a very short distance at VHF.

Roy Lewallen, W7EL

2477. Re: medium waves match antenna-transmitter 50ohm system

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-29 17:28:00 UTC
From: tzitzikas <tzitzikas.5083beb@radiobanter.com>
Message-ID: <tzitzikas.5083beb@radiobanter.com>
Source record: 12747

my match Pi system http://www.tzitzikas.webs.com/match.JPG is ok or i must modificate this to LC match system? it is ok or i must remove the 1500pf capacitor and increase the the first capacitor and add constant capacitors to 500pf capacitor? thank you.

--
tzitzikas

2478. Re: Circular versus linear polarization

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-29 17:50:04 UTC
From: bradlington@yahoo.com
Message-ID: <53407bdf-36b8-474b-aa03-3c78d4147207@y36g2000yqh.googlegroups.com>
Source record: 12739

Ok all noted on the many ideas.

Here is one for you boffins:

After having a look at the circular turnstile type antenna with a groundplane ,I sent a request to the main manufactureers regarding using this in an inverted state for what I wanted to do on the repeater.Still yet to get a reply and after a few months I guess they are still thinking about it.

If they advertised it so great for horizontal to near vertical satellite work then the same principle should apply if inverted.

Style of eggbeater looking at .
http://pagesperso-orange.fr/on6wg/Doc/Antenne%20Eggbeater-Engl-Part1-Full.pdf

What do the Boffins suggest.

2479. Re: Open wire feedline

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-29 17:59:01 UTC
From: Michael Coslo <mjc5@psu.edu>
Message-ID: <h9tht5$eo24$1@tr22n12.aset.psu.edu>
Source record: 12740

Tim Shoppa wrote:
> On Sep 29, 10:07 am, Cecil Moore <nos...@w5dxp.com> wrote:
>> However, 50 feet of ladder-line is ~1/4WL. The low 80m feedpoint
>> impedance tends to be transformed to ~4k ohms. Most built-in
>> autotuners will not handle such impedances.
>
> I personally think it's unlikely that even if someone is trapped by
> the fancy-pants autotuner they bought, that they probably don't need
> an extra fifty feet of line to deal with it. In my experience even ten
> extra feet of line at 80M can noticeably change the matching taps I
> use on my tuner if you're working in the 1/4 WL 65 foot feedline
> range. Of course that extra ten feet might make their fancy pants
> autotuner crap out on 20M, etc. and I can see how someone might start
> feeling like the old lady that swallowed the fly. I would rewrite the
> song to "swallowed the autotuner".

Wow, you do not like autotuners, eh?

I use both regular and autotuners, and both work pretty well for me.

Neither wear pants, fancy or otherwise 8^)

- 73 d eMike N3LI -

2480. Re: Circular versus linear polarization

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-29 18:21:46 UTC
From: christofire <christofire@btinternet.com>
Message-ID: <rJKdnUpp0--jzV_XnZ2dnUVZ8kWdnZ2d@bt.com>
Source record: 12741

<bradlington@yahoo.com> wrote in message
news:53407bdf-36b8-474b-aa03-3c78d4147207@y36g2000yqh.googlegroups.com...
> Ok all noted on the many ideas.
>
> Here is one for you boffins:
>
> After having a look at the circular turnstile type antenna with a
> groundplane ,I sent a request to the main manufactureers regarding
> using this in an inverted state for what I wanted to do on the
> repeater.Still yet to get a reply and after a few months I guess they
> are still thinking about it.
>
> If they advertised it so great for horizontal to near vertical
> satellite work then the same principle should apply if inverted.
>
> Style of eggbeater looking at .
> http://pagesperso-orange.fr/on6wg/Doc/Antenne%20Eggbeater-Engl-Part1-Full.pdf
>
> What do the Boffins suggest.

1. How are you thinking of mounting it whilst upside down? Even if you were to use a dielectric swan neck of some kind, you'd still have the feed line passing through the volume into which the antenna is intentionally radiating, so the radiation pattern would be upset to some extent. Of course, if you were willing to modify the antenna you could probably pass a co-axial feed line through an axial tube - but if you were going to that much trouble you might as well build the thing yourself.

2. Their statement that: 'Each of the two loops forming the antenna has an impedance of 100 ohms, and when coupled in parallel, they offer an ideal 50 ohms impedance. We will use the properties of a quarter wavelength coax line to achieve a 90 degree phase difference between the two loops in order to obtain circular polarisation.' is a bit suspect. This would be true for a half wavelength of line, indeed that is the basis of a very common form of balun, but a quarter wavelength of transmission line will cause an impedance transformation. If they use 50 ohm cable then a quarter wavelength will transform 100 ohms down to 25 ohms, and when this is connected in parallel with another 100 ohms the result will be 20 ohms which is presented to the feed line. Not a particularly good match!

My suggestion is: if you intend to purchase, proceed with caution and keep asking the proprietor the questions you want answered.

Chris

2481. Re: Open wire feedline

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-29 18:26:10 UTC
From: Tim Shoppa <shoppa@trailing-edge.com>
Message-ID: <2d8d6a3b-c5cb-4318-9fee-39b64d6c08a9@j19g2000yqk.googlegroups.com>
Source record: 12742

On Sep 29, 1:59 pm, Michael Coslo <m...@psu.edu> wrote:
> TimShoppawrote:
> > On Sep 29, 10:07 am, Cecil Moore <nos...@w5dxp.com> wrote:
> >> However, 50 feet of ladder-line is ~1/4WL. The low 80m feedpoint
> >> impedance tends to be transformed to ~4k ohms. Most built-in
> >> autotuners will not handle such impedances.
>
> > I personally think it's unlikely that even if someone is trapped by
> > the fancy-pants autotuner they bought, that they probably don't need
> > an extra fifty feet of line to deal with it. In my experience even ten
> > extra feet of line at 80M can noticeably change the matching taps I
> > use on my tuner if you're working in the 1/4 WL 65 foot feedline
> > range. Of course that extra ten feet might make their fancy pants
> > autotuner crap out on 20M, etc. and I can see how someone might start
> > feeling like the old lady that swallowed the fly. I would rewrite the
> > song to "swallowed the autotuner".
>
> Wow, you do not like autotuners, eh?

The autotuners that the neighboring hams have do not have knobs. They just have a little button you push and then relays chatter and it either succeeded or failed. There's a little LED idiot light to tell you that it succeeded or failed.

I myself do not understand how a piece of radio equipment does not have knobs. Or how it has little blinky LED's but no meters.

My homebrew tuner has alligator tips for selecting the turns on the output link, as well as plug-in link-coupled coil sets for each band and of course knobs on the variable caps. IMHO if a tuner has plug in coil sets and alligator clips then you know you're cooking with gas. I was looking a a picture of a station in the 1972 ARRL handbook last night and realized that my tuner looks almost identical to the one in the picture (which itself was probably 20 years old in 1972).

Tim.
Tim.

2482. Re: Circular versus linear polarization

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-29 18:28:03 UTC
From: christofire <christofire@btinternet.com>
Message-ID: <J7CdncEB1eMrzF_XnZ2dnUVZ8qqdnZ2d@bt.com>
Source record: 12743

"christofire" <christofire@btinternet.com> wrote in message
news:rJKdnUpp0--jzV_XnZ2dnUVZ8kWdnZ2d@bt.com...
>
> <bradlington@yahoo.com> wrote in message
> news:53407bdf-36b8-474b-aa03-3c78d4147207@y36g2000yqh.googlegroups.com...
>> Ok all noted on the many ideas.
>>
>> Here is one for you boffins:
>>
>> After having a look at the circular turnstile type antenna with a
>> groundplane ,I sent a request to the main manufactureers regarding
>> using this in an inverted state for what I wanted to do on the
>> repeater.Still yet to get a reply and after a few months I guess they
>> are still thinking about it.
>>
>> If they advertised it so great for horizontal to near vertical
>> satellite work then the same principle should apply if inverted.
>>
>> Style of eggbeater looking at .
>> http://pagesperso-orange.fr/on6wg/Doc/Antenne%20Eggbeater-Engl-Part1-Full.pdf
>>
>> What do the Boffins suggest.
>
>
> 1. How are you thinking of mounting it whilst upside down? Even if you
> were to use a dielectric swan neck of some kind, you'd still have the feed
> line passing through the volume into which the antenna is intentionally
> radiating, so the radiation pattern would be upset to some extent. Of
> course, if you were willing to modify the antenna you could probably pass
> a co-axial feed line through an axial tube - but if you were going to that
> much trouble you might as well build the thing yourself.
>
> 2. Their statement that: 'Each of the two loops forming the antenna has
> an impedance of 100 ohms, and when coupled in parallel, they offer an
> ideal 50 ohms impedance. We will use the properties of a quarter
> wavelength coax line to achieve a 90 degree phase difference between the
> two loops in order to obtain circular polarisation.' is a bit suspect.
> This would be true for a half wavelength of line, indeed that is the basis
> of a very common form of balun, but a quarter wavelength of transmission
> line will cause an impedance transformation. If they use 50 ohm cable
> then a quarter wavelength will transform 100 ohms down to 25 ohms, and
> when this is connected in parallel with another 100 ohms the result will
> be 20 ohms which is presented to the feed line. Not a particularly good
> match!

>

OK - I've just noticed they specify RG62 for the quarter wavelength of line, and that has 93 ohms characteristic impedance. It would transmform 100 ohms down to 86.5 ohms which, in parallel with the other 100 ohms, would yield 46.4 ohms. Better.

Chris

2483. Re: Open wire feedline

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-29 19:28:31 UTC
From: Michael Coslo <mjc5@psu.edu>
Message-ID: <h9tn4v$eo2c$1@tr22n12.aset.psu.edu>
Source record: 12744

Tim Shoppa wrote:
> On Sep 29, 1:59 pm, Michael Coslo <m...@psu.edu> wrote:
>> TimShoppawrote:
>>> On Sep 29, 10:07 am, Cecil Moore <nos...@w5dxp.com> wrote:
>>>> However, 50 feet of ladder-line is ~1/4WL. The low 80m feedpoint
>>>> impedance tends to be transformed to ~4k ohms. Most built-in
>>>> autotuners will not handle such impedances.
>>> I personally think it's unlikely that even if someone is trapped by
>>> the fancy-pants autotuner they bought, that they probably don't need
>>> an extra fifty feet of line to deal with it. In my experience even ten
>>> extra feet of line at 80M can noticeably change the matching taps I
>>> use on my tuner if you're working in the 1/4 WL 65 foot feedline
>>> range. Of course that extra ten feet might make their fancy pants
>>> autotuner crap out on 20M, etc. and I can see how someone might start
>>> feeling like the old lady that swallowed the fly. I would rewrite the
>>> song to "swallowed the autotuner".
>> Wow, you do not like autotuners, eh?
>
> The autotuners that the neighboring hams have do not have knobs. They
> just have a little button you push and then relays chatter and it
> either succeeded or failed. There's a little LED idiot light to tell
> you that it succeeded or failed.

Those are simple indeed. My autotuner has channel memories, an analog
meter and a cool little lcd meter that tells me how much inductance and
capacitance are inserted in the circuit. plus I can manually adjust
both. It's pretty cool in fact.

> I myself do not understand how a piece of radio equipment does not
> have knobs. Or how it has little blinky LED's but no meters.

Majik? (grinning)

> My homebrew tuner has alligator tips for selecting the turns on the
> output link, as well as plug-in link-coupled coil sets for each band
> and of course knobs on the variable caps. IMHO if a tuner has plug in
> coil sets and alligator clips then you know you're cooking with gas. I
> was looking a a picture of a station in the 1972 ARRL handbook last
> night and realized that my tuner looks almost identical to the one in
> the picture (which itself was probably 20 years old in 1972).

I certainly don't have anything against old school radios and tuners.
Dunno if you have yours this way, but I would be inclined to mount that
alligator clipped tuner coil on a nicely finished wood base, and go
really old school pretty with it. Maybe make the coil supports out of
the same type wood turned to a dowel or maybe even polished glass or

plastic. If yer going old school, flaunt it!

Anyhow, it's all good, old or new. Gives me a lot more to mess with since I like both.

- 73 de Mike N3LI -

2484. Re: Open wire feedline

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-29 20:15:54 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <5Z-dnXoWyYlh91_XnZ2dnUVZ_r5i4p2d@giganews.com>
Source record: 12745

Tim Shoppa wrote:
>
> The autotuners that the neighboring hams have do not have knobs. They
> just have a little button you push and then relays chatter and it
> either succeeded or failed. There's a little LED idiot light to tell
> you that it succeeded or failed.
>
> I myself do not understand how a piece of radio equipment does not
> have knobs. Or how it has little blinky LED's but no meters.
>
> My homebrew tuner has alligator tips for selecting the turns on the
> output link, as well as plug-in link-coupled coil sets for each band
> and of course knobs on the variable caps. IMHO if a tuner has plug in
> coil sets and alligator clips then you know you're cooking with gas. I
> was looking a a picture of a station in the 1972 ARRL handbook last
> night and realized that my tuner looks almost identical to the one in
> the picture (which itself was probably 20 years old in 1972).
>
> Tim.
> Tim.

Boy, I sure know how you feel. Real tuners have knobs, real radios have hot things that glow. Real airplanes are made from tubes and cloth and have a wheel on the tail. Real cars smoke, get 10 MPG, and burn rubber. And real women stay home, cook, and take care of the babies. It's really tough to be stuck in 1957. I feel your pain.

Roy Lewallen, W7EL
(Charter member, OFC)

2485. Re: Open wire feedline

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-29 20:33:45 UTC
From: Wayne <mygarbagecan@verizon.net>
Message-ID: <h9tqv2vh1@news.eternal-september.org>
Source record: 12746

"Roy Lewallen" <w7el@eznec.com> wrote in message
news:5Z-dnXoWyYlh91_XnZ2dnUVZ_r5i4p2d@giganews.com...
> Tim Shoppa wrote:
>>
>> The autotuners that the neighboring hams have do not have knobs. They
>> just have a little button you push and then relays chatter and it
>> either succeeded or failed. There's a little LED idiot light to tell
>> you that it succeeded or failed.
>>
>> I myself do not understand how a piece of radio equipment does not
>> have knobs. Or how it has little blinky LED's but no meters.
>>
>> My homebrew tuner has alligator tips for selecting the turns on the
>> output link, as well as plug-in link-coupled coil sets for each band
>> and of course knobs on the variable caps. IMHO if a tuner has plug in
>> coil sets and alligator clips then you know you're cooking with gas. I
>> was looking a a picture of a station in the 1972 ARRL handbook last
>> night and realized that my tuner looks almost identical to the one in
>> the picture (which itself was probably 20 years old in 1972).
>>
>> Tim.
>> Tim.
>
> Boy, I sure know how you feel. Real tuners have knobs, real radios have
> hot things that glow. Real airplanes are made from tubes and cloth and
> have a wheel on the tail. Real cars smoke, get 10 MPG, and burn rubber.
> And real women stay home, cook, and take care of the babies. It's really
> tough to be stuck in 1957. I feel your pain.
>
> Roy Lewallen, W7EL
> (Charter member, OFC)
-
LOL...me too. I'm also partial to panels that have the control labels
etched into the metal and filled with white paint :)
--Wayne

2486. Re: medium waves match antenna-transmitter 50ohm system

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-29 22:26:02 UTC
From: christofire <christofire@btinternet.com>
Message-ID: <6KOdnWFNWOTgFF_XnZ2dnUVZ8kCdnZ2d@bt.com>
Source record: 12748

"tzitzikas" <tzitzikas.5083beb@radiobanter.com> wrote in message
news:tzitzikas.5083beb@radiobanter.com...
>
> my match Pi system http://www.tzitzikas.webs.com/match.JPG is ok or i
> must modificate this to LC match system? it is ok or i must remove the
> 1500pf capacitor and increase the the first capacitor and add constant
> capacitors to 500pf capacitor? thank you.
>
> --
> tzitzikas

You probably need to answer the questions you were asked before anyone could advise on matching, like what's the length of the antenna?

Also, is this for pirate radio?

Chris

2487. Re: Lightning Arrestors Question

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-29 22:49:47 UTC
From: Jeff Liebermann <jeffl@cruzio.com>
Message-ID: <n935c59hslbue3l02hqc88ksrtub1vh7up@4ax.com>
Source record: 12749

On Mon, 28 Sep 2009 14:20:29 GMT, "Rick" <ricknj10@hotmail.com> wrote:

>> How does one protect against these without breaking the bank doing so ?
>
>Go on Mousers web site and look at gas tubes made by Littelfuse. Go to
>Littelfuses web site from the link on Mousers site and check out the specs
>on gas tubes. Compare them to the specs on your $50-70 commercial lightning
>arrestor.
>Then note that what's in that little casting box is two coax connectors, one
>capacitor and one $2-3 gas tube and you have the answer to your question.
>Myth revealed.

Yep.

Data sheets on the ceramic gas tubes by Littelfuse:
<http://www.littelfuse.com/searchresults.html?NN=0%3aTechnology%3a157>

Inside a 900Mhz cellular lightning protector. The two wires are an
interdigital bandpass filter:
<http://802.11junk.com/jeffl/pics/lightning/polyphaser-02.jpg>
I don't think these look like they were made by Littelfuse.

Unfinished panel:
<http://802.11junk.com/jeffl/pics/lightning/panel.jpg>
Mostly CATV protectors.

--
Jeff Liebermann 150 Felker St #D Santa Cruz CA 95060
831-336-2558
http://802.11junk.com jeffl@cruzio.com
http://www.LearnByDestroying.com AE6KS

2488. fractals and HDTV antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-30 04:46:28 UTC
From: John Gilmer <jlgilmer@localnet.com>
Message-ID: <6_adnVttLdKRfl_XnZ2dnUVZ_tmdnZ2d@posted.localnet>
Source record: 12750

Hi:

A month or so ago I say a PBS piece on fractals. The piece claimed that the "technology" is used to make the antennas for cell phones.

Have any amateurs used "fractal technology" to form their antennas?

Also, I note that "they" market HDTV antennas that are about the size of a book. Do these things work? What's inside them?

Yours,

JLG

2489. Re: fractals and HDTV antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-30 06:23:06 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <dkt5c5t9qodmbs68nt98c4mjl7f8n52a7q@4ax.com>
Source record: 12601

On Wed, 30 Sep 2009 00:46:28 -0400, "John Gilmer"
<jlgilmer@localnet.com> wrote:

>Hi:
>
>A month or so ago I say a PBS piece on fractals. The piece claimed that
>the "technology" is used to make the antennas for cell phones.
>
>Have any amateurs used "fractal technology" to form their antennas?

-sigh-

Any? Yes.
Many? No.

>Also, I note that "they" market HDTV antennas that are about the size of a
>book. Do these things work?

They work about as hard as Bernie Madoff worked.

The most enthusiastic fractal supporters here are those who never
built any, couldn't show you a design if they were forced to google
for one, and pound their breast about how modern inventors are reviled
in their own neighborhood. The most successful merchant who has dared
post here would sue you if you tried to make your own.

> What's inside them?

Wire (metal). Same as any antenna.

What makes you ask?

73's
Richard Clark, KB7QHC

2490. Re: fractals and HDTV antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-30 10:41:13 UTC
From: christofire <christofire@btinternet.com>
Message-ID: <3uednZ4-oJlQqF7XnZ2dnUVZ8s-dnZ2d@bt.com>
Source record: 12602

"John Gilmer" <jlgilmer@localnet.com> wrote in message
news:6_adnVttLdKRfl_XnZ2dnUVZ_tmdnZ2d@posted.localnet...
> Hi:
>
> A month or so ago I say a PBS piece on fractals. The piece claimed that
> the "technology" is used to make the antennas for cell phones.
>

That might be true. There's certainly material on the www about research
into fractal antennas that can be Googled, such as
http://ceta.mit.edu/pierb/pierb14/07.09030802.pdf

> Have any amateurs used "fractal technology" to form their antennas?
>
> Also, I note that "they" market HDTV antennas that are about the size of a
> book. Do these things work? What's inside them?
>

As you may realise, terrestrial broadcasting provides a large margin for a
lot of households which makes it possible to receive good signals in some
areas using a dead sheep. Consequently indoor television antennas are sold
in a variety of styles and, at some locations, some of them work - even if
they have meagre electrical characteristics. Unfortunately, there is a
tendency for unqualified folklore to arise about antennas that appear to
work (in particular circumstances). The DVB-T system used in Europe is
particularly resistant to multipath distortion, which helps.

Some book-sized efforts contain a PCB bow tie in front of a plane reflector.
In others, the shapes of the elements are fiddled around with like
http://www.instructables.com/id/How_to_make_a_fractal_antenna_for_HDTV_DTV_plus_/

Chris

2491. Re: medium waves match antenna-transmitter 50ohm system

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-30 11:28:36 UTC
From: Ian Jackson <ianREMOVETHISjackson@g3ohx.demon.co.uk>
Message-ID: <Ik+SozTkD0wKFw1k@g3ohx.demon.co.uk>
Source record: 12603

In message <6KOdnWFNWOTgFF_XnZ2dnUVZ8kCdnZ2d@bt.com>, christofire
<christofire@btinternet.com> writes
>
>"tzitzikas" <tzitzikas.5083beb@radiobanter.com> wrote in message
>news:tzitzikas.5083beb@radiobanter.com...
>>
>> my match Pi system http://www.tzitzikas.webs.com/match.JPG is ok or i
>> must modificate this to LC match system? it is ok or i must remove the
>> 1500pf capacitor and increase the the first capacitor and add constant
>> capacitors to 500pf capacitor? thank you.
>>
>> --
>> tzitzikas
>
>
>You probably need to answer the questions you were asked before anyone could
>advise on matching, like what's the length of the antenna?
>
>Also, is this for pirate radio?
>
For 'educational purposes only', you could try these two programs. One
calculates the impedance at the feed-point of an inverted-L end-fed
antenna, and the other calculates the values of the L and C which you
need for an L-match tuner circuit.

endfeed.exe
l_tuner.exe (that's L-TUNER-EXE)

These - and many more wonderful programs - are available from this
website:
<http://www.zerobeat.net/G4FGQ/>
<http://www.zerobeat.net/G4FGQ/page3.html#S301">

--
Ian

2492. Re: fractals and HDTV antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-30 16:12:14 UTC
From: George Csahanin <georgec@lintv.com>
Message-ID: <ha00a8$2ir$1@news.eternal-september.org>
Source record: 12605

Wow. Been a while. Last time I saw or wrote anything here about fractals was over ten years ago, and someone in the group threatened to sue me/everyone who was not a supporter of the technology.

I do know that I have seen mention of this technology relative to hand held ATSC receivers for mobile video (cel phones, etc)

GeorgeC

"John Gilmer" <jlgilmer@localnet.com> wrote in message news:6_adnVttLdKRfl_XnZ2dnUVZ_tmdnZ2d@posted.localnet...
> Hi:
>
> A month or so ago I say a PBS piece on fractals. The piece claimed that
> the "technology" is used to make the antennas for cell phones.
>
> Have any amateurs used "fractal technology" to form their antennas?
>
> Also, I note that "they" market HDTV antennas that are about the size of a
> book. Do these things work? What's inside them?
>
> Yours,
>
> JLG
>
>

2493. Re: fractals and HDTV antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-30 16:14:12 UTC
From: Wayne <mygarbagecan@verizon.net>
Message-ID: <ha004g$p3$1@news.eternal-september.org>
Source record: 12604

"John Gilmer" <jlgilmer@localnet.com> wrote in message
news:6_adnVttLdKRfl_XnZ2dnUVZ_tmdnZ2d@posted.localnet...
> Hi:
>
> A month or so ago I say a PBS piece on fractals. The piece claimed that
> the "technology" is used to make the antennas for cell phones.
>
> Have any amateurs used "fractal technology" to form their antennas?
>
> Also, I note that "they" market HDTV antennas that are about the size of a
> book. Do these things work? What's inside them?
>
> Yours,
>
> JLG
>
>
Heh heh....just sitting here recalling the GFW (Great Fractal War) on this
newsgroup a few years ago.
Where is Chip when we need him :)

2494. Re: fractals and HDTV antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-30 16:43:33 UTC
From: Jeff Liebermann <jeffl@cruzio.com>
Message-ID: <2u07c5d8k0n7pie7ajvagcbll8n44usro1@4ax.com>
Source record: 12606

On Wed, 30 Sep 2009 00:46:28 -0400, "John Gilmer"
<jlgilmer@localnet.com> wrote:

>A month or so ago I say a PBS piece on fractals. The piece claimed that
>the "technology" is used to make the antennas for cell phones.

Yep. The advantages of fractal antennas are small size and wide
bandwidth. These are the prime requirements for cramming an antenna
inside a tiny cell phone. Making it work for 800/1900Mhz cellular,
2.4GHz Bluegoof and Wi-Fi, and possibly for TV, FM, WiMax, etc, is not
easy.

>Have any amateurs used "fractal technology" to form their antennas?

Not intentionally, although many antennas (and towers) somewhat
resemble a fractal, especially when they crash to the ground. Same
with some "low visual impact" cell towers. To the best of my
knowledge, hams are not cramming broadband radios into packages the
size of cell phones.

>Also, I note that "they" market HDTV antennas that are about the size of a
>book. Do these things work? What's inside them?

Sure. So do rabbit ears, clip leads, and coat hangers. If you're in
a strong signal area, almost anything will work, including a fractal
antenna. However, if you're in a weak signal area, or are plagued by
reflections, the more traditional designs are more useful.

(Disclaimer: I've never built a fractal antenna).

--
Jeff Liebermann jeffl@cruzio.com
150 Felker St #D http://www.LearnByDestroying.com
Santa Cruz CA 95060 http://802.11junk.com
Skype: JeffLiebermann AE6KS 831-336-2558

2495. Re: medium waves match antenna-transmitter 50ohm system

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-30 17:11:01 UTC
From: tzitzikas <tzitzikas.5098d66@radiobanter.com>
Message-ID: <tzitzikas.5098d66@radiobanter.com>
Source record: 12613

my antenna is (5 x wavelength) / 16 . it is ok or i must modificate it
to wavelength/4??? the horizontal part is about 45 meters and the
vertical is about 20 meters.

--
tzitzikas

2496. Re: fractals and HDTV antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-30 17:31:22 UTC
From: Michael Coslo <mjc5@psu.edu>
Message-ID: <ha04la$g816$1@tr22n12.aset.psu.edu>
Source record: 12607

John Gilmer wrote:
> Hi:
>
> A month or so ago I say a PBS piece on fractals. The piece claimed that
> the "technology" is used to make the antennas for cell phones.
>
> Have any amateurs used "fractal technology" to form their antennas?

I recall a 10 meter fractal antenna. Strange looking thing. Disappeared some time ago from the web.

It's interesting that they call fractals "technology". Any of us could generate a usable fractal, and form some wire along that pattern, and make something. "Fractal" is no more technology than is "dipole".

There is a fellow who used to post here who has a company that makes such antennas. When I first came to this group, there was a war winding down. I never had any problems with the guy, but whoeeee the arguments were running hot.

But on the antennas themselves, they work, but they are not a substitute for a lot of other high performance antennas. All antennas are compromises, and Fractal ones are all about getting an antenna into a small space. The are mostly UHF also. That ten meter antenna was the exception, not the rule. HF? Imagine a 160 meter Fractal. No matter how it's done, it's still going to be big. If you have a small box running at UHF, you might think about putting a fractal (or it's cousin, a small random pattern antenna) in it. But if you want to run 80 meters in a small yard, there are better ways of doing it.

> Also, I note that "they" market HDTV antennas that are about the size of a
> book. Do these things work? What's inside them?

Define work. 8^) *Real* close to the stations? then probably. As for what's inside, if there was any design at all, probably a dipole cut for the approximate frequency. But that's a guess. IMO they are a wast of money.

- 73 de Mike N3LI -

2497. Re: Circular versus linear polarization

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-30 17:45:33 UTC
From: bradlington@yahoo.com
Message-ID: <2f8860cd-4301-441d-807f-ec64972db083@k19g2000yqc.googlegroups.com>
Source record: 12608

Regarding the mounting , running the feeder out from a concrete microwave tower one can run the feeder from the top or bottom of the antenna.

2498. Re: fractals and HDTV antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-30 18:53:29 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <a7a7c5l8lh9j2guq4rg330cpke83kq5b6n@4ax.com>
Source record: 12609

On Wed, 30 Sep 2009 09:43:33 -0700, Jeff Liebermann <jeffl@cruzio.com>
wrote:

Myth number one:
>Yep. The advantages of fractal antennas are small size and wide
>bandwidth.

73's
Richard Clark, KB7QHC

2499. Re: fractals and HDTV antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-30 18:57:01 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <qda7c5p6hj20v10mg3evde1slijnkluh2g@4ax.com>
Source record: 12610

On Wed, 30 Sep 2009 13:31:22 -0400, Michael Coslo <mjc5@psu.edu>
wrote:

>I recall a 10 meter fractal antenna. Strange looking thing. Disappeared
>some time ago from the web.

Same page for ten years now:
http://www.qsl.net/kb7qhc/antenna/fractal/Square%20Gasket/index.htm

73's
Richard Clark, KB7QHC

2500. Re: fractals and HDTV antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-30 19:26:54 UTC
From: Michael Coslo <mjc5@psu.edu>
Message-ID: <ha0be1$g81g$1@tr22n12.aset.psu.edu>
Source record: 12611

Richard Clark wrote:
> On Wed, 30 Sep 2009 13:31:22 -0400, Michael Coslo <mjc5@psu.edu>
> wrote:
>
>> I recall a 10 meter fractal antenna. Strange looking thing. Disappeared
>> some time ago from the web.
>
> Same page for ten years now:
> http://www.qsl.net/kb7qhc/antenna/fractal/Square%20Gasket/index.htm

Ahh, I didn't know about your page. The one I was thinking about had an
actual picture and construction ideas.

So you're in the Puget Sound area? I used to stay in Poulsbo fairly
often. Spent some evenings at the "Sons of Norway" club there. Coslo is
a good old Norwegian name! 8^)

- 73 d eMike N3LI -

2501. Re: fractals and HDTV antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-30 20:02:47 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <6LadnWUtXt_tJF7XnZ2dnUVZ_vOdnZ2d@giganews.com>
Source record: 12612

Richard Clark wrote:
> On Wed, 30 Sep 2009 09:43:33 -0700, Jeff Liebermann <jeffl@cruzio.com>
> wrote:
>
> Myth number one:
>> Yep. The advantages of fractal antennas are small size and wide
>> bandwidth.
>
> 73's
> Richard Clark, KB7QHC

It's not entirely a myth -- fractal antennas can be small and have wide bandwidth. But my dummy load is small and has wide bandwidth. What makes that an "advantage"?

You can take this to the bank: Small -- Broadband -- Efficient. Pick any two.

Roy Lewallen, W7EL

2502. goodbye cruel world

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-30 23:08:34 UTC
From: Dave <noone@nowhere.com>
Message-ID: <SxRwm.206$0H3.55@nwrddc02.gnilink.net>
Source record: 12614

Goodbye, cruel world,
Im leaving you today.
Goodbye, goodbye, goodbye.

Goodbye all you people,
Theres nothing you can say,
To make me change my mind.
Goodbye.

For tonight verizon dumps usenet, and i refuse to pay more to argue with idiots.

2503. Re: medium waves match antenna-transmitter 50ohm system

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-30 23:09:40 UTC
From: christofire <christofire@btinternet.com>
Message-ID: <N6mdnS92Gf2ieF7XnZ2dnUVZ8rGdnZ2d@bt.com>
Source record: 12615

"tzitzikas" <tzitzikas.5098d66@radiobanter.com> wrote in message
news:tzitzikas.5098d66@radiobanter.com...
>
> my antenna is (5 x wavelength) / 16 . it is ok or i must modificate it
> to wavelength/4??? the horizontal part is about 45 meters and the
> vertical is about 20 meters.
>
> --
> tzitzikas

If the wavelength is 209.6 m then those dimensions sound like 0.21 and 0.1 of a wavelength so now I understand: the total length is 5/16 of a wavelength, not 51/16 as you wrote before.

Why don't you make use of the programs Ian Jackson offered, for educational purposes as he put it.

If this is pirate radio then you probably don't care about the audio quality, so there's no point in me banging on about keeping the Q of the system low.

Chris

2504. Re: goodbye cruel world

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-30 23:19:04 UTC
From: christofire <christofire@btinternet.com>
Message-ID: <ZaKdnRYx8abvel7XnZ2dnUVZ8jWdnZ2d@bt.com>
Source record: 12616

"Dave" <noone@nowhere.com> wrote in message
news:SxRwm.206$0H3.55@nwrddc02.gnilink.net...
> Goodbye, cruel world,
> Im leaving you today.
> Goodbye, goodbye, goodbye.
>
> Goodbye all you people,
> Theres nothing you can say,
> To make me change my mind.
> Goodbye.
>
> For tonight verizon dumps usenet, and i refuse to pay more to argue with
> idiots.

You'll be missed, especially in the fight against the fraud squad. Heck,
earthly physics seems to have a bit of a grip in this group at the moment as
well.

Chris

2505. Re: fractals and HDTV antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-30 23:41:57 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <j2r7c5l6lgb4otaup46524clued557u9or@4ax.com>
Source record: 12617

On Wed, 30 Sep 2009 15:26:54 -0400, Michael Coslo <mjc5@psu.edu>
wrote:
>So you're in the Puget Sound area? I used to stay in Poulsbo fairly
>often. Spent some evenings at the "Sons of Norway" club there. Coslo is
>a good old Norwegian name! 8^)

So howcum you missed the Norwegian independance day parade here in
Ballard? Largest one outside of Norway.

73's
Richard Clark, KB7QHC

2506. Re: fractals and HDTV antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2009-09-30 23:49:52 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <k6r7c5h1d2vrc54cfaf70g6lsp3bp39era@4ax.com>
Source record: 12618

On Wed, 30 Sep 2009 15:26:54 -0400, Michael Coslo <mjc5@psu.edu>
wrote:

>Ahh, I didn't know about your page.

No one actually cares about fractal antennas. Like the rest of the
tourists, our original poster has already moved on without a second
thought on the subject.

>The one I was thinking about had an
>actual picture and construction ideas.

No one actually builds them either, unless they were accidentally
"constructed" when left in the driveway and back over with a car.
We've had actual picture of Art's antenna left on a doorstep that Art
(like an unwed mother) has never acknowledged. Construction ideas
litter webspace like a toilet papered tree.

73's
Richard Clark, KB7QHC

2507. Re: Circular versus linear polarization

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-01 00:58:27 UTC
From: Jerry <jerrymartes@verizon.net>
Message-ID: <T8Twm.224$0H3.35@nwrddc02.gnilink.net>
Source record: 12619

<bradlington@yahoo.com> wrote in message
news:2f8860cd-4301-441d-807f-ec64972db083@k19g2000yqc.googlegroups.com...
> Regarding the mounting , running the feeder out from a concrete
> microwave tower one can run the feeder from the top or bottom of the
> antenna.

Hi Brad

How is the eggbeater performance superior to that of a Lindenblad?

Jerry KD6JDJ

>

2508. Re: goodbye cruel world

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-01 01:01:07 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <WbTwm.221822$cf6.896@newsfe16.iad>
Source record: 12620

Dave wrote:
> For tonight verizon dumps usenet, and i refuse to pay more to argue with
> idiots.

There's always Google.
--
73, Cecil, IEEE, OOTC, http://www.w5dxp.com

2509. Re: goodbye cruel world

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-01 04:27:54 UTC
From: Pete <pete13245@inet.net>
Message-ID: <ha1b49ah2@news.albasani.net>
Source record: 12621

On Wed, 30 Sep 2009 23:08:34 +0000, Dave wrote:

> Goodbye, cruel world,
> Im leaving you today.
> Goodbye, goodbye, goodbye.
>
> Goodbye all you people,
> Theres nothing you can say,
> To make me change my mind.
> Goodbye.
>
> For tonight verizon dumps usenet, and i refuse to pay more to argue with
> idiots.

How unfortunate you will be missed

Corporate American claims another victory in stifling public uncensored
input.

2510. Re: goodbye cruel world

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-01 05:53:18 UTC
From: Brian Howie <brian@nospam.demon.co.uk>
Message-ID: <Qc9ZrBEOPExKFw4q@b-howie.demon.co.uk>
Source record: 12622

In message <SxRwm.206$0H3.55@nwrddc02.gnilink.net>, Dave
<noone@nowhere.com> writes
>Goodbye, cruel world,
>Im leaving you today.
>Goodbye, goodbye, goodbye.
>
>Goodbye all you people,
>Theres nothing you can say,
>To make me change my mind.
>Goodbye.
>
>For tonight verizon dumps usenet, and i refuse to pay more to argue
>with idiots.

This is a free news server I used when the one on my ISP went a bit
flaky.

Http://www.aioe.org/

Brian GM4DIJ
--
Brian Howie

2511. Crossposting Permitted to rec.radio.amateur.moderated

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-01 06:00:02 UTC
From: rram@panix.com
Message-ID: <radio/ham-radio/moderated/crossposting-1-1254376801@panix.com>
Source record: 12623
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.dx,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.policy,rec.radio.amateur.space,rec.radio.info

```
Posted-By: auto-faq 3.3.2 beta (PGPMoose V2.0, Perl 5.005)
Archive-name: radio/ham-radio/moderated/crossposting
Revision: 1.1 2009/04/12 19:42:04
Posting-Frequency: posted monthly
URL: http://www.panix.com/~rram/usenet/rram/index.html

Changes followed by "|".

After a 30-day public discussion and feedback period to gauge reader
opinions in March of 2009:

http://groups.google.com/group/rec.radio.amateur.moderated/browse_thread/thread/d7d337db35
f23326

the rec.radio.amateur.moderated Moderation Team has decided to consider
amending its charter, and permit limited simultaneous crossposting to
rec.radio.amateur.moderated and one other unmoderated
amateur-radio-related discussion newsgroup. We are currently trying
this on a temporary basis (90 days, through early July 2009), and adopt
it permanently if successful.

Approved rec.radio.amateur.* newsgroups are those that are currently
listed in the latest version of the "List of Big Eight Newsgroups" which
is crossposted monthly to news.announce.newgroups, news.groups, and
news.lists.misc.

Approved alt.radio.amateur.* and alt.ham-radio.* newsgroups are those
that have been created consistent with the suggestions in "So You Want
to Create an Alt Newsgroup" at:

http://www.faqs.org/faqs/alt-creation-guide/

Approved regional hierarchy newsgroups are those that contain either
"radio.amateur" or "ham-radio" in their names, including
uk.radio.amateur and aus.radio.amateur.misc.

We will make every reasonable effort to keep our list of approved
newsgroups up-to-date. In case we have overlooked any, and a submission
is rejected in error as a result, the rejected submitter can E-mail us
at our administrative contact address (in the signature at the bottom of
this article, and the default Reply-To for the rejection message)
requesting that it be added, and that the article be approved. We may
still choose to reject articles crossposted to any alt.* newsgroup with
an inappropriate name, including obscene language, embedded
name-calling, or encouragement of unlawful conduct.
```

Please direct any comments, questions, or criticisms to
rec-radio-amateur-moderated-request@panix.com.

2512. Re: fractals and HDTV antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-01 13:08:02 UTC
From: Frank <frank@spamfree.telus.net>
Message-ID: <SQ1xm.46029$Db2.26758@edtnps83>
Source record: 12624

> No one actually cares about fractal antennas. Like the rest of the
> tourists, our original poster has already moved on without a second
> thought on the subject.
>
>>The one I was thinking about had an
>>actual picture and construction ideas.
>
> No one actually builds them either, unless they were accidentally
> "constructed" when left in the driveway and back over with a car.
> We've had actual picture of Art's antenna left on a doorstep that Art
> (like an unwed mother) has never acknowledged. Construction ideas
> litter webspace like a toilet papered tree.

I saw that program on PBS (I think it was Nova). They actualy interviewed
the designer who used to post here all the time.

Frank

2513. Re: fractals and HDTV antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-01 15:30:35 UTC
From: Michael Coslo <mjc5@psu.edu>
Message-ID: <ha2hv0$eo4k$1@tr22n12.aset.psu.edu>
Source record: 12625

Richard Clark wrote:
> On Wed, 30 Sep 2009 15:26:54 -0400, Michael Coslo <mjc5@psu.edu>
> wrote:
>> So you're in the Puget Sound area? I used to stay in Poulsbo fairly
>> often. Spent some evenings at the "Sons of Norway" club there. Coslo is
>> a good old Norwegian name! 8^)
>
> So howcum you missed the Norwegian independance day parade here in
> Ballard? Largest one outside of Norway.

Oh, being in PA kinda limits my access. My Sons of Norway exposure was mostly because a relative was a member. I really liked those folks though. Garrison Keillor just about has them pegged - although the folks I was around liked to party a bit more.

My favorite story from those days is how when I first meet a Norwegian, they would tell you in a couple minutes if they like you or not. If they like you, they next thing they do is buy you a drink. I eventually told my father in law (the member) that we had to limit my meeting more people to the weekends, or no more than 2 an evening.

- 73 de Mike N3LI -

2514. Re: fractals and HDTV antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-01 16:25:49 UTC
From: JIMMIE <JIMMIEDEE123@YAHOO.COM>
Message-ID: <5975704f-2248-4ffe-b343-a9a6ca9f7606@m11g2000yqf.googlegroups.com>
Source record: 12626

On Oct 1, 11:30 am, Michael Coslo <m...@psu.edu> wrote:
> Richard Clark wrote:
> > On Wed, 30 Sep 2009 15:26:54 -0400, Michael Coslo <m...@psu.edu>
> > wrote:
> >> So you're in the Puget Sound area? I used to stay in Poulsbo fairly
> >> often. Spent some evenings at the "Sons of Norway" club there. Coslo is
> >> a good old Norwegian name! 8^)
>
> > So howcum you missed the Norwegian independance day parade here in
> > Ballard? Largest one outside of Norway.
>
> Oh, being in PA kinda limits my access. My Sons of Norway exposure was
> mostly because a relative was a member. I really liked those folks
> though. Garrison Keillor just about has them pegged - although the folks
> I was around liked to party a bit more.
>
> My favorite story from those days is how when I first meet a Norwegian,
> they would tell you in a couple minutes if they like you or not. If they
> like you, they next thing they do is buy you a drink. I eventually told
> my father in law (the member) that we had to limit my meeting more
> people to the weekends, or no more than 2 an evening.
>
>   - 73 de Mike N3LI -

I spent 3 months in Norway, they must have liked me a lot. Good thing
that happened in my youth.

Jimmie

2515. Re: medium waves match antenna-transmitter 50ohm system

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-01 16:42:11 UTC
From: Wimpie <wimabctel@tetech.nl>
Message-ID: <3567e282-9c5b-4b24-9c7f-3b947705400a@h13g2000yqk.googlegroups.com>
Source record: 12627

On 30 sep, 19:11, tzitzikas <tzitzikas.5098...@radiobanter.com> wrote:
> my antenna is (5 x wavelength) / 16 . it is ok or i must modificate it
> to wavelength/4??? the horizontal part is about 45 meters and the
> vertical is about 20 meters.
>
> --
> tzitzikas

Hello,

It can or cannot. It depends on your required coverage area, soil characteristics and ground network. Assuming local coverage, it will definitely work less then a vertical quarter or half wave fed over a very good ground network.

When you have a relative bad ground circuit, you may only need a capacitor in series with the antenna wire to do the matching. When you have a good ground, you need an additional inductor.

When you provide some more info, you might get better feedback.

Best regards,

Wim
PA3DJS
www.tetech.nl

2516. Re: goodbye cruel world

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-01 16:54:05 UTC
From: Jeff Liebermann <jeffl@cruzio.com>
Message-ID: <rum9c59h2fdhjrurfcr7eup88mcauflfk0@4ax.com>
Source record: 12628

On Wed, 30 Sep 2009 23:08:34 GMT, "Dave" <noone@nowhere.com> wrote:

>Goodbye, cruel world,
>Im leaving you today.
>Goodbye, goodbye, goodbye.
>
>Goodbye all you people,
>Theres nothing you can say,
>To make me change my mind.
>Goodbye.
>
>For tonight verizon dumps usenet, and i refuse to pay more to argue with
>idiots.

He'll be back. Even arguing with idiots can become addictive.

List of major usenet servers:
<http://www.top1000.org>

Free Usenet News Server search:
<http://freenews.maxbaud.net>

I'm using the old Supernews text only service for $4/month. Giganews
(which owns Supernews) has plans down to $3/month.
<https://secure.giganews.com/signup/>

--
Jeff Liebermann jeffl@cruzio.com
150 Felker St #D http://www.LearnByDestroying.com
Santa Cruz CA 95060 http://802.11junk.com
Skype: JeffLiebermann AE6KS 831-336-2558

2517. Re: goodbye cruel world

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-01 20:38:01 UTC
From: Gordon <gonzo@alltomyself.com>
Message-ID: <Xns9C978AAED5150greederxprtnet@194.177.98.144>
Source record: 12629

"Dave" <noone@nowhere.com> wrote in news:SxRwm.206$0H3.55
@nwrddc02.gnilink.net:

> Goodbye, cruel world,
> Im leaving you today.
> Goodbye, goodbye, goodbye.
>
> Goodbye all you people,
> Theres nothing you can say,
> To make me change my mind.
> Goodbye.
>
> For tonight verizon dumps usenet, and i refuse to pay more to argue with
> idiots.
>

Only an idiot would do that. And a bigger idiot wouldn't
be aware of the free usenet servers. Esp. since there
was this big discussion about them on 0.Verizon when
the alt groups were pulled over one year ago.

2518. Re: Open wire feedline

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-01 20:43:13 UTC
From: Tim Shoppa <shoppa@trailing-edge.com>
Message-ID: <dba6dc9e-4e68-4e9e-9455-da2f277c32ce@a7g2000yqo.googlegroups.com>
Source record: 12630

On Sep 29, 3:28 pm, Michael Coslo <m...@psu.edu> wrote:
> I certainly don't have anything against old school radios and tuners.
> Dunno if you have yours this way, but I would be inclined to mount that
> alligator clipped tuner coil on a nicely finished wood base, and go
> really old school pretty with it. Maybe make the coil supports out of
> the same type wood turned to a dowel or maybe even polished glass or
> plastic. If yer going old school, flaunt it!

Base is wood (polyurethaned pine) and coil supports are polycarbonate.

Polycarbonate is so way better than the polystyrene insulators I had
when I was a kid.

Yeah, pretty cool!

> Anyhow, it's all good, old or new. Gives me a lot more to mess with
> since I like both.

I am way overwhelmed with old radio stuff, would never have time to
play with the new stuff :-).

One of my neighbors (older than me but a far more recent ham than I
am) has a new LCD-screen radio and he gets all excited whenever he
finds some new software parameter he can access through twelve layers
of menu buttons on the front panel. I just kinda nod my head, I don't
want to dampen his enthusiasm, but I don't really know what he's
talking about :-).

Tim N3QE

2519. Re: fractals and HDTV antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-01 20:58:13 UTC
From: John Gilmer <jlgilmer@localnet.com>
Message-ID: <hu6dnQ-X6ZeZgljXnZ2dnUVZ_judnZ2d@posted.localnet>
Source record: 12631

> What makes you ask?

Because I want to get some help in deciding whether to buy one or not.

2520. Re: Circular versus linear polarization

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-01 21:38:57 UTC
From: bradlington@yahoo.com
Message-ID: <3adc0dc1-e501-4cd5-afa1-aa94dc140b45@k19g2000yqc.googlegroups.com>
Source record: 12632

Hi Jerry

Very good question ,and I do not have any information regarding their comparison.

On this tower due to the size and isolation I would have to split the feeder and have a minumum of two or more antennas around the tower . (Toer is 10m in diameter with steel reinforcing - high front to back isolation)

For this specific case , a Lindenbald would perhaps have too much horizontal space to mount a number of them around the tower.

Unless you are assuming that one uses one antenna split over the 4 , equally spaced around the tower.
Again this is a good question as under normal circumstances one does not have the high isolation between the elements .

I could use a 1:4 wilkoson and mount folded dipoles at skewed angles , so at any one time a distant station should see at least two of the 4 .

This is a lot to ponder about .

2521. Smith Chart program for Macs

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-01 22:07:33 UTC
From: David Ryeburn <ryeburn@sfu.caz>
Message-ID: <ryeburn-D87D0A.15073301102009@morgoth.sfu.ca>
Source record: 12633

It's available, free, at
<http://www.microwavemac.com/Site/Smith_Chart.html>. I noticed that the
documentation file, in Rich Text Format with attachments, is about twice as
large as the program itself!

He also has a program for designing Butterworth or Chebyshev filters, at
<http://www.microwavemac.com/Site/Filter_Designer.html>.

Both programs require Mac OS 10.5 (Leopard) and presumably work under 10.6
(Snow Leopard) as well. I checked, and the Smith Chart program refuses to
run under Mac OS 10.4 (Tiger). I wouldn't be surprised if, with a little
fiddling, the programs couldn't be made to run under Linux.

David, ex-W8EZE

--
David Ryeburn
ryeburn@sfu.caz
To send e-mail, use "ca" instead of "caz".

2522. SMALL ANTENNAS

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-02 00:19:38 UTC
From: Art Unwin <arthurunwin@gmail.com>
Message-ID: <47de1bc1-19dc-4208-ae6c-882fae5470fc@a21g2000yqc.googlegroups.com>
Source record: 12634

This week end is going to be wet and cold, so I thought I would give
you a radiator to play with if you are willing to make something for
yourself.
Get yourself a piece of aluminum mesh used for window insect stopping
entering your house. Soak this piece of mesh in some watered down
muriatic acid (approx $5 a bottle at a hardware store This is to
remove the insulating coating so it becomes conductive. Now this mesh
is woven so it helps to compress the strands together by tapping with
a hammer. Connect a MFJ259B to the base corners and scan to see where
the resonant frequency is.
I used a 8" x5" piece of mesh and it was resonant from about 110 to
140
MHZ so it is quite broad banded and easy to find the resonance The
vertical strands carry the applied current and the capacitance square
holes in between is a electrostatic field around which the
displacement current flows. What you have, basically, is a full wave
dipole folded very closely upon itself to form a closed circuit with a
low impedance. This is basically a transmission line if the ends are
open. The cross jumpers take the place of dielectric spacers that are
present on a open transmission line so that they may enclose an
electrostatic field created by the displacement current. The vertical
strands are really in series ,so you have effectively placed a long
length of wire into a small volume which you may shape into any form.
To play with this further, place it above a conductive sheet and note
the changes. Then try pinning it together into a cylinder and note the
changes.
Have fun playing with it.
Looking at the physics side of things. When a particle is generated by
the Sun it goes to the border and even tho it is extremely small it
breaks the border by applying a straight force vector together with a
circular vector. This same combination repeats itself when current is
applied to a radiator which also produces a circular current. These
same vectors are later repeated with gravity in combination with
rotation all of which are per laws of Newton. The particles that
escape from the sun sheath conductive materials on Earth. This is
explained by making the Gaussian field for statics a dynamic one so
that it becomes the same as Maxwells laws. The combination of fields
from the applied current when intersecting the electrostatic field
dislodges particles by elevation with spin while accellerating to the
maximum speed which is that of light so the particle can take on a
straight line trajectory with spin where the Gravity vector is
cancelled.
Elermentry explanation of the weak force in the Standard model
(Patents applied for)

Art

Art

2523. Re: fractals and HDTV antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-02 00:49:37 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <efjac5h4jfl6m5cv77f01qb94dgea44e28@4ax.com>
Source record: 12635

On Thu, 1 Oct 2009 16:58:13 -0400, "John Gilmer"
<jlgilmer@localnet.com> wrote:

>
>
>> What makes you ask?
>
>Because I want to get some help in deciding whether to buy one or not.
>

Buy a fractal antenna? What a novel concept. Do you have an example?

73's
Richard Clark, KB7QHC

2524. Re: SMALL ANTENNAS

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-02 00:55:10 UTC
From: christofire <christofire@btinternet.com>
Message-ID: <6LSdnV18tNHu0ljXnZ2dnUVZ8iadnZ2d@bt.com>
Source record: 12636

"Art Unwin" <arthurunwin@gmail.com> wrote in message
news:47de1bc1-19dc-4208-ae6c-882fae5470fc@a21g2000yqc.googlegroups.com...
> This week end is going to be wet and cold, so I thought I would give
> you a radiator to play with if you are willing to make something for
> yourself.
> Get yourself a piece of aluminum mesh used for window insect stopping
> entering your house. Soak this piece of mesh in some watered down
> muriatic acid (approx $5 a bottle at a hardware store This is to
> remove the insulating coating so it becomes conductive. Now this mesh
> is woven so it helps to compress the strands together by tapping with
> a hammer. Connect a MFJ259B to the base corners and scan to see where
> the resonant frequency is.
> I used a 8" x5" piece of mesh and it was resonant from about 110 to
> 140
> MHZ so it is quite broad banded and easy to find the resonance The
> vertical strands carry the applied current and the capacitance square
> holes in between is a electrostatic field around which the
> displacement current flows. What you have, basically, is a full wave
> dipole folded very closely upon itself to form a closed circuit with a
> low impedance. This is basically a transmission line if the ends are
> open. The cross jumpers take the place of dielectric spacers that are
> present on a open transmission line so that they may enclose an
> electrostatic field created by the displacement current. The vertical
> strands are really in series ,so you have effectively placed a long
> length of wire into a small volume which you may shape into any form.
> To play with this further, place it above a conductive sheet and note
> the changes. Then try pinning it together into a cylinder and note the
> changes.
> Have fun playing with it.
> Looking at the physics side of things. When a particle is generated by
> the Sun it goes to the border and even tho it is extremely small it
> breaks the border by applying a straight force vector together with a
> circular vector. This same combination repeats itself when current is
> applied to a radiator which also produces a circular current. These
> same vectors are later repeated with gravity in combination with
> rotation all of which are per laws of Newton. The particles that
> escape from the sun sheath conductive materials on Earth. This is
> explained by making the Gaussian field for statics a dynamic one so
> that it becomes the same as Maxwells laws. The combination of fields
> from the applied current when intersecting the electrostatic field
> dislodges particles by elevation with spin while accellerating to the
> maximum speed which is that of light so the particle can take on a
> straight line trajectory with spin where the Gravity vector is
> cancelled.

> Elermentry explanation of the weak force in the Standard model
> (Patents applied for)
> Art

Since you're lecturing on physics, as I said before, you should post this to sci.physics and sci.physics.research and see what they think.

Chris

2525. Re: SMALL ANTENNAS

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-02 01:37:18 UTC
From: tom <news4792@taring.org>
Message-ID: <4ac5593a$0$28118$8046368a@newsreader.iphouse.net>
Source record: 12637

christofire wrote:
> "Art Unwin" <arthurunwin@gmail.com> wrote in message
> news:47de1bc1-19dc-4208-ae6c-882fae5470fc@a21g2000yqc.googlegroups.com...
>> This week end is going to be wet and cold, so I thought I would give
>> you a radiator to play with if you are willing to make something for
>> yourself.
>> Get yourself a piece of aluminum mesh used for window insect stopping
>> entering your house. Soak this piece of mesh in some watered down
>> muriatic acid (approx $5 a bottle at a hardware store This is to
>> remove the insulating coating so it becomes conductive. Now this mesh
>> is woven so it helps to compress the strands together by tapping with
>> a hammer. Connect a MFJ259B to the base corners and scan to see where
>> the resonant frequency is.
>> I used a 8" x5" piece of mesh and it was resonant from about 110 to
>> 140
>> MHZ so it is quite broad banded and easy to find the resonance The
>> vertical strands carry the applied current and the capacitance square
>> holes in between is a electrostatic field around which the
>> displacement current flows. What you have, basically, is a full wave
>> dipole folded very closely upon itself to form a closed circuit with a
>> low impedance. This is basically a transmission line if the ends are
>> open. The cross jumpers take the place of dielectric spacers that are
>> present on a open transmission line so that they may enclose an
>> electrostatic field created by the displacement current. The vertical
>> strands are really in series ,so you have effectively placed a long
>> length of wire into a small volume which you may shape into any form.
>> To play with this further, place it above a conductive sheet and note
>> the changes. Then try pinning it together into a cylinder and note the
>> changes.
>> Have fun playing with it.
>> Looking at the physics side of things. When a particle is generated by
>> the Sun it goes to the border and even tho it is extremely small it
>> breaks the border by applying a straight force vector together with a
>> circular vector. This same combination repeats itself when current is
>> applied to a radiator which also produces a circular current. These
>> same vectors are later repeated with gravity in combination with
>> rotation all of which are per laws of Newton. The particles that
>> escape from the sun sheath conductive materials on Earth. This is
>> explained by making the Gaussian field for statics a dynamic one so
>> that it becomes the same as Maxwells laws. The combination of fields
>> from the applied current when intersecting the electrostatic field
>> dislodges particles by elevation with spin while accellerating to the
>> maximum speed which is that of light so the particle can take on a
>> straight line trajectory with spin where the Gravity vector is

>> cancelled.
>> Elermentry explanation of the weak force in the Standard model
>> (Patents applied for)
>> Art
>
>
> Since you're lecturing on physics, as I said before, you should post this to
> sci.physics and sci.physics.research and see what they think.
>
> Chris
>
>

What I'd like to know is how the vertical and horizontal strands know which role they are supposed to play? And if I rotate the mesh by 90 degrees but still keep the feed the same, why don't those roles change?

What if the whole thing is parallel to the ground? It should stop working completely. Hell, it could even explode for all we know. The poor strands wouldn't know what to do and the energy would build up until there was too much and - BOOOOOM!!!

And what happens if this antenna is in space? Does it stop working? Do the bits remember what orientation they used to be in when they were on earth?

Or is this all just some fantasy dreamed up by someone who needs serious medication?

Most likely the latter.

tom
K0TAR

2526. Re: SMALL ANTENNAS

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-02 01:40:36 UTC
From: Art Unwin <arthurunwin@gmail.com>
Message-ID: <97a546bc-5b12-481b-9dd8-2e3c566f9a74@j4g2000yqa.googlegroups.com>
Source record: 12638

On Oct 1, 7:55 pm, "christofire" <christof...@btinternet.com> wrote:
> "Art Unwin" <arthurun...@gmail.com> wrote in message
>
> news:47de1bc1-19dc-4208-ae6c-882fae5470fc@a21g2000yqc.googlegroups.com...
>
>
>
> > This week end is going to be wet and cold, so I thought I would give
> > you a radiator to play with if you are willing to make something for
> > yourself.
> > Get yourself a piece of aluminum mesh used for window insect stopping
> > entering your house. Soak this piece of mesh in some watered down
> > muriatic acid (approx $5 a bottle at a hardware store This is to
> > remove the insulating coating so it becomes conductive. Now this mesh
> > is woven so it helps to compress the strands together by tapping with
> > a hammer. Connect a MFJ259B to the base corners and scan to see where
> > the resonant frequency is.
> > I used a 8" x5" piece of mesh and it was resonant from about 110 to
> > 140
> > MHZ so it is quite broad banded and easy to find the resonance The
> > vertical strands carry the applied current and the capacitance square
> > holes in between is a electrostatic field around which the
> > displacement current flows. What you have, basically, is a full wave
> > dipole folded very closely upon itself to form a closed circuit with a
> > low impedance. This is basically a transmission line if the ends are
> > open. The cross jumpers take the place of dielectric spacers that are
> > present on a open transmission line so that they may enclose an
> > electrostatic field created by the displacement current. The vertical
> > strands are really in series ,so you have effectively placed a long
> > length of wire into a small volume which you may shape into any form.
> > To play with this further, place it above a conductive sheet and note
> > the changes. Then try pinning it together into a cylinder and note the
> > changes.
> > Have fun playing with it.
> > Looking at the physics side of things. When a particle is generated by
> > the Sun it goes to the border and even tho it is extremely small it
> > breaks the border by applying a straight force vector together with a
> > circular vector. This same combination repeats itself when current is
> > applied to a radiator which also produces a circular current. These
> > same vectors are later repeated with gravity in combination with
> > rotation all of which are per laws of Newton. The particles that
> > escape from the sun sheath conductive materials on Earth. This is
> > explained by making the Gaussian field for statics a dynamic one so
> > that it becomes the same as Maxwells laws. The combination of fields

> > from the applied current when intersecting the electrostatic field
> > dislodges particles by elevation with spin while accellerating to the
> > maximum speed which is that of light so the particle can take on a
> > straight line trajectory with spin where the Gravity vector is
> > cancelled.
> > Elermentry explanation of the weak force in the Standard model
> > (Patents applied for)
> > Art
>
> Since you're lecturing on physics, as I said before, you should post this to
> sci.physics and sci.physics.research and see what they think.
>
> Chris

Why? Hams will deny it without trying. Physics! all will deny it as it comes from an engineer.
Somewhere in between some one will try it. Then curiousity will take over and the question will be asked " Why is this" And then the naysayers will answer" you didn't measure it correctly or the MFJ 259B was not intended for that" Then a person with a small garden will get a bigger piece to try it out on Top Band. "You have to prove it" say the naysayers
together with " you are an engineer so you can know nothing of physics" "Well I just followed Einstein" I said " He was convinced that the secret of the weak force lies with radiation" So you are comparing yourself with Einstein?" said the naysayers. So I said that "Gauss showed the way with the static field to which I made dynamic and added radiators
so that it became the same as Maxwells law since I maintained equilibrium!"
":You can't do that" said the naysayers " that is not in any of the physics books" ":I know "
I said " be patient ": What you seek you will find" . Now who is the next person to argue with Einstein and his prediction? Newton stated that every action has an equal and opposite reaction. The big bang started from inside a arbitrary boundary. Equilibrium was broken when the smallest of particles from the Sun ventured towards the boundary. When this happened that little of little particle became an opposing force which was off centre from the opposite force such that it also applied a torque vector (spin). That chain of force vectors end with the combination of gravity with the rotation vector of Earth, where the chain of events passed along the phenomina of radiation as predicted by Einstein. No. I am certainly not going to argue with Einstein. PS try it for yourself with the many computer programs so you can argue that the programs are wrong where only the vendor is left to argue against. Now you have a bigger question, How does a particle propagate while neutralizing gravity?. Ponder on that for a while. Now for the biggy Will Cern change there minds when they read this? No we are going to find the Higgs field that nobody has found even if we have to blow up the tunnel. We want five forces to make up

the Standard Model so we can go down in history!
Cheers and beers
Art
Cheers
Art

2527. Re: SMALL ANTENNAS

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-02 01:43:34 UTC
From: Wheatshucker <wheatshucker@bogus.com>
Message-ID: <haidnfCFAv9Vx1jXnZ2dnUVZ_uadnZ2d@giganews.com>
Source record: 12639

Art Unwin wrote:
>
> Elermentry explanation of the weak force in the Standard model
> (Patents applied for)
>

Heeees baaaack. For his next act, he is developing a spellchecker.

2528. Burning Cell Towers

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-02 05:58:30 UTC
From: Jeff Liebermann <jeffl@cruzio.com>
Message-ID: <0h5bc5hs5kqi04f46h7ilq0r6t9bdftl8r@4ax.com>
Source record: 12640

Wellesley, MA. January 23, 2009
<http://3.bp.blogspot.com/_-TEUEU1JBOg/SXxlL_QFr5I/AAAAAAAAFpI/eZ28TK1K3So/s1600-h/cell+tower.jpg>
<http://www.youtube.com/watch?v=Y-CjeNpSK2U>
<http://www.youtube.com/watch?v=3OfkT94lFso>

Temple Hills, MD. Dec 21, 2008.
<http://www.livevideo.com/video/476D34D7DFCF4DCDBDEBC3D6126C424E/burning-antenna-tower-straight.aspx>

Ann Arbor, MI July 24, 2007
<http://blog.mlive.com/annarbornews/2007/07/updated_cell_phone_tower_fire.html>

Feb 2, 2007.
<http://www.youtube.com/watch?v=VrVHk97C2Og&NR=1>

?????
<http://odessaoffice.com/wireless/priceless.jpg>

Near Chicago. 2001
<http://home.mia.net/~jeremy/tower/burningmonopole/monopoleBurn.jpg>

Did I miss any?

--
Jeff Liebermann jeffl@cruzio.com
150 Felker St #D http://www.LearnByDestroying.com
Santa Cruz CA 95060 http://802.11junk.com
Skype: JeffLiebermann AE6KS 831-336-2558

2529. Re: fractals and HDTV antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-02 08:03:17 UTC
From: John Gilmer <jlgilmer@localnet.com>
Message-ID: <G9-dnWfaDIVbLljXnZ2dnUVZ_uydnZ2d@posted.localnet>
Source record: 12641

"Richard Clark" <kb7qhc@comcast.net> wrote in message
news:efjac5h4jfl6m5cv77f01qb94dgea44e28@4ax.com...
> On Thu, 1 Oct 2009 16:58:13 -0400, "John Gilmer"
> <jlgilmer@localnet.com> wrote:
>
>>
>>
>>> What makes you ask?
>>
>>Because I want to get some help in deciding whether to buy one or not.
>>
>
> Buy a fractal antenna? What a novel concept. Do you have an example?

I saw on in a Big Box store (Target or Wally World). It said "Patented
Technology."

I was thinking of something for use in a high rise condo now vacent. When
I lived there years ago it was possible to get about 10 or so TV stations
with whatever rabbit ears that came with the TV.
>

I have been around for awhile. I rememble a "miracle" TV antenna that was
just a weight covered with plastic, for example. So I am wondering
whether there is something that works like a "miracle" or are rabbit ears
the state of the art for a antenna. Trouble is that with flat screen TVs,
there isn't any place to put rabbit ears!

2530. Re: SMALL ANTENNAS

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-02 08:03:41 UTC
From: "Helmut Wabnig"
Message-ID: <mrcbc59kprbcsl12s58mivis7ahtgv3np5@4ax.com>
Source record: 12642

On Thu, 1 Oct 2009 17:19:38 -0700 (PDT), Art Unwin
<arthurunwin@gmail.com> wrote:

>This week end is going to be wet and cold, so I thought I would give
>you a radiator to play with if you are willing to make something for
>yourself.
>Get yourself a piece of aluminum mesh used for window insect stopping
>entering your house. Soak this piece of mesh in some watered down
>muriatic acid (approx $5 a bottle at a hardware store This is to
>remove the insulating coating so it becomes conductive. Now this mesh
>is woven so it helps to compress the strands together by tapping with
>a hammer. Connect a MFJ259B to the base corners and scan to see where
>the resonant frequency is.
>I used a 8" x5" piece of mesh and it was resonant from about 110 to
>140
>MHZ so it is quite broad banded and easy to find the resonance The
>vertical strands carry the applied current and the capacitance square
>holes in between is a electrostatic field around which the
>displacement current flows. .....

What a nonsense.

Everything resonates somewhere,
just give it n * lamda/4 dimensions.

A piece of wood would do it, when it rains.

w.

2531. Re: fractals and HDTV antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-02 14:34:45 UTC
From: Michael Coslo <mjc5@psu.edu>
Message-ID: <ha5328$fs1q$1@tr22n12.aset.psu.edu>
Source record: 12643

JIMMIE wrote:
> On Oct 1, 11:30 am, Michael Coslo <m...@psu.edu> wrote:

>> My favorite story from those days is how when I first meet a Norwegian,
>> they would tell you in a couple minutes if they like you or not. If they
>> like you, they next thing they do is buy you a drink. I eventually told
>> my father in law (the member) that we had to limit my meeting more
>> people to the weekends, or no more than 2 an evening.
>>
>> - 73 de Mike N3LI -
>
> I spent 3 months in Norway, they must have liked me a lot. Good thing
> that happened in my youth.

Yup. I know the feeling. Poulsbo had more characters per square inch
than any other place I've been. I had the retired marine sargent who was
afraid of ghosts - but nothing else, the most people loving person I'd
ever seen, "Shitbird", the mumbling old gent who wasn't happy unless he
had you rolling on the floor laughing, and a host of others. They were
all much older than me at the time so they're probably all gone now.

- 73 de Mike N3LI -

2532. Re: fractals and HDTV antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-02 14:41:46 UTC
From: Michael Coslo <mjc5@psu.edu>
Message-ID: <ha53fc$fs1s$1@tr22n12.aset.psu.edu>
Source record: 12644

John Gilmer wrote:
> "Richard Clark" <kb7qhc@comcast.net> wrote in message
> news:efjac5h4jfl6m5cv77f01qb94dgea44e28@4ax.com...
>> On Thu, 1 Oct 2009 16:58:13 -0400, "John Gilmer"
>> <jlgilmer@localnet.com> wrote:
>>
>>>
>>>> What makes you ask?
>>> Because I want to get some help in deciding whether to buy one or not.
>>>
>> Buy a fractal antenna? What a novel concept. Do you have an example?
>
> I saw on in a Big Box store (Target or Wally World). It said "Patented
> Technology."
>
> I was thinking of something for use in a high rise condo now vacent. When
> I lived there years ago it was possible to get about 10 or so TV stations
> with whatever rabbit ears that came with the TV.
>
> I have been around for awhile. I rememble a "miracle" TV antenna that was
> just a weight covered with plastic, for example. So I am wondering
> whether there is something that works like a "miracle" or are rabbit ears
> the state of the art for a antenna. Trouble is that with flat screen TVs,
> there isn't any place to put rabbit ears!

If you're close, try the rabbit ears. If not, try a small yagi. Fractal antennas are probably not the solution for you. One might work, but high performance is not what they are about. They are about large bandwidth in a small space. But it's the definition of small space that is the issue.

- 73 de Mike N3LI -

2533. Re: fractals and HDTV antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-02 17:06:31 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <cubcc519mgqre7qqc2lof67igjnlp02dvi@4ax.com>
Source record: 12645

On Fri, 2 Oct 2009 04:03:17 -0400, "John Gilmer"
<jlgilmer@localnet.com> wrote:

>
>"Richard Clark" <kb7qhc@comcast.net> wrote in message
>news:efjac5h4jfl6m5cv77f01qb94dgea44e28@4ax.com...
>> On Thu, 1 Oct 2009 16:58:13 -0400, "John Gilmer"
>> <jlgilmer@localnet.com> wrote:
>>
>>>
>>>
>>>> What makes you ask?
>>>
>>>Because I want to get some help in deciding whether to buy one or not.
>>>
>>
>> Buy a fractal antenna? What a novel concept. Do you have an example?
>
>I saw on in a Big Box store (Target or Wally World). It said "Patented
>Technology."

Hardly a recommendation when the technology is a corriolis force
applied left hand threaded (gaussian) screw holding the maker's plaque
to the merchandise.

>I was thinking of something for use in a high rise condo now vacent. When
>I lived there years ago it was possible to get about 10 or so TV stations
>with whatever rabbit ears that came with the TV.
>>
>
>I have been around for awhile. I rememble a "miracle" TV antenna that was
>just a weight covered with plastic, for example. So I am wondering
>whether there is something that works like a "miracle" or are rabbit ears
>the state of the art for a antenna. Trouble is that with flat screen TVs,
>there isn't any place to put rabbit ears!

Calling it fractal won't add a horizontal surface to a flat screen to
sit the antenna on; and it won't remove the necessity of turning the
antenna 90 degrees to catch the signal and poking you in the eye with
"patented technology."

Take a conventional rabbit ears antenna, lay it in the driveway, drive
over it for the next of the week; and DON'T report here how well your
fractal works when you put it up or you might get a cease-and-desist
notice from a lawyer representing a recent Nova whore.

73's
Richard Clark, KB7QHC

2534. Re: fractals and HDTV antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-02 17:07:56 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <6qccc5pkdc0ujcgdg6dtl5dt6hjoc6np72@4ax.com>
Source record: 12646

On Fri, 02 Oct 2009 10:41:46 -0400, Michael Coslo <mjc5@psu.edu>
wrote:

Myth number two (or was it one?):

>They are about large bandwidth
>in a small space.

73's
Richard Clark, KB7QHC

2535. Re: fractals and HDTV antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-02 17:09:36 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <5tccc59qu4drimfsapu6ujcefihv0eq0k9@4ax.com>
Source record: 12647

On Fri, 02 Oct 2009 10:34:45 -0400, Michael Coslo <mjc5@psu.edu>
wrote:

> "Shitbird"

Awwww, a term of endearment that has brought tears to my eyes.

73's
Richard Clark, KB7QHC

2536. About MFJ-949E Deluxe Versa Tuner II

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-02 17:15:58 UTC
From: ve2pid <ve2pid@videotron.ca>
Message-ID: <95ddc624-bc58-4c12-8d7a-76dc74b286da@b2g2000yqi.googlegroups.com>
Source record: 12648

Hi

An OM is telling me that there was in the past a version of the
MFJ-949E who had a variable coil using a cursor instead of a switch to
tap the coil as now.

Any comment on that?

Thanks de Pierre ve2pid@videotron.ca

2537. Re: fractals and HDTV antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-02 17:18:15 UTC
From: nm5k@wt.net
Message-ID: <66813dc3-96af-4bdb-a294-2d2c9cf1e143@l9g2000yqi.googlegroups.com>
Source record: 12649

On Sep 29, 11:46 pm, "John Gilmer" <jlgil...@localnet.com> wrote:
> Hi:
>
> A month or so ago I say a PBS piece on fractals. The piece claimed that
> the "technology" is used to make the antennas for cell phones.
>
> Have any amateurs used "fractal technology" to form their antennas?
>
> Also, I note that "they" market HDTV antennas that are about the size of a
> book. Do these things work? What's inside them?
>
> Yours,
>
> JLG

I consider any balanced symmetrical antenna a fractal.
Even a dipole.
What many consider as a fractal antenna, I consider a linear
loaded antenna using "creative" linear loading.
Is creative linear loading superior to the usual linear loading
one might encounter? No one has ever proven this to be the
case.

They even held contests on this group to see who could
build the best "fractal" antenna. It was shown that even
random designs performed just as well or better than
the designs offered by the local fractal guru at that time.

Fractal antennas are a viable antenna to use in tight
spaces, but no one has ever proven that a fractal design
is any better than a random linear loading design.
Not even once that I can think of.

I could cover my eyeballs, and scribble out a symmetrical
design on a piece of paper, and most likely it would
perform just as well as a "guru" offered fractal design.
A few here have proven this to be the case.
What fractal antennas are really good for is when you
have DOD and government contracts that require very
small antennas, and need something which seems
"special" in order to win these contracts.
It doesn't really matter if the antennas are superior to
random design linear loading. All that matters is that
the ones that sign checks believe it to be the case.
Kind of like the government spending $342.95 for a

hammer. It doesn't matter that the expensive hammer
is no better than one you can buy at Home Depot for
a fraction of that price. The hype overrules the reality,
and clouds the minds of those that sign checks.
Needless to say, the ones that sign checks don't have
a clue whether fractal antennas are worth the money or
not. They could care less. They see it as redistributing
wealth. :/
To me it matters not. I use manly full sized antennas,
and I'll leave the little fractals to ones that want inferior
performance.
Heck, if I could sell boatloads of inferior antennas for
boatloads of money, I could probably live with inferior
antennas too. :/
I'd be laughing too hard on my way to the bank to
worry about having a decent antenna for my radios.
Or HDTV.. Another groaner for me. HDTV antennas..
What in the wide wide world of sports is an HDTV
antenna? Do digital signals follow different rules than
analog signals? Groan... Just another example of
getting people to write checks for something someone
claims as "special" when it's not. :(

2538. Re: fractals and HDTV antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-02 20:26:28 UTC
From: JIMMIE <JIMMIEDEE123@YAHOO.COM>
Message-ID: <c033f0b9-dd69-4388-bf84-e1169957b973@o41g2000yqb.googlegroups.com>
Source record: 12650

On Oct 2, 1:18 pm, n...@wt.net wrote:
> On Sep 29, 11:46 pm, "John Gilmer" <jlgil...@localnet.com> wrote:
>
> > Hi:
>
> > A month or so ago I say a PBS piece on fractals. The piece claimed that
> > the "technology" is used to make the antennas for cell phones.
>
> > Have any amateurs used "fractal technology" to form their antennas?
>
> > Also, I note that "they" market HDTV antennas that are about the size of a
> > book. Do these things work? What's inside them?
>
> > Yours,
>
> > JLG
>
> I consider any balanced symmetrical antenna a fractal.
> Even a dipole.
> What many consider as a fractal antenna, I consider a linear
> loaded antenna using "creative" linear loading.
> Is creative linear loading superior to the usual linear loading
> one might encounter? No one has ever proven this to be the
> case.
>
> They even held contests on this group to see who could
> build the best "fractal" antenna. It was shown that even
> random designs performed just as well or better than
> the designs offered by the local fractal guru at that time.
>
> Fractal antennas are a viable antenna to use in tight
> spaces, but no one has ever proven that a fractal design
> is any better than a random linear loading design.
> Not even once that I can think of.
>
> I could cover my eyeballs, and scribble out a symmetrical
> design on a piece of paper, and most likely it would
> perform just as well as a "guru" offered fractal design.
> A few here have proven this to be the case.
> What fractal antennas are really good for is when you
> have DOD and government contracts that require very
> small antennas, and need something which seems
> "special" in order to win these contracts.
> It doesn't really matter if the antennas are superior to

> random design linear loading. All that matters is that
> the ones that sign checks believe it to be the case.
> Kind of like the government spending $342.95 for a
> hammer. It doesn't matter that the expensive hammer
> is no better than one you can buy at Home Depot for
> a fraction of that price. The hype overrules the reality,
> and clouds the minds of those that sign checks.
> Needless to say, the ones that sign checks don't have
> a clue whether fractal antennas are worth the money or
> not. They could care less. They see it as redistributing
> wealth. :/
> To me it matters not. I use manly full sized antennas,
> and I'll leave the little fractals to ones that want inferior
> performance.
> Heck, if I could sell boatloads of inferior antennas for
> boatloads of money, I could probably live with inferior
> antennas too. :/
> I'd be laughing too hard on my way to the bank to
> worry about having a decent antenna for my radios.
> Or HDTV.. Another groaner for me. HDTV antennas..
> What in the wide wide world of sports is an HDTV
> antenna? Do digital signals follow different rules than
> analog signals? Groan... Just another example of
> getting people to write checks for something someone
> claims as "special" when it's not. :(

I remember when color TV was the rage and color was added to the name
on all the TV antennas. Sometimes there was actually a stick on
"color" label on the box.

JImmie

2539. Re: fractals and HDTV antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-02 20:29:19 UTC
From: Registered User <n4jvp@ix.netcom.com>
Message-ID: <acocc51h9p5cflf8j7clmqhpi8sp7g7mok@4ax.com>
Source record: 12501

On Wed, 30 Sep 2009 00:46:28 -0400, "John Gilmer"
<jlgilmer@localnet.com> wrote:

>
>Also, I note that "they" market HDTV antennas that are about the size of a
>book. Do these things work? What's inside them?
>
One thing that has not been mentioned is most of the small HDTV
antennas (at least the ones I have seen) include an RF amplifier. W/o
the amplifier these antennas' performance is abysmal.

2540. Re: About MFJ-949E Deluxe Versa Tuner II

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-02 20:30:11 UTC
From: Owen Duffy <none@no.where>
Message-ID: <Xns9C99422756278nonenowhere@61.9.191.5>
Source record: 12502

ve2pid <ve2pid@videotron.ca> wrote in news:95ddc624-bc58-4c12-8d7a-76dc74b286da@b2g2000yqi.googlegroups.com:

Is the model description you give correct, or have you combined two models, the MFJ949E and the (Deluxe) Versatuner II (MFJ969 IIRC)?

The '949E uses a switched coil, and the '969 uses a roller inductor, IMHO a pretty poor roller inductor that uses insulating material that softens when it is hot and makes the tuner prone to serious damage under some poor operating conditions.

Owen

2541. EZNEC Ver3 Automatic Save

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-02 22:35:22 UTC
From: Chuck Olson <chuckolson01@REMOVETHIScomcast.net>
Message-ID: <ha5v7opuf1@news.eternal-september.org>
Source record: 12503

I have found that there is no such thing as "automatic save" unless you are in LAST.EZ. If you want to take an existing named file and improve it - - okay click on the file and work on the wires, transmission lines and source tabulations, but be sure to SAVE AS and choose the same filename and just replace it. If you don't, the file won't get updated. I learned this after assuming opening a filename meant anything I would do would be placed under that filename - - like it would if you were in WORD, but no, it's not saved, and if you open another filename, the work you did will be lost - - in my case, all 32 wires, 21 transmission lines and 2 sources to enter data for 2 designs - - and you'll have to do all of it over again. I even printed out the description of the file - - it was all there - - but the next time I went to look at it, it was back to the previous file that the new design had been started with - - no update!

Roy, you may or you may not fix this - - I guess it's been this way for a long time - - so you probably have your reasons. It's just that it's not like WORD, and I feel WORD is a preferable model. Of course once you know about the problem, I guess it's not a problem - - until you forget and lose your work - - so I'm lighting the candle. I have never lost an update to a WORD document. (You are prompted to save it, if any change has taken place).

2542. Re: SMALL ANTENNAS

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-02 23:33:46 UTC
From: buzz <buzz@nowhere.com>
Message-ID: <ha62kqjts5@news.eternal-september.org>
Source record: 12504

Art Unwin wrote:
> This week end is going to be wet and cold, so I thought I would give
> you a radiator to play with if you are willing to make something for
> yourself.
> Get yourself a piece of aluminum mesh used for window insect stopping
> entering your house. Soak this piece of mesh in some watered down
> muriatic acid (approx $5 a bottle at a hardware store This is to
> remove the insulating coating so it becomes conductive. Now this mesh
> is woven so it helps to compress the strands together by tapping with
> a hammer. Connect a MFJ259B to the base corners and scan to see where
> the resonant frequency is.
> I used a 8" x5" piece of mesh and it was resonant from about 110 to
> 140
> MHZ so it is quite broad banded and easy to find the resonance The
> vertical strands carry the applied current and the capacitance square
> holes in between is a electrostatic field around which the
> displacement current flows. What you have, basically, is a full wave
> dipole folded very closely upon itself to form a closed circuit with a
> low impedance. This is basically a transmission line if the ends are
> open. The cross jumpers take the place of dielectric spacers that are
> present on a open transmission line so that they may enclose an
> electrostatic field created by the displacement current. The vertical
> strands are really in series ,so you have effectively placed a long
> length of wire into a small volume which you may shape into any form.
> To play with this further, place it above a conductive sheet and note
> the changes. Then try pinning it together into a cylinder and note the
> changes.
> Have fun playing with it.
> Looking at the physics side of things. When a particle is generated by
> the Sun it goes to the border and even tho it is extremely small it
> breaks the border by applying a straight force vector together with a
> circular vector. This same combination repeats itself when current is
> applied to a radiator which also produces a circular current. These
> same vectors are later repeated with gravity in combination with
> rotation all of which are per laws of Newton. The particles that
> escape from the sun sheath conductive materials on Earth. This is
> explained by making the Gaussian field for statics a dynamic one so
> that it becomes the same as Maxwells laws. The combination of fields
> from the applied current when intersecting the electrostatic field
> dislodges particles by elevation with spin while accellerating to the
> maximum speed which is that of light so the particle can take on a
> straight line trajectory with spin where the Gravity vector is
> cancelled.
> Elermentry explanation of the weak force in the Standard model

> (Patents applied for)
> Art
>
> Art

Since all the strands are connected together, the entire things just
looks like one flat piece of metal. Snake oil spin.

2543. Re: SMALL ANTENNAS

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-03 00:17:02 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <3b5dc59ucqdu4m1m8lrijb3e3msg19v5o0@4ax.com>
Source record: 12505

On Fri, 02 Oct 2009 17:33:46 -0600, buzz <buzz@nowhere.com> wrote:

>Since all the strands are connected together, the entire things just
>looks like one flat piece of metal.

That would seem to be the intent of the acid bath and hammering, but who knows, maybe it was a diamagnetic hammer (not Maxwell's silver hammer certainly) pounding in the particles that would someday under equilibrium fly off like Tinkerbell's fairy dust.

>Snake oil spin.

A new corriolis effect?

Perhaps Obama can slip over to Stockholm and get Art a seat at the next Nobel awards. Something tells me that the Sewer rats of Rio (a nod to Reggie) will snag the prize from under his nose.

73's
Richard Clark, KB7QHC

2544. Re: SMALL ANTENNAS

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-03 00:21:17 UTC
From: Art Unwin <arthurunwin@gmail.com>
Message-ID: <645f037a-6e27-4d04-aaeb-e992bca094a9@37g2000yqm.googlegroups.com>
Source record: 12506
Body handling: HTML body converted to readable text

On Oct 2, 6:33 pm, buzz wrote:
> Art Unwin wrote:
> > This week end is going to be wet and cold, so I thought I would give
> > you a radiator to play with if you are willing to make something for
> > yourself.
> > Get yourself a piece of aluminum mesh used for window insect stopping
> > entering your house. Soak this piece of mesh in some watered down
> > muriatic acid (approx $5 a bottle at a hardware store This is to
> > remove the insulating coating so it becomes conductive. Now this mesh
> > is woven so it helps to compress the strands together by tapping with
> > a hammer. Connect a MFJ259B to the base corners and scan to see where
> > the resonant frequency is.
> > I used a 8" x5" piece of mesh and it was resonant from about 110 to
> > 140
> > MHZ so it is quite broad banded and easy to find the resonance The
> > vertical strands carry the applied current and the capacitance square
> > holes in between is a electrostatic field around which the
> > displacement current flows. What you have, basically, is a full wave
> > dipole folded very closely upon itself to form a closed circuit with a
> > low impedance. This is basically a transmission line if the ends are
> > open. The cross jumpers take the place of dielectric spacers that are
> > present on a open transmission line so that they may enclose an
> > electrostatic field created by the displacement current. The vertical
> > strands are really in series ,so you have effectively placed a long
> > length of wire into a small volume which you may shape into any form.
> > To play with this further, place it above a conductive sheet and note
> > the changes. Then try pinning it together into a cylinder and note the
> > changes.
> > Have fun playing with it.
> > Looking at the physics side of things. When a particle is generated by
> > the Sun it goes to the border and even tho it is extremely small it
> > breaks the border by applying a straight force vector together with a
> > circular vector. This same combination repeats itself when current is
> > applied to a radiator which also produces a circular current. These
> > same vectors are later repeated with gravity in combination with
> > rotation all of which are per laws of Newton. The particles that
> > escape from the sun sheath conductive materials on Earth. This is
> > explained by making the Gaussian field for statics a dynamic one so
> > that it becomes the same as Maxwells laws. The combination of fields
> > from the applied current when intersecting the electrostatic field
> > dislodges particles by elevation with spin while accellerating to the
> > maximum speed which is that of light so the particle can take on a
> > straight line trajectory with spin where the Gravity vector is

> > cancelled.
> > Elermentry explanation of the weak force in the Standard model
> > (Patents applied for)
> > Art
>
> > Art
>
> Since all the strands are connected together, the entire things just
> looks like one flat piece of metal. Snake oil spin.

And what is the MFJ259B measuring when it denotes a resonant frequency?

2545. TV Signal polarization

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-03 00:33:44 UTC
From: david boyd <davem.boyd@gmail.com>
Message-ID: <56d03987-7726-42d0-825b-657df9ac1390@e8g2000yqo.googlegroups.com>
Source record: 12507

Are there any websites that give the polarization for TV signals?

2546. Re: TV Signal polarization

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-03 00:39:14 UTC
From: christofire <christofire@btinternet.com>
Message-ID: <n6ydncwSPPKlAFvXnZ2dnUVZ8hmdnZ2d@bt.com>
Source record: 12508

"david boyd" <davem.boyd@gmail.com> wrote in message
news:56d03987-7726-42d0-825b-657df9ac1390@e8g2000yqo.googlegroups.com...
> Are there any websites that give the polarization for TV signals?

Yes - which country?

Chris

2547. Re: SMALL ANTENNAS

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-03 00:46:42 UTC
From: Art Unwin <arthurunwin@gmail.com>
Message-ID: <24bbb6b2-bbf7-4631-802d-045b6d9f69c4@a21g2000yqc.googlegroups.com>
Source record: 12509
Body handling: HTML body converted to readable text

On Oct 2, 7:21 pm, Art Unwin wrote:
> On Oct 2, 6:33 pm, buzz wrote:
>
>
>
> > Art Unwin wrote:
> > > This week end is going to be wet and cold, so I thought I would give
> > > you a radiator to play with if you are willing to make something for
> > > yourself.
> > > Get yourself a piece of aluminum mesh used for window insect stopping
> > > entering your house. Soak this piece of mesh in some watered down
> > > muriatic acid (approx $5 a bottle at a hardware store This is to
> > > remove the insulating coating so it becomes conductive. Now this mesh
> > > is woven so it helps to compress the strands together by tapping with
> > > a hammer. Connect a MFJ259B to the base corners and scan to see where
> > > the resonant frequency is.
> > > I used a 8" x5" piece of mesh and it was resonant from about 110 to
> > > 140
> > > MHZ so it is quite broad banded and easy to find the resonance The
> > > vertical strands carry the applied current and the capacitance square
> > > holes in between is a electrostatic field around which the
> > > displacement current flows. What you have, basically, is a full wave
> > > dipole folded very closely upon itself to form a closed circuit with a
> > > low impedance. This is basically a transmission line if the ends are
> > > open. The cross jumpers take the place of dielectric spacers that are
> > > present on a open transmission line so that they may enclose an
> > > electrostatic field created by the displacement current. The vertical
> > > strands are really in series ,so you have effectively placed a long
> > > length of wire into a small volume which you may shape into any form.
> > > To play with this further, place it above a conductive sheet and note
> > > the changes. Then try pinning it together into a cylinder and note the
> > > changes.
> > > Have fun playing with it.
> > > Looking at the physics side of things. When a particle is generated by
> > > the Sun it goes to the border and even tho it is extremely small it
> > > breaks the border by applying a straight force vector together with a
> > > circular vector. This same combination repeats itself when current is
> > > applied to a radiator which also produces a circular current. These
> > > same vectors are later repeated with gravity in combination with
> > > rotation all of which are per laws of Newton. The particles that
> > > escape from the sun sheath conductive materials on Earth. This is
> > > explained by making the Gaussian field for statics a dynamic one so
> > > that it becomes the same as Maxwells laws. The combination of fields

> > > from the applied current when intersecting the electrostatic field
> > > dislodges particles by elevation with spin while accellerating to the
> > > maximum speed which is that of light so the particle can take on a
> > > straight line trajectory with spin where the Gravity vector is
> > > cancelled.
> > > Elermentry explanation of the weak force in the Standard model
> > > (Patents applied for)
> > > Art
>
> > > Art
>
> > Since all the strands are connected together, the entire things just
> > looks like one flat piece of metal. Snake oil spin.
>
> And what is the MFJ259B measuring when it denotes a resonant frequency?

Never mind.! You don't own a MFJ but you anticipated the answer anyway
when applying a DC current. Excellent, you are a antenna guru.

2548. Re: EZNEC Ver3 Automatic Save

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-03 01:30:48 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <BZqdnSuRN4vWNFvXnZ2dnUVZ_judnZ2d@giganews.com>
Source record: 12510

Chuck Olson wrote:
> I have found that there is no such thing as "automatic save" unless you are
> in LAST.EZ. If you want to take an existing named file and improve it - -
> okay click on the file and work on the wires, transmission lines and
> source tabulations, but be sure to SAVE AS and choose the same
> filename and just replace it. If you don't, the file won't get updated. I
> learned this after assuming opening a filename meant anything I would do
> would be placed under that filename - - like it would if you were in WORD,
> but no, it's not saved, and if you open another filename, the work you did
> will be lost - - in my case, all 32 wires, 21 transmission lines and 2
> sources to enter data for 2 designs - - and you'll have to do all of it
> over
> again. I even printed out the description of the file - - it was all
> there - - but the next time I went to look at it, it was back to the
> previous file that the new design had been started with - - no update!
>
> Roy, you may or you may not fix this - - I guess it's been this way for a
> long time - - so you probably have your reasons. It's just that it's not
> like WORD, and I feel WORD is a preferable model. Of course once you know
> about the problem, I guess it's not a problem - - until you forget and lose
> your work - - so I'm lighting the candle. I have never lost an update to a
> WORD document. (You are prompted to save it, if any change has taken
> place).

Beginning with version 4.0, introduced more than 5 years ago, EZNEC prompts you when you end the program or open a new file, asking whether you want to save the current one, if the description has changed since opening the file.

I won't be making any more changes to v. 3.0.

Roy Lewallen, W7EL

2549. Re: SMALL ANTENNAS

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-03 02:02:55 UTC
From: tom <news4792@taring.org>
Message-ID: <4ac6b0b5$0$28121$8046368a@newsreader.iphouse.net>
Source record: 12511
Body handling: HTML body converted to readable text

Art Unwin wrote:
> On Oct 2, 6:33 pm, buzz wrote:
>> Art Unwin wrote:
spelling curtsy Art
>>> Elermentry explanation of the weak force in the Standard model
>>> (Patents applied for)
>>> Art
>>> Art
>> Since all the strands are connected together, the entire things just
>> looks like one flat piece of metal. Snake oil spin.
>
> And what is the MFJ259B measuring when it denotes a resonant frequency?

What did the instrument say exactly? Or is that covered by your patent?

What leads you to believe that it indicated rezonunz?

And if it did, why would you think that helps confirm your nonsensical
view of the world?

tom
K0TAR

2550. Re: SMALL ANTENNAS

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-03 02:05:13 UTC
From: tom <news4792@taring.org>
Message-ID: <4ac6b13f$0$28121$8046368a@newsreader.iphouse.net>
Source record: 12512
Body handling: HTML body converted to readable text

Art Unwin wrote:
> On Oct 2, 6:33 pm, buzz wrote:
>> Art Unwin wrote:
<<<
>>> Art
>> Since all the strands are connected together, the entire things just
>> looks like one flat piece of metal. Snake oil spin.
>
> And what is the MFJ259B measuring when it denotes a resonant frequency?

And I DO own a 259B, so let's go toe to toe on the measurements bright boy.

tom
K0TAR

2551. Re: SMALL ANTENNAS

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-03 02:11:09 UTC
From: Art Unwin <arthurunwin@gmail.com>
Message-ID: <12874523-4d5b-42dd-931d-547cc8b0f732@k4g2000yqb.googlegroups.com>
Source record: 12513
Body handling: HTML body converted to readable text

On Oct 2, 7:46 pm, Art Unwin wrote:
> On Oct 2, 7:21 pm, Art Unwin wrote:
>
>
>
> > On Oct 2, 6:33 pm, buzz wrote:
>
> > > Art Unwin wrote:
> > > > This week end is going to be wet and cold, so I thought I would give
> > > > you a radiator to play with if you are willing to make something for
> > > > yourself.
> > > > Get yourself a piece of aluminum mesh used for window insect stopping
> > > > entering your house. Soak this piece of mesh in some watered down
> > > > muriatic acid (approx $5 a bottle at a hardware store This is to
> > > > remove the insulating coating so it becomes conductive. Now this mesh
> > > > is woven so it helps to compress the strands together by tapping with
> > > > a hammer. Connect a MFJ259B to the base corners and scan to see where
> > > > the resonant frequency is.
> > > > I used a 8" x5" piece of mesh and it was resonant from about 110 to
> > > > 140
> > > > MHZ so it is quite broad banded and easy to find the resonance The
> > > > vertical strands carry the applied current and the capacitance square
> > > > holes in between is a electrostatic field around which the
> > > > displacement current flows. What you have, basically, is a full wave
> > > > dipole folded very closely upon itself to form a closed circuit with a
> > > > low impedance. This is basically a transmission line if the ends are
> > > > open. The cross jumpers take the place of dielectric spacers that are
> > > > present on a open transmission line so that they may enclose an
> > > > electrostatic field created by the displacement current. The vertical
> > > > strands are really in series ,so you have effectively placed a long
> > > > length of wire into a small volume which you may shape into any form.
> > > > To play with this further, place it above a conductive sheet and note
> > > > the changes. Then try pinning it together into a cylinder and note the
> > > > changes.
> > > > Have fun playing with it.
> > > > Looking at the physics side of things. When a particle is generated by
> > > > the Sun it goes to the border and even tho it is extremely small it
> > > > breaks the border by applying a straight force vector together with a
> > > > circular vector. This same combination repeats itself when current is
> > > > applied to a radiator which also produces a circular current. These
> > > > same vectors are later repeated with gravity in combination with
> > > > rotation all of which are per laws of Newton. The particles that
> > > > escape from the sun sheath conductive materials on Earth. This is

> > > > explained by making the Gaussian field for statics a dynamic one so
> > > > that it becomes the same as Maxwells laws. The combination of fields
> > > > from the applied current when intersecting the electrostatic field
> > > > dislodges particles by elevation with spin while accellerating to the
> > > > maximum speed which is that of light so the particle can take on a
> > > > straight line trajectory with spin where the Gravity vector is
> > > > cancelled.
> > > > Elermentry explanation of the weak force in the Standard model
> > > > (Patents applied for)
> > > > Art
>
> > > > Art
>
> > > Since all the strands are connected together, the entire things just
> > > looks like one flat piece of metal. Snake oil spin.
>
> > And what is the MFJ259B measuring when it denotes a resonant frequency?
>
> Never mind.! You don't own a MFJ but you anticipated the answer anyway
> when applying a DC current. Excellent, you are a antenna guru.

Just made another similar size sample made of brass with a diamond
perforation and I got it down to 45 mhz where reactance was zero and
the resistance was 20 plus. I suppose I could get it to go below 45
Mhz with more manipulation but it is getting late. Seems like only a
few own a MFJ 259B which makes for silly questions and comments. Oh
well.

2552. Re: SMALL ANTENNAS

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-03 02:22:56 UTC
From: tom <news4792@taring.org>
Message-ID: <4ac6b5d1$0$42843$8046368a@newsreader.iphouse.net>
Source record: 12514

Art Unwin wrote:
>
> Just made another similar size sample made of brass with a diamond
> perforation and I got it down to 45 mhz where reactance was zero and
> the resistance was 20 plus. I suppose I could get it to go below 45
> Mhz with more manipulation but it is getting late. Seems like only a
> few own a MFJ 259B which makes for silly questions and comments. Oh
> well.

And what were you driving it against?

Was it connected to just the center pin on the PL259?

If so, what was connected to the ground side of the instrument?

tom
K0TAR

2553. Re: SMALL ANTENNAS

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-03 02:24:41 UTC
From: Art Unwin <arthurunwin@gmail.com>
Message-ID: <dbca45ec-0e6f-4422-8a4e-6c2b4bb0477d@g23g2000yqh.googlegroups.com>
Source record: 12515
Body handling: HTML body converted to readable text

On Oct 2, 9:02 pm, tom wrote:
> Art Unwin wrote:
> > On Oct 2, 6:33 pm, buzz wrote:
> >> Art Unwin wrote:
>
> spelling curtsy Art
>
> >>> Elermentry explanation of the weak force in the Standard model
> >>> (Patents applied for)
> >>> Art
> >>> Art
> >> Since all the strands are connected together, the entire things just
> >> looks like one flat piece of metal. Snake oil spin.
>
> > And what is the MFJ259B measuring when it denotes a resonant frequency?
>
> What did the instrument say exactly? Or is that covered by your patent?
>
> What leads you to believe that it indicated rezonunz?
>
> And if it did, why would you think that helps confirm your nonsensical
> view of the world?
>
> tom
> K0TAR

You really make yourself look so stupid with questions like that. Or
maybe I should say "so dumb?" You "may" have made it out of high
school "may", but for evidence of higher education you could get a
diploma from a Honduras University for just pennies. Probably sent off
a postcard for one with a Honduras postage stamp on it just to impress
them.

2554. Re: SMALL ANTENNAS

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-03 02:29:01 UTC
From: tom <news4792@taring.org>
Message-ID: <4ac6b6d4$0$28119$8046368a@newsreader.iphouse.net>
Source record: 12516

Art Unwin wrote:
>
> Just made another similar size sample made of brass with a diamond
> perforation and I got it down to 45 mhz where reactance was zero and
> the resistance was 20 plus. I suppose I could get it to go below 45
> Mhz with more manipulation but it is getting late. Seems like only a
> few own a MFJ 259B which makes for silly questions and comments. Oh
> well.

Just twigged on the key phrase "I got it down".

What is that supposed to mean? "I bent it?" or "I moved it next to this nice old cast iron radiator"? What?

So he adjusted it in an undefined manner.

And what size "diamond perforation"? What angle? What percentage perforation? What thickness is this sheet? (Almost a bad pun)

tom
K0TAR

2555. Re: SMALL ANTENNAS

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-03 02:40:37 UTC
From: Art Unwin <arthurunwin@gmail.com>
Message-ID: <f748962a-9dde-4dc1-96d0-ed891cfbc949@d10g2000yqh.googlegroups.com>
Source record: 12517

On Oct 2, 9:22 pm, tom <news4...@taring.org> wrote:
> Art Unwin wrote:
>
> > Just made another similar size sample made of brass with a diamond
> > perforation and I got it down to 45 mhz where reactance was zero and
> > the resistance was 20 plus. I suppose I could get it to go below 45
> > Mhz with more manipulation but it is getting late. Seems like only a
> > few own a MFJ 259B which makes for silly questions and comments. Oh
> > well.
>
> And what were you driving it against?
>
> Was it connected to just the center pin on the PL259?
>
> If so, what was connected to the ground side of the instrument?
>
> tom
> K0TAR

You may have bought one but you have never used it as shown by your
silly questions.
You have lied so much in the past.
I presume you live alone or maybe you are homelessso cut a square from
the mesh on your window and introduce it to what ever you bought with
a piece of coax with a connector at one end and the shielding and
center wire separated at the other end. Yes, just for fun connect only
to the centre pin and stand back as it surely would explode. My
version of the MFJ doesn't say anything so I have to read the meter.
Since your one "says" it all ask what it is measuring! Do you think
you can do that for yourself? I imagine many hams have already tried
it and are laughing their heads off over you and your questions.

2556. Re: SMALL ANTENNAS

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-03 02:43:40 UTC
From: tom <news4792@taring.org>
Message-ID: <4ac6ba43$0$28114$8046368a@newsreader.iphouse.net>
Source record: 12518

Art Unwin wrote:
> On Oct 2, 9:02 pm, tom <news4...@taring.org> wrote:
<snip>
>>
>> What leads you to believe that it indicated rezonunz?
>>
>> And if it did, why would you think that helps confirm your nonsensical
>> view of the world?
>>
>> tom
>> K0TAR
>
> You really make yourself look so stupid with questions like that. Or
> maybe I should say "so dumb?" You "may" have made it out of high
> school "may", but for evidence of higher education you could get a
> diploma from a Honduras University for just pennies. Probably sent off
> a postcard for one with a Honduras postage stamp on it just to impress
> them.

When I've made claims, I've generally associated numbers with them. If someone should challenge me on one, I would respond to them with where the number came from. We could then have a discussion about it, and if it ended up on this group, others would get to make cogent and lively comments.

And hopefully some would learn from some who knew. And those who presented verifiable evidence would be acknowledged by those that didn't have it. And some would disagree on nothing but fact, and some would disagree just for the hell of it. And so on.

But there is a consensus on what works and why. The disagreements are pretty much on just the fine points and about 80% because the OFs in question like to do it and have the time. At least it appears that way. I'm not bothered by it, and I think most of the regulars aren't either. And some of it is quite amusing. The next button isn't hard to click.

Which leads to me saying, Art, ssppppsssspppppspsspspspspsp!

tom
K0TAR

2557. Re: SMALL ANTENNAS

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-03 02:47:29 UTC
From: Art Unwin <arthurunwin@gmail.com>
Message-ID: <4320fbad-64f7-4f6e-a185-cb07141533d5@j39g2000yqh.googlegroups.com>
Source record: 12519

On Oct 2, 9:29 pm, tom <news4...@taring.org> wrote:
> Art Unwin wrote:
>
> > Just made another similar size sample made of brass with a diamond
> > perforation and I got it down to 45 mhz where reactance was zero and
> > the resistance was 20 plus. I suppose I could get it to go below 45
> > Mhz with more manipulation but it is getting late. Seems like only a
> > few own a MFJ 259B which makes for silly questions and comments. Oh
> > well.
>
> Just twigged on the key phrase "I got it down".
>
> What is that supposed to mean? "I bent it?" or "I moved it next to this
> nice old cast iron radiator"? What?
>
> So he adjusted it in an undefined manner.
>
> And what size "diamond perforation"? What angle? What percentage
> perforation? What thickness is this sheet? (Almost a bad pun)
>
> tom
> K0TAR

Sorry Tom, I haven't got anymore time to waste on you. Find somebody
to show you how to use the MFJ and explain what resonance means and
you should be off and running, ...running away that is. So Tommy,
nighty ,night PLONK!

2558. Re: EZNEC Ver3 Automatic Save

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-03 02:52:29 UTC
From: Chuck Olson <chuckolson01@REMOVETHIScomcast.net>
Message-ID: <ha6e9u$6us$1@news.eternal-september.org>
Source record: 12520

"Roy Lewallen" <w7el@eznec.com> wrote in message
news:BZqdnSuRN4vWNFvXnZ2dnUVZ_judnZ2d@giganews.com...
> Beginning with version 4.0, introduced more than 5 years ago, EZNEC
> prompts you when you end the program or open a new file, asking whether
> you want to save the current one, if the description has changed since
> opening the file.
>
> I won't be making any more changes to v. 3.0.
>
> Roy Lewallen, W7EL

Thank you for your quick response. I'm sorry I didn't check your website first to find out how far behind times I had become. Your price on the new Ver 5 is certainly attractive. But for now, I guess I'll be okay with what I have. 73

Chuck Olson W6PKP

2559. Re: SMALL ANTENNAS

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-03 02:56:00 UTC
From: tom <news4792@taring.org>
Message-ID: <4ac6bd91$0$42844$8046368a@newsreader.iphouse.net>
Source record: 12521

Art Unwin wrote:
>
> You may have bought one but you have never used it as shown by your
> silly questions.
<snip>
> cut a square from
> the mesh on your window and introduce it to what ever you bought with
> a piece of coax with a connector at one end and the shielding and
> center wire separated at the other end. Yes, just for fun connect only
> to the centre pin and stand back as it surely would explode.

Thanks. That's the best description I've ever heard from you. Now the coax type, and how long. and it's orientation and distance from the ground or large metallic things, and your position and weight and height and other things like that in the local environment and then we might _begin_ to be able to duplicate your place of testing.

tom
K0TAR

2560. static high voltages of antenna protect

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-03 05:44:33 UTC
From: tzitzikas <tzitzikas.50cd927@radiobanter.com>
Message-ID: <tzitzikas.50cd927@radiobanter.com>
Source record: 12523

i have an inverted L antenna for medium waves. i would like to ground
the static high voltages. the antenna has static high voltages when the
weather is not good.
i am looking for a easy system to ground this voltages and to protect
my transmitter and the tuning circuit.
i had seen a schematic with carbon resistance about 10kohm which is
connected between the antenna and ground. this solution is ok? do you
have to propose any idea?

--
tzitzikas

2561. Re: SMALL ANTENNAS

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-03 07:59:38 UTC
From: Szczepan Bialek <sz.bialek@wp.pl>
Message-ID: <ha6krv$l9t$1@node1.news.atman.pl>
Source record: 12522

"Art Unwin" <arthurunwin@gmail.com> wrote
news:47de1bc1-19dc-4208-ae6c-882fae5470fc@a21g2000yqc.googlegroups.com...
>
> Get yourself a piece of aluminum mesh used for window insect stopping
> entering your house.
>
> I used a 8" x5" piece of mesh and it was resonant from about 110 to
> 140

Could you tell us the details of the mesh (the wire diameter and the
distance between them).
S*
> MHZ so it is quite broad banded and easy to find the resonance The
> vertical strands carry the applied current and the capacitance square
> holes in between is a electrostatic field around which the
> displacement current flows. What you have, basically, is a full wave
> dipole folded very closely upon itself to form a closed circuit with a
> low impedance. This is basically a transmission line if the ends are
> open. The cross jumpers take the place of dielectric spacers that are
> present on a open transmission line so that they may enclose an
> electrostatic field created by the displacement current. The vertical
> strands are really in series ,so you have effectively placed a long
> length of wire into a small volume which you may shape into any form.
> To play with this further, place it above a conductive sheet and note
> the changes. Then try pinning it together into a cylinder and note the
> changes.
> Have fun playing with it.
> Looking at the physics side of things. When a particle is generated by
> the Sun it goes to the border and even tho it is extremely small it
> breaks the border by applying a straight force vector together with a
> circular vector. This same combination repeats itself when current is
> applied to a radiator which also produces a circular current. These
> same vectors are later repeated with gravity in combination with
> rotation all of which are per laws of Newton. The particles that
> escape from the sun sheath conductive materials on Earth. This is
> explained by making the Gaussian field for statics a dynamic one so
> that it becomes the same as Maxwells laws. The combination of fields
> from the applied current when intersecting the electrostatic field
> dislodges particles by elevation with spin while accellerating to the
> maximum speed which is that of light so the particle can take on a
> straight line trajectory with spin where the Gravity vector is
> cancelled.
> Elermentry explanation of the weak force in the Standard model
> (Patents applied for)

> Art
>
> Art

2562. Re: static high voltages of antenna protect

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-03 11:00:26 UTC
From: christofire <christofire@btinternet.com>
Message-ID: <HfudnXth_NFSs1rXnZ2dnUVZ8nSdnZ2d@bt.com>
Source record: 12524

"tzitzikas" <tzitzikas.50cd927@radiobanter.com> wrote in message
news:tzitzikas.50cd927@radiobanter.com...
>
> i have an inverted L antenna for medium waves. i would like to ground
> the static high voltages. the antenna has static high voltages when the
> weather is not good.
> i am looking for a easy system to ground this voltages and to protect
> my transmitter and the tuning circuit.
> i had seen a schematic with carbon resistance about 10kohm which is
> connected between the antenna and ground. this solution is ok? do you
> have to propose any idea?
> --
> tzitzikas

Yes, fine as long as you don't connect it somewhere where the system
impedance is high (like the end of the radiator!). Surprising you should
ask something so basic when you claim to run an engineering 'corporation'
http://www.tzitzikas.webs.com/

Chris

2563. Re: static high voltages of antenna protect

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-03 12:24:21 UTC
From: Richard Fry <rfry@adams.net>
Message-ID: <ddaaad43-c984-404d-a088-f6272680c569@a6g2000vbp.googlegroups.com>
Source record: 12525

On Oct 3, 12:44 am, tzitzikas <tzitzikas.50cd...@radiobanter.com>
wrote:
> i have an inverted L antenna for medium waves. i would like to ground
> the static high voltages. the antenna has static high voltages when the
> weather is not good.
> i am looking for a easy system to ground this voltages and to protect
> my transmitter and the tuning circuit.
> i had seen a schematic with carbon resistance about 10kohm which is
> connected between the antenna and ground. this solution is ok? do you
> have to propose any idea?

Doing so would act as a static drain, but may not be effective at
preventing damage to whatever your antenna is connected to if there
should be a nearby lightning strike.

A better approach for that might be to disconnect the antenna from
your equipment during lightning conditions, and connect it a good, low-
Z, earth ground.

RF

2564. Re: EZNEC Ver3 Automatic Save

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-03 13:45:22 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <pAIxm.15012$ma7.9795@newsfe04.iad>
Source record: 12526

Chuck Olson wrote:
> Roy, you may or you may not fix this - - I guess it's been this way for a
> long time - - so you probably have your reasons.

I prefer EZNEC the way it is to an Automatic Save
to the original filename since that would wipe out
the pristine file one started with.

An improvement might be to ask the operator, upon
exit, if he/she wants to save the present file.
--
73, Cecil, IEEE, OOTC, http://www.w5dxp.com

2565. Re: TV Signal polarization

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-03 13:58:08 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <mMIxm.15013$ma7.2509@newsfe04.iad>
Source record: 12527

david boyd wrote:
> Are there any websites that give the polarization for TV signals?

Isn't it all horizontal for the USA?
--
73, Cecil, IEEE, OOTC, http://www.w5dxp.com

2566. Re: TV Signal polarization

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-03 14:24:27 UTC
From: christofire <christofire@btinternet.com>
Message-ID: <tdGdnfjoosk9w1rXnZ2dnUVZ8gCdnZ2d@bt.com>
Source record: 12528

"Cecil Moore" <nospam@w5dxp.com> wrote in message
news:mMIxm.15013$ma7.2509@newsfe04.iad...
> david boyd wrote:
>> Are there any websites that give the polarization for TV signals?
>
> Isn't it all horizontal for the USA?
> --
> 73, Cecil, IEEE, OOTC, http://www.w5dxp.com

May well be, but it isn't in Europe. Are all gmail users in the USA then?

Chris

2567. Re: SMALL ANTENNAS

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-03 15:12:03 UTC
From: Registered User <n4jvp@ix.netcom.com>
Message-ID: <ucnec5hvqrj7jadi77qicjf2foqnikie0h@4ax.com>
Source record: 12529
Body handling: HTML body converted to readable text

On Fri, 02 Oct 2009 21:05:13 -0500, tom wrote:

>Art Unwin wrote:
>> On Oct 2, 6:33 pm, buzz wrote:
>>> Art Unwin wrote:
>>>
>>>>
>>>> Art
>>> Since all the strands are connected together, the entire things just
>>> looks like one flat piece of metal. Snake oil spin.
>>
>> And what is the MFJ259B measuring when it denotes a resonant frequency?
>
>And I DO own a 259B, so let's go toe to toe on the measurements bright boy.
>
Then you should be able to duplicate Art's results without knowing the
parameters of Art's test. Sez who? Well Art of course! HI

I own a MFJ-259B and find it to be an useful tool. The device's OOB
accuracy was found to be lacking but after re-calibration all was FB.
Perhaps instrumentation errors are helping to 'confirm' Art's
contradictory theories and hazy explanations.

2568. Re: TV Signal polarization

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-03 15:39:43 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <01sec5hdak558kjb99mv14ft6i9kfogscr@4ax.com>
Source record: 12530

On Sat, 3 Oct 2009 15:24:27 +0100, "christofire"
<christofire@btinternet.com> wrote:

> Are all gmail users in the USA then?

Our OP is halfway between Annapolis and D.C.

73's
Richard Clark, KB7QHC

2569. Re: EZNEC Ver3 Automatic Save

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-03 18:34:45 UTC
From: steveeh131047 <google@karinya.net>
Message-ID: <c4b4705b-0753-4a6e-a20a-7fac08ca3a93@g1g2000vbr.googlegroups.com>
Source record: 12531

On Oct 3, 2:45 pm, Cecil Moore <nos...@w5dxp.com> wrote:
>
> An improvement might be to ask the operator, upon
> exit, if he/she wants to save the present file.
> --
> 73, Cecil, IEEE, OOTC, http://www.w5dxp.com

That's the one that often bites me. Make some changes to a model, and on exit you don't get prompted to save it. Next time you run EZ it's there as LAST.EZ, but if you now open a new file you don't get prompted to save LAST.EZ, so all gets lost. A prompt to save on exit would be nice.

73,
Steve G3TXQ

2570. Fishrod anìtennas - transformer and twin-lead

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-03 19:08:57 UTC
From: Antonio Vernucci <vernucci@tin.it>
Message-ID: <4ac7a166$0$1103$4fafbaef@reader3.news.tin.it>
Source record: 12532

Use of fishrod antennas is getting more and more common to cover all bands 7 ... 28 MHz, including WARC. The typical length of the radiating wire is about 25 feet, that is about one quarter wavelength at 10 MHz.

On lower frequencies (e.g. 7 MHz) that antenna shows a low radiation resistance and a strong capacitive reactance. On higher frequencies resistance goes up and down with frequency, showing very high peaks, and reactance does the same, though obviously with a different pattern.

Typical configuration used is:
- 1:4 transformer (balun or unun) at the antenna
- 300-ohm or 450-ohm flat twin-lead
- tuner at the transmitter

SWR is generally high, except on certain specific frequencies (which may not fall in the amateur bands).

I would like to hear some opinions on the usefulness of using the transformer and the twin-lead. My arguments are:

- above 10 MHz, where impedance is generally fairly high, the transformer could (??) be helpful to reduce SWR, but below 10 MHz it should be harmful, as its transformation goes on the wrong side.

- use of the twin-lead is usually justified by its low attenuation, that limits the extra attenuation caused by the high SWR existing on the line. In my opinion the 300-ohm twin-lead attenuation is reported to be low mainly because it is measured in presence of a 300-ohm load, that draws low RF current. But in the subject application, where the antenna impedance is uncontrolled, what should count is the ohmic resistance of the twin-lead conductors which is not particularly low due to their fairly small diameter. Wouldn't an RG-213 do better than the twin-lead?

Thanks for your comments & 73

Tony I0JX
Rome, Italy

2571. Cushcraft 5 element A50-5S six meter beam to cannibalize

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-03 19:53:44 UTC
From: R U <bud@aaa.com>
Message-ID: <79Cdne88cuVSNlrXnZ2dnUVZ_jidnZ2d@buckeye-express.com>
Source record: 12533
Cross-posted to: alt.ham-radio.marketplace,rec.ham-radio.swap,rec.radio.amateur.antenna

Hi

I am looking for a Cushcraft 5 element A50-5S six meter beam to cannibalize and repair my A50-5S.

I am out of work for medical issues so funds are tight right now I hope I can find something and do a repair cheap as possible.

The boom is in 3 sections, I am missing one end. Aluminum Tube 1-1/4 X 50"

I am missing the entire REDDI (GAMMA) MATCH Assembly, on page 5 of my original instructions.

2 end caps (plastic) go on each end of the boom.

My son Darien - KDBKMF just got his call and wants to talk on 6 meters On both Voice and CW . We just cant afford to buy a new antenna.

I am cuting a wire to a inverted "V" today. He really wants a yagi. I dont blame him at all.

We live in Toledo Ohio it would be nice to find parts.
thank you
Rich NF8V Toledo Ohio

2572. Re: EZNEC Ver3 Automatic Save

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-03 20:09:11 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <PbOxm.92412$nQ6.18057@newsfe07.iad>
Source record: 12534

Roy Lewallen wrote:
> Beginning with version 4.0, introduced more than 5 years ago, EZNEC
> prompts you when you end the program or open a new file, asking whether
> you want to save the current one, if the description has changed since
> opening the file.

My EZNEC+ 4.0.40 doesn't seem to do that.
--
73, Cecil, IEEE, OOTC, http://www.w5dxp.com

2573. Re: EZNEC Ver3 Automatic Save

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-03 20:20:00 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <TlOxm.92413$nQ6.3970@newsfe07.iad>
Source record: 12535

steveeh131047 wrote:
> That's the one that often bites me. Make some changes to a model, and
> on exit you don't get prompted to save it. Next time you run EZ it's
> there as LAST.EZ, but if you now open a new file you don't get
> prompted to save LAST.EZ, so all gets lost. A prompt to save on exit
> would be nice.

Maybe you got plonked by W7EL? :-) I did and my version of
EZNEC+ 4.0.40 doesn't perform as asserted by W7EL a few
postings ago.
--
73, Cecil, IEEE, OOTC, http://www.w5dxp.com

2574. Re: TV Signal polarization

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-03 20:38:58 UTC
From: christofire <christofire@btinternet.com>
Message-ID: <_4udnazSb7XxK1rXnZ2dnUVZ8gydnZ2d@bt.com>
Source record: 12536

"Richard Clark" <kb7qhc@comcast.net> wrote in message
news:01sec5hdak558kjb99mv14ft6i9kfogscr@4ax.com...
> On Sat, 3 Oct 2009 15:24:27 +0100, "christofire"
> <christofire@btinternet.com> wrote:
>
>> Are all gmail users in the USA then?
>
> Our OP is halfway between Annapolis and D.C.
>
> 73's
> Richard Clark, KB7QHC

Did you know that from prior communication with the OP or is there some data in his posting that gives a clue to that fact?

For the countries in ITU Region 2, the Americas, there will be FCC and other documentation some of which may be available, and some of which may be available free of charge; there is also some amount of comment about polarisations like http://www.televisionbroadcast.com/article/67946.

For many of the countries covered by the Geneva 07 ITU-R agreement, the 'frequency allocation tables' include polarisation details and can be accessed from the national administrations via the ERO web site http://www.ero.dk/6EB60FD0-D703-42F6-97C1-41FD3713F2B0.W5Doc?frames=no&; they can generally be downloaded free of charge.

Chris

2575. Re: Fishrod an�tennas - transformer and twin-lead

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-03 20:39:12 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <17dfc5dudho41vf27ss5aa1e7lkkkdgl50@4ax.com>
Source record: 12537

On Sat, 3 Oct 2009 21:08:57 +0200, "Antonio Vernucci"
<vernucci@tin.it> wrote:

>I would like to hear some opinions on the usefulness of using the transformer
>and the twin-lead. My arguments are:
>
>- above 10 MHz, where impedance is generally fairly high, the transformer could
>(??) be helpful to reduce SWR, but below 10 MHz it should be harmful, as its
>transformation goes on the wrong side.

Hi Tony,

Good of you to notice that the 1:4 can also be viewed as 4:1 (or did
you notice?) with it reversed. This is not strictly so, as the
classic BalUn consists of wound transmission lines with characteristic
Z at the geometric mean of the load and source Z. However, lacking
this doesn't always stop the experimenter.

>- use of the twin-lead is usually justified by its low attenuation, that limits
>the extra attenuation caused by the high SWR existing on the line. In my opinion
>the 300-ohm twin-lead attenuation is reported to be low mainly because it is
>measured in presence of a 300-ohm load, that draws low RF current. But in the
>subject application, where the antenna impedance is uncontrolled, what should
>count is the ohmic resistance of the twin-lead conductors which is not
>particularly low due to their fairly small diameter. Wouldn't an RG-213 do
>better than the twin-lead?

If your BalUn has already done the bigger job of turning a High Z to a
modest one, the common logic for the need for twin line has also been
diminished.

Working with, designing, and building BalUn applications demands a
good tool for validation. Do you have something that will measure Z
with accuracy?

73's
Richard Clark, KB7QHC

2576. Re: TV Signal polarization

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-03 20:43:28 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <mkdfc5ln0plckglm8rbp4pih3ail3s5ikq@4ax.com>
Source record: 12539

On Sat, 3 Oct 2009 21:38:58 +0100, "christofire"
<christofire@btinternet.com> wrote:

>Did you know that from prior communication with the OP or is there some data
>in his posting that gives a clue to that fact?

From his posting post in the header, just as yours is obscured.

73's
Richard Clark, KB7QHC

2577. Re: EZNEC Ver3 Automatic Save

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-03 20:44:43 UTC
From: steveeh131047 <google@karinya.net>
Message-ID: <40c86c08-7b40-4779-8f76-e14638230f3d@p15g2000vbl.googlegroups.com>
Source record: 12538

Mine's EZNEC+ v5.0.27

Steve G3TXQ

2578. Re: Fishrod anìtennas - transformer and twin-lead

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-03 20:51:05 UTC
From: Antonio Vernucci <vernucci@tin.it>
Message-ID: <4ac7b960$0$1096$4fafbaef@reader4.news.tin.it>
Source record: 12540

> Good of you to notice that the 1:4 can also be viewed as 4:1 (or did
> you notice?) with it reversed.

That is obvious, but in common designs there is no provision (e.g. a relay) for reversing the transformer when operating on frequencies where the antenna resistance is lower. So the transformer remains there as it is, doing the opposite job of what it should do.

> Working with, designing, and building BalUn applications demands a
> good tool for validation. Do you have something that will measure Z
> with accuracy?

No, I am not building that antenna or doing any experiment. I am only trying to understand the rationale behind what people proposes and I am seeking advice from people having specific experience on the issue.

73

Tony I0JX.

2579. PS: Cushcraft 5 element A50-5S six meter beam to cannibalize

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-03 21:14:12 UTC
From: R U <nf7d@bex.net>
Message-ID: <VuqdnQRlEcwvI1rXnZ2dnUVZ_uqdnZ2d@buckeye-express.com>
Source record: 12541
Cross-posted to: alt.ham-radio.marketplace,rec.ham-radio.swap,rec.radio.amateur.antenna

the correct email is nf7d@bex.net
please reply there.
I did just change my call to NF8V cause we moved here. the internet service
although is really fast, they charge to change you account info.
Im not inclined to pay it.
please ignore the bud@aaa, I dont know how that got in here.
73
Rich

"R U" <bud@aaa.com> wrote in message
news:79Cdne88cuVSNlrXnZ2dnUVZ_jidnZ2d@buckeye-express.com...
> Hi
>
> I am looking for a Cushcraft 5 element A50-5S six meter beam to
> cannibalize and repair my A50-5S.
>
> I am out of work for medical issues so funds are tight right now I hope I
> can find something and do a repair cheap as possible.
>
> The boom is in 3 sections, I am missing one end. Aluminum Tube 1-1/4 X
> 50"
>
> I am missing the entire REDDI (GAMMA) MATCH Assembly, on page 5 of my
> original instructions.
>
> 2 end caps (plastic) go on each end of the boom.
>
> My son Darien - KDBKMF just got his call and wants to talk on 6 meters On
> both Voice and CW . We just cant afford to buy a new antenna.
>
> I am cuting a wire to a inverted "V" today. He really wants a yagi. I dont
> blame him at all.
>
> We live in Toledo Ohio it would be nice to find parts.
> thank you
> Rich NF8V Toledo Ohio

2580. Re: Fishrod an&#65533;tennas - transformer and twin-lead

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-03 21:18:32 UTC
From: Owen Duffy <none@no.where>
Message-ID: <Xns9C9A548646751nonenowhere@61.9.191.5>
Source record: 12542

"Antonio Vernucci" <vernucci@tin.it> wrote in
news:4ac7a166$0$1103$4fafbaef@reader3.news.tin.it:

> Use of fishrod antennas is getting more and more common to cover all
> bands 7 ... 28 MHz, including WARC. The typical length of the
> radiating wire is about 25 feet, that is about one quarter wavelength
> at 10 MHz.

By fishrod antenna, I assume that you mean a telescopic fibreglass pole of about 10m height, used to support a straight or approximately straight (including a very coarse pitch helical) vertical wire of the same length.

This has a lot in common with the popular 43' vertical, just the lengths are different, and the frequency coverage will be different.

The use of a 4:1 balun on all of these things seems inspired by one antenna manufacturer's recommendation and supply of 4:1 voltage baluns for the application. Their site shows testimonials, and claims thousands sold. Eham reviews abound with glowing testimonials.

However... the application of a 4:1 voltage balun seems to me not only to lack design rationale, but to be quite undesirable in driving common mode current on the coax feedline, and potentially very lossy in configurations where the feedline is buried.

I discuss the use of an untuned vertical as a multiband antenna, and raise the insanity of the voltage balun application at http://www.vk1od.net/antenna/multibandunloadedvertical/index.htm .

Owen

2581. Re: TV Signal polarization

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-03 21:24:00 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <g6gfc59h0kgdo48e4bun42qssbmpn0tp6o@4ax.com>
Source record: 12543

On Sat, 03 Oct 2009 13:43:28 -0700, Richard Clark <kb7qhc@comcast.net>
wrote:

>On Sat, 3 Oct 2009 21:38:58 +0100, "christofire"
><christofire@btinternet.com> wrote:
>
>>Did you know that from prior communication with the OP or is there some data
>>in his posting that gives a clue to that fact?
>
Correction:
From his posting HOST in the header, just as yours is obscured.

73's
Richard Clark, KB7QHC

2582. Re: TV Signal polarization

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-03 21:47:26 UTC
From: christofire <christofire@btinternet.com>
Message-ID: <D4Wdnd4JINPpW1rXnZ2dnUVZ8q-dnZ2d@bt.com>
Source record: 12544

"Richard Clark" <kb7qhc@comcast.net> wrote in message
news:g6gfc59h0kgdo48e4bun42qssbmpn0tp6o@4ax.com...
> On Sat, 03 Oct 2009 13:43:28 -0700, Richard Clark <kb7qhc@comcast.net>
> wrote:
>
>>On Sat, 3 Oct 2009 21:38:58 +0100, "christofire"
>><christofire@btinternet.com> wrote:
>>
>>>Did you know that from prior communication with the OP or is there some
>>>data
>>>in his posting that gives a clue to that fact?
>>
> Correction:
> From his posting HOST in the header, just as yours is obscured.
>
> 73's
> Richard Clark, KB7QHC

Well, not intentionally I'm sure. As I've already stated in another thread
in this NG, for what it matters, I'm located near to London - actually a
stone's throw away from Epsom racecourse.

Have you come across anything useful published by the FCC about
polarisations used for digital terrestrial television.

Chris

2583. Re: TV Signal polarization

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-04 00:04:27 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <ajpfc51u3gficqg3kpl39chd2husfo78vu@4ax.com>
Source record: 12545

On Sat, 3 Oct 2009 22:47:26 +0100, "christofire"
<christofire@btinternet.com> wrote:

>Have you come across anything useful published by the FCC about
>polarisations used for digital terrestrial television.

That would be Richard Fry's turf.

73's
Richard Clark, KB7QHC

2584. Re: SMALL ANTENNAS

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-04 03:44:23 UTC
From: Art Unwin <arthurunwin@gmail.com>
Message-ID: <1ef6ac01-f646-4f51-b4b1-482730509bfe@h30g2000vbr.googlegroups.com>
Source record: 12546

On Oct 1, 7:55 pm, "christofire" <christof...@btinternet.com> wrote:
> "Art Unwin" <arthurun...@gmail.com> wrote in message
>
> news:47de1bc1-19dc-4208-ae6c-882fae5470fc@a21g2000yqc.googlegroups.com...
>
>
>
> > This week end is going to be wet and cold, so I thought I would give
> > you a radiator to play with if you are willing to make something for
> > yourself.
> > Get yourself a piece of aluminum mesh used for window insect stopping
> > entering your house. Soak this piece of mesh in some watered down
> > muriatic acid (approx $5 a bottle at a hardware store This is to
> > remove the insulating coating so it becomes conductive. Now this mesh
> > is woven so it helps to compress the strands together by tapping with
> > a hammer. Connect a MFJ259B to the base corners and scan to see where
> > the resonant frequency is.
> > I used a 8" x5" piece of mesh and it was resonant from about 110 to
> > 140
> > MHZ so it is quite broad banded and easy to find the resonance The
> > vertical strands carry the applied current and the capacitance square
> > holes in between is a electrostatic field around which the
> > displacement current flows. What you have, basically, is a full wave
> > dipole folded very closely upon itself to form a closed circuit with a
> > low impedance. This is basically a transmission line if the ends are
> > open. The cross jumpers take the place of dielectric spacers that are
> > present on a open transmission line so that they may enclose an
> > electrostatic field created by the displacement current. The vertical
> > strands are really in series ,so you have effectively placed a long
> > length of wire into a small volume which you may shape into any form.
> > To play with this further, place it above a conductive sheet and note
> > the changes. Then try pinning it together into a cylinder and note the
> > changes.
> > Have fun playing with it.
> > Looking at the physics side of things. When a particle is generated by
> > the Sun it goes to the border and even tho it is extremely small it
> > breaks the border by applying a straight force vector together with a
> > circular vector. This same combination repeats itself when current is
> > applied to a radiator which also produces a circular current. These
> > same vectors are later repeated with gravity in combination with
> > rotation all of which are per laws of Newton. The particles that
> > escape from the sun sheath conductive materials on Earth. This is
> > explained by making the Gaussian field for statics a dynamic one so
> > that it becomes the same as Maxwells laws. The combination of fields

> > from the applied current when intersecting the electrostatic field
> > dislodges particles by elevation with spin while accellerating to the
> > maximum speed which is that of light so the particle can take on a
> > straight line trajectory with spin where the Gravity vector is
> > cancelled.
> > Elermentry explanation of the weak force in the Standard model
> > (Patents applied for)
> > Art
>
> Since you're lecturing on physics, as I said before, you should post this to
> sci.physics and sci.physics.research and see what they think.
>
> Chris
Chris
I took your advice and sent an E mail to sci.physics research
explaining what I have found
and asking for comment. I am not a member of that group so it may well
not be picked up.
Tomorrow I will add to my home page.... Unwin Antennas..... copies of
both patent requests where the last one contains graphs of results of
mesh style radiators with other things. As time passes I will add my
other antenna patent requests from the past just for the hell of it.
Initial patent request costs were $515 each which is a lot less than
the UK and I believe it is about $200 for maintenance fees on each of
them due in about two years from now. I recommend that those with
EZNEC model the helical antenna shown as I am sure they will find it
of interest.
Regards
Art

2585. Re: TV Signal polarization

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-04 03:45:34 UTC
From: "Sal M. Onella" <sobars@cox.net>
Message-ID: <296f216d-3628-4b76-93ce-0e3a944528fd@o36g2000vbl.googlegroups.com>
Source record: 12547

< snip >
>
> Have you come across anything useful published by the FCC about
> polarisations used for digital terrestrial television.
>
> Chris

Yes. http://www.fcc.gov/mb/video/tvq.html is the start page for most television queries for US, Canadian and Mexican TV stations. Type something relevant in the Call Sign block and press <Enter>. On the next page, click any of the station's lines and you will next be taken to a detail page (my term) with many specifics for the station, commonly including antenna polarization. (You may omit the callsign and instead enter a city, further downpage. Then, all that city's licensed stations will be listed and you can bring up detail pages one at a time.)

Just now, I determined that KTVU is Horizontal and KABC is Circular (H=V).

Please note that the detail page lists data for every major paper on file with the FCC (or neighbor government). That is, you find separate clusters of data for the station as licensed, plus any construction permits, applications, modifications, etc. Be sure of what you're seeing, as some of it represents planning that might never be approved or funded.

Some data will open in a new window; the coverage maps are that way.

Happy hunting,
Sal

2586. Re: SMALL ANTENNAS

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-04 03:52:55 UTC
From: tom <news4792@taring.org>
Message-ID: <4ac81c82$0$42839$8046368a@newsreader.iphouse.net>
Source record: 12548
Body handling: HTML body converted to readable text

Registered User wrote:
> On Fri, 02 Oct 2009 21:05:13 -0500, tom wrote:
>
>> Art Unwin wrote:
>>> On Oct 2, 6:33 pm, buzz wrote:
>>>> Art Unwin wrote:
>> <<<
>>>>> Art
>>>> Since all the strands are connected together, the entire things just
>>>> looks like one flat piece of metal. Snake oil spin.
>>> And what is the MFJ259B measuring when it denotes a resonant frequency?
>> And I DO own a 259B, so let's go toe to toe on the measurements bright boy.
>>
> Then you should be able to duplicate Art's results without knowing the
> parameters of Art's test. Sez who? Well Art of course! HI
>
> I own a MFJ-259B and find it to be an useful tool. The device's OOB
> accuracy was found to be lacking but after re-calibration all was FB.
> Perhaps instrumentation errors are helping to 'confirm' Art's
> contradictory theories and hazy explanations.

Or it could be he's just a loony. Ok, he _is_ just a loony.

73
tom
K0TAR

2587. Re: SMALL ANTENNAS

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-04 04:07:11 UTC
From: tom <news4792@taring.org>
Message-ID: <4ac81f70$0$28116$8046368a@newsreader.iphouse.net>
Source record: 12549

Art Unwin wrote:
> On Oct 2, 9:29 pm, tom <news4...@taring.org> wrote:
>> Art Unwin wrote:
>>
>>> Just made another similar size sample made of brass with a diamond
>>> perforation and I got it down to 45 mhz where reactance was zero and
>>> the resistance was 20 plus. I suppose I could get it to go below 45
>>> Mhz with more manipulation but it is getting late. Seems like only a
>>> few own a MFJ 259B which makes for silly questions and comments. Oh
>>> well.
>> Just twigged on the key phrase "I got it down".
>>
>> What is that supposed to mean? "I bent it?" or "I moved it next to this
>> nice old cast iron radiator"? What?
>>
>> So he adjusted it in an undefined manner.
>>
>> And what size "diamond perforation"? What angle? What percentage
>> perforation? What thickness is this sheet? (Almost a bad pun)
>>
>> tom
>> K0TAR
>
> Sorry Tom, I haven't got anymore time to waste on you. Find somebody
> to show you how to use the MFJ and explain what resonance means and
> you should be off and running, ...running away that is. So Tommy,
> nighty ,night PLONK!

He will never answer a question with A REAL answer. Because he doesn't
have one. Only bafflegab.

Interesting since he's the one that's going to revolutionize antenna
design. We're all wrong, stuck in the mud morons, and he knows all.
Except his antennas don't work, and ours do. Funny that.

tom
K0TAR

2588. Re: SMALL ANTENNAS

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-04 10:52:20 UTC
From: christofire <christofire@btinternet.com>
Message-ID: <EPidnT063If341XXnZ2dnUVZ8kGdnZ2d@bt.com>
Source record: 12550

"Art Unwin" <arthurunwin@gmail.com> wrote in message
news:1ef6ac01-f646-4f51-b4b1-482730509bfe@h30g2000vbr.googlegroups.com...

Chris
I took your advice and sent an E mail to sci.physics research
explaining what I have found
and asking for comment. I am not a member of that group so it may well
not be picked up.
-snip-
Regards
Art

* Unfortunately I can't see your message when I look at
sci.physics.research, but I believe it's a moderated group so it may not
have made its way over the moderator's desk yet, as it were. Can you see
your message there? ... and, if so, what title did you give it?

Chris

2589. Re: SMALL ANTENNAS

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-04 14:46:17 UTC
From: Art Unwin <arthurunwin@gmail.com>
Message-ID: <226cd351-2e53-4415-ae09-690d771279e2@g1g2000vbr.googlegroups.com>
Source record: 12551

On Oct 4, 5:52 am, "christofire" <christof...@btinternet.com> wrote:
> "Art Unwin" <arthurun...@gmail.com> wrote in message
>
> news:1ef6ac01-f646-4f51-b4b1-482730509bfe@h30g2000vbr.googlegroups.com...
>
> Chris
> I took your advice and sent an E mail to sci.physics research
> explaining what I have found
> and asking for comment. I am not a member of that group so it may well
> not be picked up.
> -snip-
> Regards
> Art
>
> * Unfortunately I can't see your message when I look at
> sci.physics.research, but I believe it's a moderated group so it may not
> have made its way over the moderator's desk yet, as it were. Can you see
> your message there? ... and, if so, what title did you give it?
>
> Chris

re Weak force
Yes, it goes directly to the moderator so I imagine that it will take time. The question being that 2 vectors can be traced from the big bang to the boundary of earth. If it is not the weak force then where does it fit in with GUT? This also was predicted by Einstein with respect to radiation so if this is not it we have more searching to do. We will have to wait and see what the technical level is and it may well be as low as this group! Time will tell.

2590. Re: SMALL ANTENNAS

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-04 15:01:00 UTC
From: christofire <christofire@btinternet.com>
Message-ID: <xbSdnYxZAZ8vJVXXnZ2dnUVZ8mWdnZ2d@bt.com>
Source record: 12552

"Art Unwin" <arthurunwin@gmail.com> wrote in message
news:226cd351-2e53-4415-ae09-690d771279e2@g1g2000vbr.googlegroups.com...
On Oct 4, 5:52 am, "christofire" <christof...@btinternet.com> wrote:
> "Art Unwin" <arthurun...@gmail.com> wrote in message
>
> news:1ef6ac01-f646-4f51-b4b1-482730509bfe@h30g2000vbr.googlegroups.com...
>
> Chris
> I took your advice and sent an E mail to sci.physics research
> explaining what I have found
> and asking for comment. I am not a member of that group so it may well
> not be picked up.
> -snip-
> Regards
> Art
>
> * Unfortunately I can't see your message when I look at
> sci.physics.research, but I believe it's a moderated group so it may not
> have made its way over the moderator's desk yet, as it were. Can you see
> your message there? ... and, if so, what title did you give it?
>
> Chris

re Weak force
Yes, it goes directly to the moderator so I imagine that it will take
time. The question being that 2 vectors can be traced from the big
bang to the boundary of earth. If it is not the weak force then where
does it fit in with GUT? This also was predicted by Einstein with
respect to radiation so if this is not it we have more searching to
do. We will have to wait and see what the technical level is and it
may well be as low as this group! Time will tell.

* I don't think the 'technical level' of this group is low - some of the
posts are very well informed - but a group devoted to physics research must
be a more appropriate forum for airing thoughts about fundamental physics
and the Universe, thoughts that go way beyond amateur radio. I look forward
to seeing your posting there and, if you've read much of what appears there,
I think you'll find the 'technical level' there is very high.

Chris

2591. Re: Fishrod anìtennas - transformer and twin-lead

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-04 15:45:25 UTC
From: steveeh131047 <google@karinya.net>
Message-ID: <5e53bd91-a69c-452f-9dab-8361b9e649ca@v2g2000vbb.googlegroups.com>
Source record: 12553

It's interesting to model this sort of arrangement, note the wide range of feedpoint impedances that will be seen on the different bands, and observe the feedline losses that might be incurred when it is directly fed with 50 ohm coax. If you then introduce an ideal transformer at the feedpoint and repeat the exercise you will generally find that feedline losses increase on some bands and decrease on others.

With the vertical length I tried, the effect of a 1:9 transformer was to limit the more extreme losses at the cost of making some very low losses higher. I guess over the several bands I tried you could say there was a net improvement with the transformer.

But one question would be how to build this ideal 1:9 transformer which maintains its transformation ratio and exhibits zero loss across the wide range of impedances and frequencies involved.

Steve G3TXQ

2592. Re: Re: Fishrod an�tennas - transformer and twin-lead

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-04 16:06:59 UTC
From: Ian Jackson <ianREMOVETHISjackson@g3ohx.demon.co.uk>
Message-ID: <5r9lbPMjgMyKFwG6@g3ohx.demon.co.uk>
Source record: 12554

In message
<5e53bd91-a69c-452f-9dab-8361b9e649ca@v2g2000vbb.googlegroups.com>,
steveeh131047 <google@karinya.net> writes
>It's interesting to model this sort of arrangement, note the wide
>range of feedpoint impedances that will be seen on the different
>bands, and observe the feedline losses that might be incurred when it
>is directly fed with 50 ohm coax. If you then introduce an ideal
>transformer at the feedpoint and repeat the exercise you will
>generally find that feedline losses increase on some bands and
>decrease on others.
>
>With the vertical length I tried, the effect of a 1:9 transformer was
>to limit the more extreme losses at the cost of making some very low
>losses higher. I guess over the several bands I tried you could say
>there was a net improvement with the transformer.
>
>But one question would be how to build this ideal 1:9 transformer
>which maintains its transformation ratio and exhibits zero loss across
>the wide range of impedances and frequencies involved.
>
You might like to refer to the thread "UNUN Cores?How To Wind?",
started on 1 August. In particular, the last posting (by 'UK Monitor')
suggests a link to this website:
<http://g8jnj.webs.com/currentprojects.htm>

--
Ian

2593. Re: SMALL ANTENNAS

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-04 16:40:10 UTC
From: Art Unwin <arthurunwin@gmail.com>
Message-ID: <1f084add-d79a-408d-9f62-53c46beee0bc@v20g2000vbs.googlegroups.com>
Source record: 12555

On Oct 4, 10:01 am, "christofire" <christof...@btinternet.com> wrote:
> "Art Unwin" <arthurun...@gmail.com> wrote in message
>
> news:226cd351-2e53-4415-ae09-690d771279e2@g1g2000vbr.googlegroups.com...
> On Oct 4, 5:52 am, "christofire" <christof...@btinternet.com> wrote:
>
>
>
> > "Art Unwin" <arthurun...@gmail.com> wrote in message
>
> >news:1ef6ac01-f646-4f51-b4b1-482730509bfe@h30g2000vbr.googlegroups.com...
>
> > Chris
> > I took your advice and sent an E mail to sci.physics research
> > explaining what I have found
> > and asking for comment. I am not a member of that group so it may well
> > not be picked up.
> > -snip-
> > Regards
> > Art
>
> > * Unfortunately I can't see your message when I look at
> > sci.physics.research, but I believe it's a moderated group so it may not
> > have made its way over the moderator's desk yet, as it were. Can you see
> > your message there? ... and, if so, what title did you give it?
>
> > Chris
>
> re Weak force
> Yes, it goes directly to the moderator so I imagine that it will take
> time. The question being that 2 vectors can be traced from the big
> bang to the boundary of earth. If it is not the weak force then where
> does it fit in with GUT? This also was predicted by Einstein with
> respect to radiation so if this is not it we have more searching to
> do. We will have to wait and see what the technical level is and it
> may well be as low as this group! Time will tell.
>
> * I don't think the 'technical level' of this group is low - some of the
> posts are very well informed - but a group devoted to physics research must
> be a more appropriate forum for airing thoughts about fundamental physics
> and the Universe, thoughts that go way beyond amateur radio. I look forward
> to seeing your posting there and, if you've read much of what appears there,
> I think you'll find the 'technical level' there is very high.
>

> Chris

It is a question of interpretation. There are many computer programs that are used by hams
and they do quite well. But they generally are used for planar forms and not what Maxwell
proposed in his formulae, where accountability of all forces involved is a must.
So when these programs show that a radiator is tipped against the ground to arrive at "100% efficiency" then it becomes worthy of hams to review why this is the case. Actually it shows two vectors at work outside the earths boundary where hams have only taken into consideration of one, and that is gravity. So hams are now presented with an opportunity to re asses their position on antennas such that maybe returning to full compliance to Maxwells formula will provide a path of improvement with respect to radiation, where one can look at point radiation as the path towards smaller radiators. I have shown that reviewing radiation in the light of Maxwells equations, when compared to those of an extended Gaussian law as being equal, states that " A conductive radiator can be of any shape, size or elevation as long as it is in equilibrium" This obviously presents opportunities for hams to approach with advantage antennas over and above those used today. The sad thing is that the hobby has changed so much that the theme is not to explore but to deny change, because we have lost the base of curiousity and experimentation to the use of radio as a means of talking behind the shade of anonimity
where one can assume a station in life that they really have not earned.

2594. Re: SMALL ANTENNAS

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-04 17:37:42 UTC
From: Richard Fry <rfry@adams.net>
Message-ID: <ac0cf62b-a1b8-40c6-9e5b-59931adcdf64@k26g2000vbp.googlegroups.com>
Source record: 12556

On Oct 4, 11:40 am, Art Unwin <arthurun...@gmail.com> wrote
about "computer programs," e.g., NEC
> So when these programs show that a radiator is tipped against the
> ground to arrive at "100% efficiency"...

Your conclusion is faulty. See
http://groups.google.com/group/rec.radio.amateur.antenna/browse_thread/thread/d419e5b91e29e0be

and...

> A conductive radiator can be of any shape, size or elevation as
> long as it is in equilibrium

Any conductor exposed to space will produce far-field EM radiation
from nearly 100% of the r-f current that can be made to flow along it,
in directions where fields from various parts of the conductor do not
cancel each other.

Those that will radiate most of the rated power of a transmitter will
have a high radiation resistance compared to the sum of the other
ohmic losses in the antenna system, whatever matching network is
required at the feedpoint to match the feedpoint Z to the transmission
line connected there, and a transmitter designed to supply its rated
power into that net load impedance.

Wire conductors and configurations that are small in terms of
wavelength necessarily have low radiation resistance. So systems
using them do not radiate a very high percentage of the available
power of the transmitter.

RF

2595. Re: Fishrod anìtennas - transformer and twin-lead

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-04 18:59:18 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <kq6dnXEMkf0WbVXXnZ2dnUVZ_u2dnZ2d@giganews.com>
Source record: 12557

steveeh131047 wrote:
> It's interesting to model this sort of arrangement, note the wide
> range of feedpoint impedances that will be seen on the different
> bands, and observe the feedline losses that might be incurred when it
> is directly fed with 50 ohm coax. If you then introduce an ideal
> transformer at the feedpoint and repeat the exercise you will
> generally find that feedline losses increase on some bands and
> decrease on others.
>
> With the vertical length I tried, the effect of a 1:9 transformer was
> to limit the more extreme losses at the cost of making some very low
> losses higher. I guess over the several bands I tried you could say
> there was a net improvement with the transformer.
>
> But one question would be how to build this ideal 1:9 transformer
> which maintains its transformation ratio and exhibits zero loss across
> the wide range of impedances and frequencies involved.
>
> Steve G3TXQ

Some time ago I made a series of careful measurements of a transformer which was at the feedpoint of a multiple band antenna. At frequencies where the feedpoint impedance was very much different from the (purely resistive) design impedance, the transformation wasn't equal to the design transformation, and the transformer introduced both series and shunt impedance. At some frequencies, these effects were extreme, and the transformer acted nothing at all like an ideal transformer.

Modeling a system like this with an ideal transformer might be an interesting intellectual exercise. But that's all it is -- the real system won't behave anything like the model. You can extend a transformer's range of impedances and frequencies by using great care in the initial design and construction, then adding compensating circuitry. The job gets more difficult as the transformation ratio increases. I seriously doubt you'll ever come close to making a transformer anything like the one described in the last paragraph.

The amateur way is to build a system with a transformer, then figure out how to live with whatever you get. An engineering approach usually involves designing a system with predictable and repeatable performance, and that precludes depending on a transformer over a wide impedance range.

Roy Lewallen, W7EL

2596. Re: Fishrod anìtennas - transformer and twin-lead

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-04 19:36:59 UTC
From: steveeh131047 <google@karinya.net>
Message-ID: <7b1f64f8-1e80-44c6-80a7-bb3b53cffb73@j9g2000vbp.googlegroups.com>
Source record: 12558

On Oct 4, 7:59 pm, Roy Lewallen <w...@eznec.com> wrote:

> Modeling a system like this with an ideal transformer might be an
> interesting intellectual exercise. But that's all it is -- the real
> system won't behave anything like the model.

Roy,

I didn't express myself well - the final paragraph was meant to be a
rhetorical question which cast doubt on the validity of the
conclusions!

73,
Steve G3TXQ

2597. Re: fractals and HDTV antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-04 20:05:16 UTC
From: George Csahanin <haarp@dyb.com>
Message-ID: <haav5s$b66$1@news.eternal-september.org>
Source record: 12559

What in the wide wide world of sports is an HDTV antenna? Do
> digital signals follow different rules than analog signals? Groan...
> Just another example of getting people to write checks for something
> someone claims as "special" when it's not. :(

I remember seeing one at CES a few years ago. An HDTV antenna, I laughed,
mad at me for being too practicaal to exploit the idiot market, and
remembered how in the late 60's there were suddenly "color" TV antennas.
Gold anodized to make
em look different.

Same thing. Congratulate the guy making hte money with it.

GeorgeC

2598. Re: fractals and HDTV antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-04 20:09:23 UTC
From: George Csahanin <haarp@dyb.com>
Message-ID: <haavdj$b66$2@news.eternal-september.org>
Source record: 12560

On Fri, 02 Oct 2009 16:29:19 -0400, Registered User wrote:

> On Wed, 30 Sep 2009 00:46:28 -0400, "John Gilmer"
> <jlgilmer@localnet.com> wrote:
>
>
>>Also, I note that "they" market HDTV antennas that are about the size of
>>a book. Do these things work? What's inside them?
>>
> One thing that has not been mentioned is most of the small HDTV antennas
> (at least the ones I have seen) include an RF amplifier. W/o the
> amplifier these antennas' performance is abysmal.

There's an interesting twist. We're finding that these amplified gizmo's
are creating problems. Too much signal for the amplifier, actually
degrading performance. And they amplify the local noise, which is much of
the real issue, Taiwan wall-wart supplies, etc...

And they amplify FM. Combine the right two FM's and you can wipe out
reception to a VHF high band TV.

It is amazing how mis informed so many people are.

Yeah, just ask the guy at Radio Shack. 50 years too late for that one to
have a chance.

GeorgeC

2599. Re: Fishrod an�tennas - transformer and twin-lead

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-04 21:38:40 UTC
From: Owen Duffy <none@no.where>
Message-ID: <Xns9C9B57EFDB7F1nonenowhere@61.9.191.5>
Source record: 12561

steveeh131047 <google@karinya.net> wrote in news:5e53bd91-a69c-452f-9dab-8361b9e649ca@v2g2000vbb.googlegroups.com:

> It's interesting to model this sort of arrangement, note the wide
> range of feedpoint impedances that will be seen on the different
> bands, and observe the feedline losses that might be incurred when it
> is directly fed with 50 ohm coax. If you then introduce an ideal
> transformer at the feedpoint and repeat the exercise you will
> generally find that feedline losses increase on some bands and
> decrease on others.
>
> With the vertical length I tried, the effect of a 1:9 transformer was
> to limit the more extreme losses at the cost of making some very low
> losses higher. I guess over the several bands I tried you could say
> there was a net improvement with the transformer.
>
> But one question would be how to build this ideal 1:9 transformer
> which maintains its transformation ratio and exhibits zero loss across
> the wide range of impedances and frequencies involved.

Steve,

My article on the unloaded vertical includes a discussion of the unun / balun thing. I did run models incorporating an ideal 4:1 current balun, and found that coax loss is better on some frequencies and poorer on others.

The model is not directly applicable to a generic end user installation because the coax loss depends on line type, length etc, and the ideal balun assumption is not a good estimator for practical baluns with extreme loads.

I haven't published an article on the unun model, I should one day perhaps.

Practical baluns are likely to have higher losses under extreme operating conditions, and that will result in lower VSWR than otherwise, so the added complexity of a real world balun is that at those extremes, it will tend to be lossier, its transformation departs from ideal, and line losses will tend to be lower.

I have created a model of a practical ferrite cored 4:1 unun, and explore it with different core materials, dimensions, and windings. The models reconcile well with G8JNJ's experimental ununs and my own prototypes... but reconciliation on extreme loads taxes both Martin's and my own measurement capabilities.

I cannot guess what inspired the application of 4:1 voltage baluns to these antennas, much less why a reputable manufacturer would recommend the configuration which to my mind defies sound principles. Nevertheless, it does appear that thousands are successfully in use, and many hams have the QSLs to prove that an antenna that lacks sound explanation "works real good" anyway.

I do think there is good reason to apply a common mode current choke to such antennas, not to recommend them as a matter of routine (though they won't hurt much), but in some implementations one could expect a significant common mode current problem, and a commom mode current choke may be part of an effective mitigation.

As to whether a 4:1 transformation is universally better than 1:1, ideal or otherwise, I doubt it. If the coax loss is a problem, and it will be for all but lowest loss configurations), an ATU at the feedpoint seems the better solution.

In making the observation that loss helps to reduce line VSWR, which in turn reduces line VSWR, perhaps the only sensible design rationale behing the 4:1 voltage balun applied on the subject antenna is that it drives common mode current on the feedline, and in the case of a buried feedline (as they often are), the power lost in heating the soil tames the feedpoint impedance, reducing line loss. But, does that maximise system efficiency? (Though it may work in that way, I doubt the 'designers' had that in mind.)

Owen

2600. Re: Fishrod anìtennas - transformer and twin-lead

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-04 23:54:27 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <ppqdndsSDpUqqFTXnZ2dnUVZ_tydnZ2d@giganews.com>
Source record: 12562

steveeh131047 wrote:
> On Oct 4, 7:59 pm, Roy Lewallen <w...@eznec.com> wrote:
>
>> Modeling a system like this with an ideal transformer might be an
>> interesting intellectual exercise. But that's all it is -- the real
>> system won't behave anything like the model.
>
> Roy,
>
> I didn't express myself well - the final paragraph was meant to be a
> rhetorical question which cast doubt on the validity of the
> conclusions!
>
> 73,
> Steve G3TXQ

Sorry, Steve. It's really hard to express subtlety or sarcasm in this sort of written venue -- as I've found out so many times myself.

Roy Lewallen, W7EL

2601. Re: Fishrod anìtennas - transformer and twin-lead

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-05 01:10:36 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <KIbym.57820$944.50761@newsfe09.iad>
Source record: 12563

steveeh131047 wrote:
> But one question would be how to build this ideal 1:9 transformer
> which maintains its transformation ratio and exhibits zero loss across
> the wide range of impedances and frequencies involved.

Has there been any information published on loss and
transformation measurements for real world TLTs used
far outside of their design impedances?
--
73, Cecil, IEEE, OOTC, http://www.w5dxp.com

2602. Re: Fishrod anìtennas - transformer and twin-lead

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-05 08:41:43 UTC
From: steveeh131047 <google@karinya.net>
Message-ID: <f0a129d7-2b15-49f2-bd28-a33031bbfbc5@m20g2000vbp.googlegroups.com>
Source record: 12564

Owen,

If I've managed to read my lab notes correctly, these were the differences in loss (ground+feedline+tuner) - with and without an ideal 9:1 transformer at the feedpoint - for a 33ft vertical over average ground fed with 50ft of RG213. I assumed ground losses of 20 ohms. Positive figures indicate that the losses were lower with the transformer:

160m -1.6dB
80m +6.02dB
40m -2.3dB
30m +2.1dB
20m +4.4dB
17m +3.86dB
15m -0.55dB
12m +1.6dB
10m +2.9dB

Of course this data was for one specific scenario, but I guess you'd look at it and say that for this case, on balance, the inclusion of the transformer was of benefit. But now factor in some realistic transformer losses and it might not look so clear cut.

73,
Steve G3TXQ

2603. Re: Fishrod anìtennas - transformer and twin-lead

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-05 08:45:30 UTC
From: steveeh131047 <google@karinya.net>
Message-ID: <46a67bfc-c375-4533-8df0-39ed7a54e198@o35g2000vbi.googlegroups.com>
Source record: 12565

On Oct 5, 2:10 am, Cecil Moore <nos...@w5dxp.com> wrote:

> Has there been any information published on loss and
> transformation measurements for real world TLTs used
> far outside of their design impedances?
> --
> 73, Cecil, IEEE, OOTC, http://www.w5dxp.com

Cecil,

Martin has some data under the heading "33ft Verticals and 4:1 Ununs "
here:
http://g8jnj.webs.com/currentprojects.htm

73,
Steve G3TXQ

2604. Re: Fishrod an�tennas - transformer and twin-lead

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-05 09:14:17 UTC
From: Owen Duffy <none@no.where>
Message-ID: <Xns9C9BCDDF964E5nonenowhere@61.9.191.5>
Source record: 12566

steveeh131047 <google@karinya.net> wrote in news:46a67bfc-c375-4533-8df0-39ed7a54e198@o35g2000vbi.googlegroups.com:

> On Oct 5, 2:10 am, Cecil Moore <nos...@w5dxp.com> wrote:
>
>> Has there been any information published on loss and
>> transformation measurements for real world TLTs used
>> far outside of their design impedances?
>> --
>> 73, Cecil, IEEE, OOTC, http://www.w5dxp.com
>
> Cecil,
>
> Martin has some data under the heading "33ft Verticals and 4:1 Ununs "
> here:
> http://g8jnj.webs.com/currentprojects.htm

Steve,

Here are the input impedance and VSWR(50),Loss graphs for my model of a FT240 #61 with 12 bifilar turns with a 1000+j0 load.

http://www.vk1od.net/lost/Clip045.png

http://www.vk1od.net/lost/Clip046.png

Non-ideal transformation ratio is not a big issue for an unun used with an ATU, voltage withstand and loss are higher priority.

The balun loss data in the article at http://vk1od.net/blog/?p=568 was obtained by measuring the balun using a VNA, and creating a spreadsheet that solved the balun + load network for an arbitrary load impedance. The spreadsheet is revealing, as one can immediately see the broadband peformance of the balun with extreme loads, R and X in arbitrary combination.

What I do know is that it is superficial to describe a balun (or unun) with just two metrics such as 5kW, VSWR<1.5... but have a look at commercial baluns, that is how they are often (mostly) sold. There is the odd manufacturer that gives a loss and VSWR curve on a nominal load FWIW, but I have not yet seen any manufacturer publish a set of S parameters covering the operating range.

I am not naive about magnetics, they are challenging devices, but at least in the ham radio market, it is more black magic than good sense.

BTW, if you look at the loss graph for this device with a 1000+j0 load, and assume that it can safely dissipate perhaps 20W continuous, it is capable of less than 1kW continuous at 30MHz, but some manufacturers build such a transformer and rate them at 5kW or more. With a load impedance of 4k+j0 (eg a full wave dipole), the loss is even worse, and the continous power rating even lower.

Owen

2605. Re: Fishrod anìtennas - transformer and twin-lead

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-05 11:36:30 UTC
From: steveeh131047 <google@karinya.net>
Message-ID: <904ca0dc-3f0b-406b-a57f-8d39bdb87533@r31g2000vbi.googlegroups.com>
Source record: 12567

On Oct 5, 10:14 am, Owen Duffy <n...@no.where> wrote:

>
> Non-ideal transformation ratio is not a big issue for an unun used with
> an ATU, voltage withstand and loss are higher priority.
>
Owen,

Agreed. But the "non-ideal transformation" will result in changed
feedline losses and tuner losses. May be better, may be worse :)

I enjoyed reading your balun loss article. "66% of the transmitter
power converted to heat inside the ATU" will be a surprise to many
folk. I can replicate almost the exact set-up you describe: G5RV >>
half-wave of ladderline>>4:1 voltage balun>>tuner; so If I can find
the time I'll try to measure the rate of temperature rise inside the
tuner case when it's handling 100W CW, and then stick a 60W light bulb
in the case and measure the rate of temperature rise again.

73,
Steve G3TXQ

2606. Re: Fishrod anìtennas - transformer and twin-lead

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-05 15:39:28 UTC
From: Antonio Vernucci <vernucci@tin.it>
Message-ID: <4aca1330$0$1101$4fafbaef@reader2.news.tin.it>
Source record: 12568

Thanks for the numerous comments on the unun / balun, but I read nothing on the possible convenience to use a 300 ohm flat ribbon in place of coaxial. No interest for that issue?

73

Tony I0JX

2607. Re: Fishrod an�tennas - transformer and twin-lead

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-05 16:31:18 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <9q7kc59450rr5b1gi31fhp19qgqh158hga@4ax.com>
Source record: 12569

On Mon, 5 Oct 2009 17:39:28 +0200, "Antonio Vernucci"
<vernucci@tin.it> wrote:

> but I read nothing on the
>possible convenience to use a 300 ohm flat ribbon in place of coaxial.

On Sat, 03 Oct 2009 13:39:12 -0700, Richard Clark <kb7qhc@comcast.net>
wrote:

>If your BalUn has already done the bigger job of turning a High Z to a
>modest one, the common logic for the need for twin line has also been
>diminished.

73's
Richard Clark, KB7QHC

2608. Re: TV Signal polarization

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-05 16:39:42 UTC
From: Michael Coslo <mjc5@psu.edu>
Message-ID: <had7gg$ms00$1@tr22n12.aset.psu.edu>
Source record: 12570

christofire wrote:
> "Richard Clark" <kb7qhc@comcast.net> wrote in message
> news:01sec5hdak558kjb99mv14ft6i9kfogscr@4ax.com...
>> On Sat, 3 Oct 2009 15:24:27 +0100, "christofire"
>> <christofire@btinternet.com> wrote:
>>
>>> Are all gmail users in the USA then?
>> Our OP is halfway between Annapolis and D.C.
>>
>> 73's
>> Richard Clark, KB7QHC
>
>
> Did you know that from prior communication with the OP or is there some data
> in his posting that gives a clue to that fact?

Take a deep breath, and don't see insults or snubs behind every tree.

- Respectfully, 73 de Mike N3LI -

2609. Re: TV Signal polarization

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-05 18:15:35 UTC
From: christofire <christofire@btinternet.com>
Message-ID: <xsWdnXiulaVUqlfXnZ2dnUVZ8hmdnZ2d@bt.com>
Source record: 12571

"Michael Coslo" <mjc5@psu.edu> wrote in message
news:had7gg$ms00$1@tr22n12.aset.psu.edu...
> christofire wrote:
>> "Richard Clark" <kb7qhc@comcast.net> wrote in message
>> news:01sec5hdak558kjb99mv14ft6i9kfogscr@4ax.com...
>>> On Sat, 3 Oct 2009 15:24:27 +0100, "christofire"
>>> <christofire@btinternet.com> wrote:
>>>
>>>> Are all gmail users in the USA then?
>>> Our OP is halfway between Annapolis and D.C.
>>>
>>> 73's
>>> Richard Clark, KB7QHC
>>
>>
>> Did you know that from prior communication with the OP or is there some
>> data in his posting that gives a clue to that fact?
>
>
> Take a deep breath, and don't see insults or snubs behind every tree.
>
> - Respectfully, 73 de Mike N3LI -

QSD

Chris

2610. Re: TV Signal polarization

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-05 18:34:22 UTC
From: Jim Lux <james.p.lux@jpl.nasa.gov>
Message-ID: <4ACA3C2E.3000100@jpl.nasa.gov>
Source record: 12572

david boyd wrote:
> Are there any websites that give the polarization for TV signals?

For the US, the FCC database tells the polarization (elliptical is
pretty common.. mostly horizontal, with some vertical component)

For instance, here's the stuff for KCBS-TV in the Los Angeles area:
http://fjallfoss.fcc.gov/cgi-bin/ws.exe/prod/cdbs/pubacc/prod/eng_tv.pl?Facility_id=9628

Horizontal pol

But channel 11, KTTV
http://fjallfoss.fcc.gov/cgi-bin/ws.exe/prod/cdbs/pubacc/prod/eng_tv.pl?Facility_id=22208
has Elliptical..

The search page is here:
http://fjallfoss.fcc.gov/prod/cdbs/pubacc/prod/sta_sear.htm

2611. Re: TV Signal polarization

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-05 19:07:51 UTC
From: "J. Mc Laughlin" <jcm@power-net.net>
Message-ID: <35udnd7LuN2Y2VfXnZ2dnUVZ_i2dnZ2d@bright.net>
Source record: 12573

Dear Group:

As not all will be familiar with Q-signals:
QSD Is my keying defective? when used as a question
Your keying is defective..

Regards, Mac N8TT
--
J. McLaughlin; Michigan, USA
Home: JCM@power-net.net
"christofire" <christofire@btinternet.com> wrote in message
news:xsWdnXiulaVUqlfXnZ2dnUVZ8hmdnZ2d@bt.com...
>
> "Michael Coslo" <mjc5@psu.edu> wrote in message
> news:had7gg$ms00$1@tr22n12.aset.psu.edu...
>> christofire wrote:
>>> "Richard Clark" <kb7qhc@comcast.net> wrote in message
>>> news:01sec5hdak558kjb99mv14ft6i9kfogscr@4ax.com...
>>>> On Sat, 3 Oct 2009 15:24:27 +0100, "christofire"
>>>> <christofire@btinternet.com> wrote:
>>>>
>>>>> Are all gmail users in the USA then?
>>>> Our OP is halfway between Annapolis and D.C.
>>>>
>>>> 73's
>>>> Richard Clark, KB7QHC
>>>
>>>
>>> Did you know that from prior communication with the OP or is there some
>>> data in his posting that gives a clue to that fact?
>>
>>
>> Take a deep breath, and don't see insults or snubs behind every tree.
>>
>> - Respectfully, 73 de Mike N3LI -
>
>
> QSD
>
> Chris
>

2612. Re: Fishrod anìtennas - transformer and twin-lead

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-05 19:17:26 UTC
From: Antonio Vernucci <vernucci@tin.it>
Message-ID: <4aca4646$0$1112$4fafbaef@reader1.news.tin.it>
Source record: 12574

>>If your BalUn has already done the bigger job of turning a High Z to a
>>modest one, the common logic for the need for twin line has also been
>>diminished.

Yes but my question regarded the advantage of twin-lead vs. coaxial in that particular application where impedance is uncontrolled.

73

Tony I0JX

2613. Re: Fishrod an�tennas - transformer and twin-lead

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-05 19:33:38 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <agikc5pkqmnae55mqde6mu5u1uhc8b6qud@4ax.com>
Source record: 12575

On Mon, 5 Oct 2009 21:17:26 +0200, "Antonio Vernucci"
<vernucci@tin.it> wrote:

>Yes but my question regarded the advantage of twin-lead vs. coaxial in that
>particular application where impedance is uncontrolled.

http://www.vk1od.net/calc/tl/twllc.htm

73's
Richard Clark, KB7QHC

2614. Re: Fishrod an�tennas - transformer and twin-lead

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-05 21:30:06 UTC
From: Owen Duffy <none@no.where>
Message-ID: <Xns9C9C567C29DB8nonenowhere@61.9.191.5>
Source record: 12577

steveeh131047 <google@karinya.net> wrote in
news:904ca0dc-3f0b-406b-a57f-8d39bdb87533@r31g2000vbi.googlegroups.com:

> On Oct 5, 10:14 am, Owen Duffy <n...@no.where> wrote:
>
>>
>> Non-ideal transformation ratio is not a big issue for an unun used
>> with an ATU, voltage withstand and loss are higher priority.
>>
> Owen,
>
> Agreed. But the "non-ideal transformation" will result in changed
> feedline losses and tuner losses. May be better, may be worse :)

Almost always, but probably more often for the better.

BTW, I gave a brief description of the FT240 #61 12t unun, but didn't mention the winding details, they are 0.8mm wire spaced (centre to centre) 3.2mm and permittivity 1.2 which describes a winding with 0.8mm PTFE insulation for high voltage withstand, an 'ATU unun' in commercial talk.

>
> I enjoyed reading your balun loss article. "66% of the transmitter
> power converted to heat inside the ATU" will be a surprise to many
> folk. I can replicate almost the exact set-up you describe: G5RV >>
> half-wave of ladderline>>4:1 voltage balun>>tuner; so If I can find
> the time I'll try to measure the rate of temperature rise inside the
> tuner case when it's handling 100W CW, and then stick a 60W light bulb
> in the case and measure the rate of temperature rise again.

Keep in mind that ferrite cores heat (and cool) very slowly. One could easily be fooled into thinking that there isn't much heat dissipated in a short test, but after an hour of operation, the core is still heating at a substantial rate. This is one of the things that saves the bacon of manufacturers of 5kW and 10kW continuous rated baluns, they are not usually called upon to operate at high duty cycle for long enough to reach the Curie point.

Calorimetric measurments are problematic, they sound simple enough, but latency my mean it takes hours to reach close to maximum operating temperature.

The greater worry is that this manufacturer, and probably some others, use thermoplastic insulation to support the coil, which could result in damage if you operate the ATU long enough to reach operating

temperature. Do so entirely at your own risk.

At one time, I had two identical ATUs, and I attached one with a 600+j0 load to the tx on 1.8Mhz and adjusted for VSWR=1 on the input. I replaced the load with another ATU backwards and with a 50+j0 load and adjusted the second ATU for VSWR=1 on the input to the first ATU. I then read the power into the 50 ohms load and out of the tx using a Bird 43 and calculated the loss. The loss in the first ATU under those conditions can be approximated by allocating half the total loss. This test indicated quite high loss, and the case was quite warm near the balun after just minutes of testing. BTW, this was the same type of ATU as in the article you mentioned earlier.

In the example article, about 26% of the tx power is radiated on 80m. That sounds pretty awful, but it should be seen relative to say 80% as a reasonable system efficiency for a multiband antenna.

Owen

2615. Re: TV Signal polarization

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-05 21:30:40 UTC
From: JIMMIE <JIMMIEDEE123@YAHOO.COM>
Message-ID: <5c9f41cb-d00d-43e8-8a7f-0c79592e6d21@m18g2000vbs.googlegroups.com>
Source record: 12576

On Oct 5, 2:34 pm, Jim Lux <james.p....@jpl.nasa.gov> wrote:
> david boyd wrote:
> > Are there any websites that give the polarization for TV signals?
>
> For the US, the FCC database tells the polarization (elliptical is
> pretty common.. mostly horizontal, with some vertical component)
>
> For instance, here's the stuff for KCBS-TV in the Los Angeles
area:http://fjallfoss.fcc.gov/cgi-bin/ws.exe/prod/cdbs/pubacc/prod/eng_tv....
>
> Horizontal pol
>
> But channel 11,
KTTVhttp://fjallfoss.fcc.gov/cgi-bin/ws.exe/prod/cdbs/pubacc/prod/eng_tv....
> has Elliptical..
>
> The search page is here:http://fjallfoss.fcc.gov/prod/cdbs/pubacc/prod/sta_sear.htm

Concerning a TV station using elliptical polarization is there a
purposeful phase difference between the horizontal and vertical fields
or is it simply just dividing power between horizontal and verical
radiators with no concern as to phase relationship

Jimmie

2616. Re: Fishrod an�tennas - transformer and twin-lead

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-05 21:39:30 UTC
From: Owen Duffy <none@no.where>
Message-ID: <Xns9C9C58142A192nonenowhere@61.9.191.5>
Source record: 12578

"Antonio Vernucci" <vernucci@tin.it> wrote in
news:4aca4646$0$1112$4fafbaef@reader1.news.tin.it:

>>>If your BalUn has already done the bigger job of turning a High Z to
>>>a modest one, the common logic for the need for twin line has also
>>>been diminished.
>
> Yes but my question regarded the advantage of twin-lead vs. coaxial in
> that particular application where impedance is uncontrolled.

Tony, it depends on the details of your scenario, and may be different at
different frequencies.

Unless you believe in the myth that ladder line is *so* low in loss that
you *never* need to consider it, you need to calculate it out to really
know... it is not a no-brainer as we say, in fact it is a quite complex
problem to solve (mainly quantifying the loss and transformation in
transformers which both Roy and I have mentioned in this thread).

BTW, from time to time I see articles that recommend twin line for direct
feeding a ground mounted vertical (ie without using a balun at the feed
point). It is as insane as using a 4:1 voltage balun with coax at the
base of such a vertical, because both types of feed drive substantial
common mode current on the feed line. A review of such an article is at
http://vk1od.net/antenna/multibandunloadedvertical/BSUM.htm , this one
using a magic ingredient, Belden 8222 twin feedline which Belden ceased
manufacturing. But... I am sure some hams have got the QSLs to prove that
it "works real good".

Owen

2617. Focused EMP pulse?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-05 21:53:50 UTC
From: Mike Luther <mike.luther@ziplog.com>
Message-ID: <4aca6ae8$0$23738$bbae4d71@news.suddenlink.net>
Source record: 12579

A friend of mine cited a claim in a brand new book, "The Lost Symbol" by Dan Brown. So said, in it is a claim of a new weapon of choice that is installed in some USA military helicopters which is cable of aiming an actual EMP pulse at a target below that destroys computer and electronic equipment of focus to the pulse! Same as a 'normal' 30Megavolt/Meter EMP pulse from a nuclear device, or even a huge Solar Burst. As told me they used it recently to silence an Email production site they had to quickly do so that they couldn't do any other way, per this book....

Duhh .....

Few people seem to recall the last huge Solar Burst we got here in the USA in the mid-1800's about the time of the Golden Spike. So history says, it completely took out most of all the at-the-time telegraph systems which all had to be rebuilt or replaced.

At any rate, can anyone here conjecture, or better still, teach me how it would be possible to create and focus an EMP pulse that could be used as described in an airborne delivery machine? What might the antenna be like?

Just curious.

W5WQN

--

--> Sleep well; OS2's still awake! ;)

Mike Luther

2618. Re: TV Signal polarization

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-05 22:30:40 UTC
From: christofire <christofire@btinternet.com>
Message-ID: <idadnfYx8sgO7IfXnZ2dnUVZ8kKdnZ2d@bt.com>
Source record: 12580

"JIMMIE" <JIMMIEDEE123@YAHOO.COM> wrote in message
news:5c9f41cb-d00d-43e8-8a7f-0c79592e6d21@m18g2000vbs.googlegroups.com...
On Oct 5, 2:34 pm, Jim Lux <james.p....@jpl.nasa.gov> wrote:
> david boyd wrote:
> > Are there any websites that give the polarization for TV signals?
>
> For the US, the FCC database tells the polarization (elliptical is
> pretty common.. mostly horizontal, with some vertical component)
>
> For instance, here's the stuff for KCBS-TV in the Los Angeles
> area:http://fjallfoss.fcc.gov/cgi-bin/ws.exe/prod/cdbs/pubacc/prod/eng_tv....
>
> Horizontal pol
>
> But channel 11,
> KTTVhttp://fjallfoss.fcc.gov/cgi-bin/ws.exe/prod/cdbs/pubacc/prod/eng_tv....
> has Elliptical..
>
> The search page is
> here:http://fjallfoss.fcc.gov/prod/cdbs/pubacc/prod/sta_sear.htm

Concerning a TV station using elliptical polarization is there a
purposeful phase difference between the horizontal and vertical fields
or is it simply just dividing power between horizontal and verical
radiators with no concern as to phase relationship

Jimmie

Probably the latter, as is done around the world nowadays for VHF FM radio,
although I confidently predict someone will contradict me with stuff about
odd-order reflections changing the sense of rotation and stuff like that.
Unless the receiving antennas are circularly polarised that won't count for
much. There's a potential benefit when mobile receivers are in use, in some
cases portable receivers as well..

In the UK the term 'mixed' polarisation is used in Band II and the
broadcasters (mainly via Arqiva) don't pay extra for a specified phase
relationship, but antenna manufacturers like Alan Dick
(http://www.alandick.com/broadcast_antennas_product_004.htm) produce
mixed-polarisation and circularly-polarised versions to suit different
markets, as they would. UK terrestrial television in Bands IV/V is all
plane polarised (H from 50 main stations and V from most of the rest) at the
moment. DVB-H trials in L-Band may have used mixed (i.e. slant or
elliptical) polarisation.

Way back up the 'phone bill I posted in a thread titled 'Circular versus linear polarisation' a link to: http://downloads.bbc.co.uk/rd/pubs/reports/1970-35.pdf which you may find interesting.

Chris

2619. Re: Focused EMP pulse?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-05 22:43:55 UTC
From: christofire <christofire@btinternet.com>
Message-ID: <iPedneFR1YIz61fXnZ2dnUVZ8jKdnZ2d@bt.com>
Source record: 12581

"Mike Luther" <mike.luther@ziplog.com> wrote in message
news:4aca6ae8$0$23738$bbae4d71@news.suddenlink.net...
>A friend of mine cited a claim in a brand new book, "The Lost Symbol" by
>Dan Brown. So said, in it is a claim of a new weapon of choice that is
>installed in some USA military helicopters which is cable of aiming an
>actual EMP pulse at a target below that destroys computer and electronic
>equipment of focus to the pulse! Same as a 'normal' 30Megavolt/Meter EMP
>pulse from a nuclear device, or even a huge Solar Burst. As told me they
>used it recently to silence an Email production site they had to quickly do
>so that they couldn't do any other way, per this book....
>
> Duhh .....
>
> Few people seem to recall the last huge Solar Burst we got here in the USA
> in the mid-1800's about the time of the Golden Spike. So history says, it
> completely took out most of all the at-the-time telegraph systems which
> all had to be rebuilt or replaced.
>
> At any rate, can anyone here conjecture, or better still, teach me how it
> would be possible to create and focus an EMP pulse that could be used as
> described in an airborne delivery machine? What might the antenna be
> like?
>
> Just curious.
>
> W5WQN
>
> --
>
>
> --> Sleep well; OS2's still awake! ;)
>
> Mike Luther

The antenna would need to be paraphysical to achieve the kind of directivity gain needed to create such a field strength whilst capable of being mounted on a helicopter. Are you sure you're not out by several factors of ten in respect of the field strength?

Chris

PS: ... however, this is the right place to meet pedlars of paraphysical antennas!

2620. Re: Fishrod an�tennas - transformer and twin-lead

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-05 22:52:02 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <72tkc51s34vbmeg8rocdj71ueac2u8usvb@4ax.com>
Source record: 12582

On Mon, 05 Oct 2009 21:30:06 GMT, Owen Duffy <none@no.where> wrote:

>Calorimetric measurments are problematic, they sound simple enough, but
>latency my mean it takes hours to reach close to maximum operating
>temperature. ...
>and the case was quite warm near the balun after just minutes of testing.

Sounds like the BalUn was doing a superlative job.

Hi Owen,

What you describe (sans the problematic word latent) is specific heat capacity. And just like any capacitor, charge/heat does not increase after a source is removed. If it is not removed (which I presume was the intent of both your statements), then the specific heat capacity you describe is a design boon.

73's
Richard Clark, KB7QHC

2621. Re: Focused EMP pulse?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-05 22:53:02 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <v5ukc5hso9v3jd58r39k0plvbf9jiu04vl@4ax.com>
Source record: 12583

On Mon, 05 Oct 2009 21:53:50 +0000, Mike Luther
<mike.luther@ziplog.com> wrote:

>At any rate, can anyone here conjecture, or better still, teach me how it would
>be possible to create and focus an EMP pulse that could be used as described in
>an airborne delivery machine? What might the antenna be like?
>

It's called RADAR.

73's
Richard Clark, KB7QHC

2622. Re: Fishrod an�tennas - transformer and twin-lead

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-05 23:32:40 UTC
From: Owen Duffy <none@no.where>
Message-ID: <Xns9C9C6B43ED60Bnonenowhere@61.9.191.5>
Source record: 12584

Richard Clark <kb7qhc@comcast.net> wrote in
news:72tkc51s34vbmeg8rocdj71ueac2u8usvb@4ax.com:

...
> What you describe (sans the problematic word latent) is specific heat
> capacity.

I used the term latency in the context of time, there is a delay between commencement of application of steady power to reaching substantially full operating temperature. Yes, the effect can be predicted using the material specific heat capacity, subject to the temperature variability of the ferrite characteristics.

...
> the intent of both your statements), then the specific heat capacity
> you describe is a design boon.

Yes, but a trap if long term use is envisaged but tested only in the short term.

Owen

2623. Re: Focused EMP pulse?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-06 00:29:56 UTC
From: Jim Lux <james.p.lux@jpl.nasa.gov>
Message-ID: <hae325doq1@news.jpl.nasa.gov>
Source record: 12585

Mike Luther wrote:
> A friend of mine cited a claim in a brand new book, "The Lost Symbol" by
> Dan Brown. So said, in it is a claim of a new weapon of choice that is
> installed in some USA military helicopters which is cable of aiming an
> actual EMP pulse at a target below that destroys computer and electronic
> equipment of focus to the pulse! Same as a 'normal' 30Megavolt/Meter
> EMP pulse from a nuclear device, or even a huge Solar Burst. As told me
> they used it recently to silence an Email production site they had to
> quickly do so that they couldn't do any other way, per this book....
>
> Duhh .....
>
> Few people seem to recall the last huge Solar Burst we got here in the
> USA in the mid-1800's about the time of the Golden Spike. So history
> says, it completely took out most of all the at-the-time telegraph
> systems which all had to be rebuilt or replaced.
>
> At any rate, can anyone here conjecture, or better still, teach me how
> it would be possible to create and focus an EMP pulse that could be used
> as described in an airborne delivery machine? What might the antenna be
> like?
>
> Just curious.
>
> W5WQN
>

Gyrotron, driven by a Flux Compression Generator.

basically a very high power microwave transmitting tube at a high enough frequency where a moderate sized antenna gives a narrow beamwidth (e.g. at 10GHz, a 2 meter antenna has about a 1 degree beamwidth.. 100GHz with a 20 cm antenna does the same.) , with a HV pulse generator that uses the mechanical energy from an explosion to generate the HV high current pulse to run the tube.

Now.. 30 MV/m at a distance of say, 200 meters..

Assuming you're in the far field, so E/H = 377 ohms.. H = 30MV/m/ 377 = 0.08 MA/m. 30MV/m * 80kA/m = 2.4E12 W/m^2... that's a pretty high power density (far higher than you'd need, in this application by the way... a few tens of kW/square meter would probably do)

But, continuing on.. let's say you've got a 0.57 degree beamwidth. That's about 0.01 radian, so at 200m, the "spot" is 2 meters in diameter, or, call it 3-4 square meters.

That means the source has to put out a peak power of about 1E13 Watts.. Say the pulse is a microsecond long.. that's 1E7 joules (10 Megajoules) which isn't a lot of energy. But a terawatt peak power? That's hard to believe.

So lets move on.. Average powers of a megawatt are certainly reasonable.. Let's scale back our field to 30 kV/m (so the power density is now 2.4E6W/m^2... still 2400 times brighter than the sun)

That's a lot more realistic, and still enough to zap stuff.

2624. Re: Fishrod an�tennas - transformer and twin-lead

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-06 06:25:53 UTC
From: Owen Duffy <none@no.where>
Message-ID: <Xns9C9CB1528DBBAnonenowhere@61.9.191.5>
Source record: 12586

To put some numbers around the problem, if one had a FT240 core which has a mass of around 0.2kg, and specific heat capacity around 800J/kgK, the energy to raise the core to a Curie point of 130�C to 300�C would be 17kJ to 44kJ. If the core was well insulated (no heat loss) and dissipating say 20W, that would take 15 to 40 minutes.

Of course, one would hope that the transformers do lose heat to the environment, and that would substantially slow the rate of rise of temperature.

Experience shows that a 5 minute test of a ferrite transformer does not indicate continuous power handling capability.

Digressing slightly, but on this ferrite heat thing...

Martin questioned my article "A review of the Guanella 4:1 balun on a shared magnetic circuit" at http://www.vk1od.net/balun/gsc/index.htm . In particular, his issue was with my proposition that the extent to which these things "work" is due to flux leakage on low � cores, the lower the �, the more they resemble Guanella's balun.

Martin's inital experiments indicated that the thing did work, but on my advice he tried prototypes on high and low � cores and took thermal pictures of the things after operation. The images showed non-uniform distribution of heat in the cores which is either due to the main heat source being the conductor losses, or that magnetic flux is a significant contribution and not evenly distributed in the toroid. The flux distribution is a credible explanation for the different patterns for same winding on the different � cores.

Again, this is one of those things that lots of hams have QSLs to prove that they "work real good".

Owen

2625. Re: TV Signal polarization

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-06 09:28:49 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <kZSdnecqc-lLkFbXnZ2dnUVZ_uKdnZ2d@giganews.com>
Source record: 12587

JIMMIE wrote:
>
> Concerning a TV station using elliptical polarization is there a
> purposeful phase difference between the horizontal and vertical fields
> or is it simply just dividing power between horizontal and verical
> radiators with no concern as to phase relationship
>
> Jimmie

If equal horizontal and vertical components are in phase, you have linear polarization. If they're 90 degrees out of phase, you have circular polarization. If they're at some other relative phase angle, you have elliptical polarization. (Actually, linear and circular are two extreme special cases of elliptical polarization.)

This makes a big difference in how the waves behave. The polarization of a circularly polarized wave rotates 360 degrees each cycle, while the polarization of a linearly polarized wave is fixed. If you add equal vertical and horizontal fields in phase, you get a linearly polarized wave tilted 45 degrees relative to horizontal or vertical. If you rotate a linearly polarized receiving antenna in that field, you'll get a maximum when the antenna is aligned with the field, and zero when it's at right angles to the field, that is, tilted 45 degrees the other way. If, on the other hand, you add the linearly polarized vertical field to a linearly polarized horizontal field that's 90 degrees out of phase, you get a circularly polarized wave. The signal amplitude won't change at all as you rotate the linearly polarized receiving antenna. It'll stay at a constant 3 dB below the best response you got from the linearly polarized field.

If the H and V fields are added with some other phase angle, you'll get some variation as you rotate the receiving antenna, but no complete null.

Roy Lewallen, W7EL

2626. Re: Focused EMP pulse?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-06 09:43:10 UTC
From: christofire <christofire@btinternet.com>
Message-ID: <YMSdnbZKmI-qjFbXnZ2dnUVZ8iydnZ2d@bt.com>
Source record: 12588

"Jim Lux" <james.p.lux@jpl.nasa.gov> wrote in message
news:hae325doq1@news.jpl.nasa.gov...
> Mike Luther wrote:
>> A friend of mine cited a claim in a brand new book, "The Lost Symbol" by
>> Dan Brown. So said, in it is a claim of a new weapon of choice that is
>> installed in some USA military helicopters which is cable of aiming an
>> actual EMP pulse at a target below that destroys computer and electronic
>> equipment of focus to the pulse! Same as a 'normal' 30Megavolt/Meter EMP
>> pulse from a nuclear device, or even a huge Solar Burst. As told me they
>> used it recently to silence an Email production site they had to quickly
>> do so that they couldn't do any other way, per this book....
>>
>> Duhh .....
>>
>> Few people seem to recall the last huge Solar Burst we got here in the
>> USA in the mid-1800's about the time of the Golden Spike. So history
>> says, it completely took out most of all the at-the-time telegraph
>> systems which all had to be rebuilt or replaced.
>>
>> At any rate, can anyone here conjecture, or better still, teach me how it
>> would be possible to create and focus an EMP pulse that could be used as
>> described in an airborne delivery machine? What might the antenna be
>> like?
>>
>> Just curious.
>>
>> W5WQN
>>
>
> Gyrotron, driven by a Flux Compression Generator.
>
> basically a very high power microwave transmitting tube at a high enough
> frequency where a moderate sized antenna gives a narrow beamwidth (e.g. at
> 10GHz, a 2 meter antenna has about a 1 degree beamwidth.. 100GHz with a 20
> cm antenna does the same.) , with a HV pulse generator that uses the
> mechanical energy from an explosion to generate the HV high current pulse
> to run the tube.
>
>
> Now.. 30 MV/m at a distance of say, 200 meters..
>
> Assuming you're in the far field, so E/H = 377 ohms.. H = 30MV/m/ 377 =
> 0.08 MA/m. 30MV/m * 80kA/m = 2.4E12 W/m^2... that's a pretty high power
> density (far higher than you'd need, in this application by the way... a

> few tens of kW/square meter would probably do)
>
> But, continuing on.. let's say you've got a 0.57 degree beamwidth. That's
> about 0.01 radian, so at 200m, the "spot" is 2 meters in diameter, or,
> call it 3-4 square meters.
>
> That means the source has to put out a peak power of about 1E13 Watts..
> Say the pulse is a microsecond long.. that's 1E7 joules (10 Megajoules)
> which isn't a lot of energy. But a terawatt peak power? That's hard to
> believe.
>
> So lets move on.. Average powers of a megawatt are certainly reasonable..
> Let's scale back our field to 30 kV/m (so the power density is now
> 2.4E6W/m^2... still 2400 times brighter than the sun)
>
> That's a lot more realistic, and still enough to zap stuff.

... but how much damage is a pulse of 10 GHz RF going to do? The effectiveness of a nuclear EMP much to do with its very broad bandwidth (as well as its rise time).

Not that I know anything about the subject, Officer.

Chris

2627. Re: fractals and HDTV antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-06 11:38:30 UTC
From: John Gilmer <jlgilmer@localnet.com>
Message-ID: <sd-dndXmnJOusVbXnZ2dnUVZ_uWdnZ2d@posted.localnet>
Source record: 12589

>
> There's an interesting twist. We're finding that these amplified gizmo's
> are creating problems. Too much signal for the amplifier, actually
> degrading performance. And they amplify the local noise, which is much of
> the real issue, Taiwan wall-wart supplies, etc...

We are getting a little "thread drift" here but ...

When the shift to HDTV came we suddenly found that we couldn't get reliable service for most of the channels we were used to. We live in a semi-rural place and it's over 50 miles (as the crow flies) to the nearest broadcast TV antenna.

A neighbor suggested the antenna mounted amplifier (I already had a "distribution amplifier" in the basement) and it fixed us up.

2628. Re: Focused EMP pulse?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-06 12:26:11 UTC
From: MTV <volztexas@comcast.net>
Message-ID: <FHGym.6111$Q52.4831@en-nntp-03.dc1.easynews.com>
Source record: 12590

Dan Brown?
<plunk>

Mike Luther wrote:
> A friend of mine cited a claim in a brand new book, "The Lost Symbol" by
> Dan Brown. So said, in it is a claim of a new weapon of choice that is
> installed in some USA military helicopters which is cable of aiming an
> actual EMP pulse at a target below that destroys computer and electronic
> equipment of focus to the pulse! Same as a 'normal' 30Megavolt/Meter
> EMP pulse from a nuclear device, or even a huge Solar Burst. As told me
> they used it recently to silence an Email production site they had to
> quickly do so that they couldn't do any other way, per this book....
>
> Duhh .....
>
> Few people seem to recall the last huge Solar Burst we got here in the
> USA in the mid-1800's about the time of the Golden Spike. So history
> says, it completely took out most of all the at-the-time telegraph
> systems which all had to be rebuilt or replaced.
>
> At any rate, can anyone here conjecture, or better still, teach me how
> it would be possible to create and focus an EMP pulse that could be used
> as described in an airborne delivery machine? What might the antenna be
> like?
>
> Just curious.
>
> W5WQN
>

2629. Re: fractals and HDTV antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-06 13:00:10 UTC
From: christofire <christofire@btinternet.com>
Message-ID: <1b-dnUOtDpLDolbXnZ2dnUVZ8uudnZ2d@bt.com>
Source record: 12591

"John Gilmer" <jlgilmer@localnet.com> wrote in message
news:sd-dndXmnJOusVbXnZ2dnUVZ_uWdnZ2d@posted.localnet...
>
>
>>
>> There's an interesting twist. We're finding that these amplified gizmo's
>> are creating problems. Too much signal for the amplifier, actually
>> degrading performance. And they amplify the local noise, which is much of
>> the real issue, Taiwan wall-wart supplies, etc...
>
> We are getting a little "thread drift" here but ...
>
> When the shift to HDTV came we suddenly found that we couldn't get
> reliable service for most of the channels we were used to. We live in a
> semi-rural place and it's over 50 miles (as the crow flies) to the nearest
> broadcast TV antenna.
>
> A neighbor suggested the antenna mounted amplifier (I already had a
> "distribution amplifier" in the basement) and it fixed us up.

Mast-head amplifiers always were appropriate for 'fringe-area' reception in the old days when there were fewer transmitters around. The dynamic range issues occur closer to transmitters, of whatever type, whose signals get into the front end. If someone puts up a TETRA (or equivalent for your country) base-station near your house you might find amplifiers a lot less effective.

Chris

2630. Re: Focused EMP pulse?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-06 16:31:47 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <s0smc5td0u86fm4evq1uk1vh8hpuf525uo@4ax.com>
Source record: 12592

On Tue, 6 Oct 2009 10:43:10 +0100, "christofire"
<christofire@btinternet.com> wrote:

>... but how much damage is a pulse of 10 GHz RF going to do?

Stand in front of an unfocussed emitter such as an open microwave oven
for 10 minutes (say, a meter back); that would be about 100,000
pulses; divide your noted effects by the same number and report back.

73's
Richard Clark, KB7QHC

2631. Re: Fishrod an�tennas - transformer and twin-lead

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-06 17:35:00 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <afvmc512qucbqk013et95r0aghpuif3k0b@4ax.com>
Source record: 12593

On Tue, 06 Oct 2009 06:25:53 GMT, Owen Duffy <none@no.where> wrote:

>Of course, one would hope that the transformers do lose heat to the
>environment, and that would substantially slow the rate of rise of
>temperature.

Hi Owen,

This opens another topic of my study with Thermal Resistance. One paper that I have filed away that may aid you is W.E. Hord's "Recent Developments In The Average Power Capacity Of Rotary-Field Ferrite Phase Shifters." It may lack the specific application discussed here, but it covers the math and interface relationships. Sorry, but I don't have any publication details except for author/title.

Hord's work is with ferrites capable of sustaining RF power levels in multiple KW. My first experience with ferrites (ca. 1972) was with RF transmission line source/load isolation in the microwaves (the paper is S-Band), a field that is wholly alien to discussion here.

73's
Richard Clark, KB7QHC

2632. Re: fractals and HDTV antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-06 18:33:07 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <Ce6dncVR9aT0EFbXnZ2dnUVZ_qednZ2d@giganews.com>
Source record: 12594

christofire wrote:
>
> Mast-head amplifiers always were appropriate for 'fringe-area' reception in
> the old days when there were fewer transmitters around. The dynamic range
> issues occur closer to transmitters, of whatever type, whose signals get
> into the front end. If someone puts up a TETRA (or equivalent for your
> country) base-station near your house you might find amplifiers a lot less
> effective.
>
> Chris

For sure. I was on the verge of returning my last analog TV because it wouldn't get one channel at all, and several others were very poor. But then I got an idea and added an attenuator at the antenna input. Problem solved -- got a great picture on all channels. The new HDTV has a better dynamic range and can put up with the strong signals, so it doesn't need the attenuator. I'm about 10 - 15 miles line of sight from urban broadcast towers. I use a commercial TV antenna in the attic.

Roy Lewallen, W7EL

2633. Re: Fishrod an�tennas - transformer and twin-lead

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-06 18:49:07 UTC
From: Owen Duffy <none@no.where>
Message-ID: <Xns9C9D3B3109620nonenowhere@61.9.191.5>
Source record: 12595

Owen Duffy <none@no.where> wrote in
news:Xns9C9CB1528DBBAnonenowhere@61.9.191.5:

...
> Martin questioned my article "A review of the Guanella 4:1 balun on a
> shared magnetic circuit" at http://www.vk1od.net/balun/gsc/index.htm .

Ian (GM3SEK) kindly drew my attention to incorrect reference to two of the
figures in the above article. The error was misleading, it is fixed now. My
apologies to anyone who was confused by the error.

Thanks Ian.

Owen

2634. Re: Focused EMP pulse?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-06 23:14:55 UTC
From: Jim Lux <james.p.lux@jpl.nasa.gov>
Message-ID: <hagj1f$2l1$1@news.jpl.nasa.gov>
Source record: 12597

christofire wrote:
> "Jim Lux" <james.p.lux@jpl.nasa.gov> wrote in message
> news:hae325doq1@news.jpl.nasa.gov...
>> Mike Luther wrote:
>>> A friend of mine cited a claim in a brand new book, "The Lost Symbol" by
>>> Dan Brown. So said, in it is a claim of a new weapon of choice that is
>>> installed in some USA military helicopters which is cable of aiming an
>>> actual EMP pulse at a target below that destroys computer and electronic
>>> equipment of focus to the pulse! Same as a 'normal' 30Megavolt/Meter EMP
>>> pulse from a nuclear device, or even a huge Solar Burst. As told me they
>>> used it recently to silence an Email production site they had to quickly
>>> do so that they couldn't do any other way, per this book....
>>>
>>> Duhh .....
>>>
>>> Few people seem to recall the last huge Solar Burst we got here in the
>>> USA in the mid-1800's about the time of the Golden Spike. So history
>>> says, it completely took out most of all the at-the-time telegraph
>>> systems which all had to be rebuilt or replaced.
>>>
>>> At any rate, can anyone here conjecture, or better still, teach me how it
>>> would be possible to create and focus an EMP pulse that could be used as
>>> described in an airborne delivery machine? What might the antenna be
>>> like?
>>>
>>> Just curious.
>>>
>>> W5WQN
>>>
>> Gyrotron, driven by a Flux Compression Generator.
>>
>> basically a very high power microwave transmitting tube at a high enough
>> frequency where a moderate sized antenna gives a narrow beamwidth (e.g. at
>> 10GHz, a 2 meter antenna has about a 1 degree beamwidth.. 100GHz with a 20
>> cm antenna does the same.) , with a HV pulse generator that uses the
>> mechanical energy from an explosion to generate the HV high current pulse
>> to run the tube.
>>
>>
>> Now.. 30 MV/m at a distance of say, 200 meters..
>>
>
>
> ... but how much damage is a pulse of 10 GHz RF going to do? The

> effectiveness of a nuclear EMP much to do with its very broad bandwidth (as
> well as its rise time).
>
>

Actually, I was thinking more like 100GHz, so the beamwidth would be
small for a reasonable sized reflector.

But, you've also identified the key thing when evaluating EMP vulnerability.

2635. Re: Focused EMP pulse?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-06 23:26:44 UTC
From: christofire <christofire@btinternet.com>
Message-ID: <aJidncBoD7OlT1bXnZ2dnUVZ8l2dnZ2d@bt.com>
Source record: 12596

"Richard Clark" <kb7qhc@comcast.net> wrote in message
news:s0smc5td0u86fm4evq1uk1vh8hpuf525uo@4ax.com...
> On Tue, 6 Oct 2009 10:43:10 +0100, "christofire"
> <christofire@btinternet.com> wrote:
>
>>... but how much damage is a pulse of 10 GHz RF going to do?
>
> Stand in front of an unfocussed emitter such as an open microwave oven
> for 10 minutes (say, a meter back); that would be about 100,000
> pulses; divide your noted effects by the same number and report back.
>
> 73's
> Richard Clark, KB7QHC

If you believe that's the basis of EMP then I won't argue with your opinion.

Chris

2636. Re: Focused EMP pulse?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-06 23:34:14 UTC
From: Jim Lux <james.p.lux@jpl.nasa.gov>
Message-ID: <hagk5m$g3k$1@news.jpl.nasa.gov>
Source record: 12598

Richard Clark wrote:
> On Tue, 6 Oct 2009 10:43:10 +0100, "christofire"
> <christofire@btinternet.com> wrote:
>
>> ... but how much damage is a pulse of 10 GHz RF going to do?
>
> Stand in front of an unfocussed emitter such as an open microwave oven
> for 10 minutes (say, a meter back); that would be about 100,000
> pulses; divide your noted effects by the same number and report back.
>
> 73's
> Richard Clark, KB7QHC

More like, put your radio in a microwave and turn it on.

60 pulses/second (in the US).. 600W average power. Figure the power density is probably in the 10 W/cm^2 rough order of magnitude, or 100kW/square meter. Peak to average ratio in a microwave oven is pretty low (3?), so thermal effects on a lossy medium will be significant.

The 30kV/m (which is achievable as described earlier, a megawatt over that 2 meter circular area) is around 24 times that. I think it's safe to say that 30kV/m sorts of fields will fry stuff, in general, pretty much independent of its resonant properties. Crumpled aluminum foil sparks pretty well, as does steel wool.

As for personnel exposure..

Yep, you'll get a burn.. probably cook your eyeballs too. Although, at 100GHz, the penetration depth is small..Might just cook your skin off like a horror movie.

I don't know what the penetration scale depth at 10 GHz is, off hand. Certainly several cm (I'd expect it to scale as sqrt(1/f), and 2.45 GHz in a microwave oven clearly penetrates 10 cm at least, or you couldn't cook a big roast at all evenly)

That's the challenge, of course.. High enough fields to cause arcs/breakdown to destroy the electronics, but low enough average power that thermal effects are minimal, so you don't kill or injure the people.

1-10 MW peak powers at pulse lengths of microseconds are pretty standard radar fare. Fire it at 1pps, and the average power will be down in the few watts area, so personnel safety isn't as big a problem. There are lots of cases of folks being exposed to fields of this magnitude accidentally, and they don't die as a rule.

There is a tale in the FCC enforcement literature about a guy working on a FM broadcast tower where he noticed sparking and smoke from his protective garments after the station manager remotely turned the transmitter on to full power.

On a smaller scale, I've accidentally killed quite a few pieces of electronics with fast HV pulses. It kind of goes with the territory when you fool with Marx banks and solid state electronics. Even fairly low powered Tesla coils will do a number on garage door openers, but I think that's because the GDOs are kind of cheap designs, with long wires hanging out of them, and it doesn't take much to kill one. That's basically discharging a 50pF cap charged to 100-200kV in a few tens of ns.

2637. Re: Focused EMP pulse?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-07 00:07:36 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <5umnc5lrasuml70ookk0c71g2jlaoke3rc@4ax.com>
Source record: 12599

On Wed, 7 Oct 2009 00:26:44 +0100, "christofire"
<christofire@btinternet.com> wrote:

>If you believe that's the basis of EMP then I won't argue with your opinion.

Hi Chris,

Your statement implies that a "basis" can lead to some new unique RF
phenomenon.

If EMP is co-opted for some trendy single purpose definition that
denudes the former understanding of its general (and still no less
applicable) meaning, then, yes, we have descended into opinionated
belief systems which depend upon faith.

What you infer by "basis" is that this particular pulse (with the
unstated nuclear detonation, or an e-bomb as the initiator) is somehow
different from all other pulses. No, not in the least. By whatever
"basis," there are very ordinary formulas that allow for rise time,
fall time, pulse duration, magnitude, and such artifacts as ringing
(undershoot, overshoot, crest, and the rest).

"Basis" is not another engineering term for magnitude. What was
astonishing through nuclear detonation was corralled and managed into
an e-bomb, which is nothing more remarkable than clever engineering of
shorting a capacitor. Each of the three could be cleverly induced to
give the same RF signature - what price "basis?" It happens a
trillion times a day with all the microwaves ovens on this earth.

73's
Richard Clark, KB7QHC

2638. Re: Focused EMP pulse?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-07 01:13:52 UTC
From: christofire <christofire@btinternet.com>
Message-ID: <l9ednWk0va7JdlbXnZ2dnUVZ8hadnZ2d@bt.com>
Source record: 12600

"Richard Clark" <kb7qhc@comcast.net> wrote in message
news:5umnc5lrasuml70ookk0c71g2jlaoke3rc@4ax.com...
> On Wed, 7 Oct 2009 00:26:44 +0100, "christofire"
> <christofire@btinternet.com> wrote:
>
>>If you believe that's the basis of EMP then I won't argue with your
>>opinion.
>
> Hi Chris,
>
> Your statement implies that a "basis" can lead to some new unique RF
> phenomenon.
>
> If EMP is co-opted for some trendy single purpose definition that
> denudes the former understanding of its general (and still no less
> applicable) meaning, then, yes, we have descended into opinionated
> belief systems which depend upon faith.
>
> What you infer by "basis" is that this particular pulse (with the
> unstated nuclear detonation, or an e-bomb as the initiator) is somehow
> different from all other pulses. No, not in the least. By whatever
> "basis," there are very ordinary formulas that allow for rise time,
> fall time, pulse duration, magnitude, and such artifacts as ringing
> (undershoot, overshoot, crest, and the rest).
>
> "Basis" is not another engineering term for magnitude. What was
> astonishing through nuclear detonation was corralled and managed into
> an e-bomb, which is nothing more remarkable than clever engineering of
> shorting a capacitor. Each of the three could be cleverly induced to
> give the same RF signature - what price "basis?" It happens a
> trillion times a day with all the microwaves ovens on this earth.
>
> 73's
> Richard Clark, KB7QHC

The effects on equipment of repetitive cycles of incident electric field strength with alternating polarity, constant period and equal rise and fall times (AKA a sine wave), whether continuous or 'pulsed', are different from the effects of an incident pulse of electric field strength with a short rise time that is not broken up into harmonic cycles. The latter can induce a high voltage pulse that is wideband in the same manner as the result of a lightning strike, and this can propagate through an installation causing damage. The former cannot do that. Of course, I appreciate the difference is the spectral width of the incident 'signal'.

The example you gave was of the former type, radiation from a microwave oven, whereas I had written about the latter type. An open microwave oven may well cook a human but it won't have much effect on a power cable feeding a computer other than, perhaps, melting the insulation! A wideband pulse of electric field of sufficicient strength will damage the computer. But, evidently, you disagree ...

Chris

2639. Re: Focused EMP pulse?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-07 02:52:46 UTC
From: tom <news4792@taring.org>
Message-ID: <4acc0274$0$28113$8046368a@newsreader.iphouse.net>
Source record: 12401

Richard Clark wrote:
>
> "Basis" is not another engineering term for magnitude. What was
> astonishing through nuclear detonation was corralled and managed into
> an e-bomb, which is nothing more remarkable than clever engineering of
> shorting a capacitor. Each of the three could be cleverly induced to
> give the same RF signature - what price "basis?" It happens a
> trillion times a day with all the microwaves ovens on this earth.
>
> 73's
> Richard Clark, KB7QHC

Richard

To see you write that the "clever engineering of shorting a capacitor"
is remotely similar to standing in front of a microwave oven is very
disappointing to say the least. You are losing your edge.

You know very well that they aren't remotely similar in the effects
produced. For one thing the "clever engineering of shorting a
capacitor" is very misleading without at least some explanation of how
different it is from simply shorting a capacitor.

tom
K0TAR

2640. Science Network Maxwell's equations program

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-07 03:25:29 UTC
From: tom <news4792@taring.org>
Message-ID: <4acc0a1f$0$28112$8046368a@newsreader.iphouse.net>
Source record: 12402

21 minutes in, and nothing about diamagnetic thingies leaping off of antennas.

Lots of stuff about the breakthroughs in understanding that happened. Like that C in the equations really equaled the speed of light. And more amazing things.

But no spinning neutrinos and especially no equilibrium.

tom
K0TAR

2641. Seeking New FAQ/Intro Maintainers for rec.radio.amateur.*

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-07 06:05:00 UTC
From: rram@panix.com
Message-ID: <radio/ham-radio/recruitment-1-1254895500@panix.com>
Source record: 12403
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.dx,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.policy,rec.radio.info

```
Posted-By: auto-faq 3.3.2 beta (PGPMoose V2.0, Perl 5.005)
Archive-name: radio/ham-radio/recruitment
Revision: 1.1 2007/09/29 18:42:47
Posting-Frequency: posted monthly
URL: http://www.faqs.org/faqs/radio/personal-intro/

Changes followed by "|".

The rec.radio.info newsgroup, first established in 1993, has been
recently revived by an active moderation team. We are currently seeking
suitable information, FAQ, and bulletin articles from the entire
rec.radio.* newsgroup hierarchy for simultaneous cross-posting to our
newsgroup.

We are seeking a replacement maintainer for the following information
bulletin formerly posted to rec.radio.amateur.* (and currently archived
at http://www.faqs.org/faqs/radio/personal-intro/ ):

radio/personal-intro
Subject: Guide to the rec.radio Newsgroups
Maintainer: jeffreyh@Hawaii.Edu (Jeffrey Herman)
Last Posted: 9 Nov 2001 06:18:17 GMT
Posting-Frequency: 15th of each month

We are willing to provide any technical support necessary to get this
article updated and automatically posted again at a regular interval.
This would include establishing contact with the original maintainer for
any necessary permissions. We would prefer to seek a new, dedicated
maintainer at this time, rather than start auto-posting the original
article ourselves.

For more information about our newsgroup, see:

http://www.panix.com/~rram/usenet/rri/index.html

Please direct any comments, questions, or criticisms to
rec-radio-info-request@panix.com.
```

2642. Re: Focused EMP pulse?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-07 06:08:33 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <efboc5ln414602mtnerhs1g0no61afn86h@4ax.com>
Source record: 12404

On Tue, 06 Oct 2009 21:52:46 -0500, tom <news4792@taring.org> wrote:

>To see you write that the "clever engineering of shorting a capacitor"
>is remotely similar to standing in front of a microwave oven is very
>disappointing to say the least. You are losing your edge.
>
>You know very well that they aren't remotely similar in the effects
>produced. For one thing the "clever engineering of shorting a
>capacitor" is very misleading without at least some explanation of how
>different it is from simply shorting a capacitor.

Hi Tom,

EMP is a fast charge/discharge event. EMP products come in three flavors, I will only discuss the fastest. The fastest is rarely described with a risetime less than 1nS, but I have seen others bandy about the frequency of 10GHz, so we have to assume they have links to literature that claim a risetime on the order of 33pS. Be that as it may, mercury switches can switch a 1000V pulse into a 50Ohm load in 500ps. This is laboratory stuff, not armament. Armament can be engineered to perform with larger supplies as one-shot disposable switches (you don't run lab equipment to failure, new out of the box on the first application of power). Such switches are controlled access and limited sale items.

To generate this 10GHz pulse would require very, very short very, very low resistance leads; which would, of course, become part of a tuned (to 10GHz) circuit. The trigger device often employs a charge driven shorting bar. It is only a matter of capacitance and low resistance metalurgy from there.

73's
Richard Clark, KB7QHC

2643. Re: Focused EMP pulse?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-07 06:37:07 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <j6aoc518o82tvnlq8ter7ja50god1ev11d@4ax.com>
Source record: 12405

On Wed, 7 Oct 2009 02:13:52 +0100, "christofire"
<christofire@btinternet.com> wrote:

>The effects on equipment of repetitive cycles of incident electric field
>strength with alternating polarity, constant period and equal rise and fall
>times (AKA a sine wave), whether continuous or 'pulsed', are different from
>the effects of an incident pulse of electric field strength with a short
>rise time that is not broken up into harmonic cycles. The latter can induce
>a high voltage pulse that is wideband in the same manner as the result of a
>lightning strike, and this can propagate through an installation causing
>damage. The former cannot do that. Of course, I appreciate the difference
>is the spectral width of the incident 'signal'.

Hi Chris,

You are mixing frequency domain with time domain descriptions. Example
repeated from above:
>a short rise time that is not broken up into harmonic cycles.

"A short rise time" is made up of an increasingly dense spectrum of
harmonic cycles. It cannot be otherwise.

>
>The example you gave was of the former type, radiation from a microwave
>oven, whereas I had written about the latter type.

You are now mixing modulation into the time domain to argue against a
frequency domain solution. Modulation, if anything, adds even more
spectral (harmonic cycle) products.

Besides, I offered you simply reduce the number of modulation cycles,
by their count, to reduce the effect to that of one cycle (of
modulation). A pulse is a modulation of one cycle (however poorly
shaped it may be, and it envelopes a pluarity of SHF cycles).

> An open microwave oven
>may well cook a human but it won't have much effect on a power cable feeding
>a computer other than, perhaps, melting the insulation! A wideband pulse of
>electric field of sufficicient strength will damage the computer. But,
>evidently, you disagree ...

No, not evident at all. Any "effect" is more a function of amplitude
than a failure to warm insulation:
On Tue, 6 Oct 2009 10:43:10 +0100, "christofire"
<christofire@btinternet.com> wrote:
>but how much damage is a pulse of 10 GHz RF going to do?
"How much damage" speaks specifically to that function of amplitude,

not pulse shape, not rise time, fall time, or the rest; and as you are explicit in giving a specific frequency.... The microwave oven example suitably answers this. A RADAR example does even better (and still the results, save for amplitude, are the same).

73's
Richard Clark, KB7QHC

2644. Re: Focused EMP pulse?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-07 06:52:41 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <qsdoc5tvk1u1h53rmi6j0on446adenpk5t@4ax.com>
Source record: 12406

On Tue, 06 Oct 2009 23:08:33 -0700, Richard Clark <kb7qhc@comcast.net>
wrote:

>The trigger device often employs a charge driven
>shorting bar.

Charge here means explosive charge (accelerating the shorting bar into
the capacitor).

>It is only a matter of capacitance and low resistance
>metalurgy from there.

The capacitor is called a Marx bank (some cold-war irony there) in a
Explosively Pumped Flux Compression Generator. There are issues of
self shorting inductors wound around cylindrical explosive charges and
reams of discussion which all basically devolves to very simple and
fundamental LC with peak IR relationships.

How could it be otherwise?

73's
Richard Clark, KB7QHC

2645. Re: Focused EMP pulse?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-07 13:34:50 UTC
From: Michael Coslo <mjc5@psu.edu>
Message-ID: <hai5dq$b470$1@tr22n12.aset.psu.edu>
Source record: 12407

Richard Clark wrote:

> Besides, I offered you simply reduce the number of modulation cycles,
> by their count, to reduce the effect to that of one cycle (of
> modulation). A pulse is a modulation of one cycle (however poorly
> shaped it may be, and it envelopes a pluarity of SHF cycles).

Even though I know you're having some fun here Richard, your division by pulse assumes that the effects are linear.

- 73 de Mike N3LI -

2646. Transmission Line Question

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-07 14:32:54 UTC
From: AndyS <andysharpe@juno.com>
Message-ID: <3ce427a9-b24e-470b-b086-6170269b9c6b@v15g2000prn.googlegroups.com>
Source record: 12408

Andy writes:

I have a need for a quarter-wavelength transmission line at 25 ohms
impedance.

My SPICE simulator tells me that I can connect two 50 ohm, quarter-
wavelength
transmission lines in parallel and get the exact same performance
as the needed
25 ohm line.

However, I have not seen anyone try this, nor seen it used in
equipment.

Does anyone here have any experience with doing this, or have any
learned
opinions as to why it might, or might not, be a good idea ??

Thanks for your informed advice..

Andy W4OAH

2647. Re: Transmission Line Question

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-07 15:00:05 UTC
From: Ian White GM3SEK <gm3sek@ifwtech.co.uk>
Message-ID: <9PC04UM1zKzKFA9g@ifwtech.co.uk>
Source record: 12409

AndyS Wrote:

> I have a need for a quarter-wavelength transmission line at 25 ohms
>impedance. My SPICE simulator tells me that I can connect two 50
>ohm, quarter- wavelength transmission lines in parallel and get the
>exact same performance as the needed 25 ohm line.
>
> However, I have not seen anyone try this, nor seen it used in
>equipment. Does anyone here have any experience with doing this, or
>have any learned opinions as to why it might, or might not, be a
>good idea ??
>

No problem. It's a standard technique for matching yagis, for example:

http://www.mydarc.de/dk7zb/start1.htm
(click the third item in menu list)

--

73 from Ian GM3SEK
http://www.ifwtech.co.uk/g3sek

2648. Re: Focused EMP pulse?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-07 16:26:31 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <e6gpc5dj6asgbsao6so54tr3gr0sltd4fq@4ax.com>
Source record: 12410

On Wed, 07 Oct 2009 09:34:50 -0400, Michael Coslo <mjc5@psu.edu>
wrote:

>Even though I know you're having some fun here Richard, your division by
>pulse assumes that the effects are linear.

Yes, they are. However, for some members who contribute to this group
insofar as postings about ejected particels and Luxembourg effect,
non-linearities may abound.

73's
Richard Clark, KB7QHC

2649. Re: Transmission Line Question

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-07 16:51:46 UTC
From: steveeh131047 <google@karinya.net>
Message-ID: <0a13ea69-ccea-4555-a5c8-71e08eab7b31@k26g2000vbp.googlegroups.com>
Source record: 12411

It works well.

I needed some Zo=25 ohm for a 1:4 balun (12.5ohms>>50ohms) and simply
used parallelled lengths of 50 ohm for the windings.

73,
Steve G3TXQ

2650. Re: Focused EMP pulse?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-07 17:38:10 UTC
From: Michael Coslo <mjc5@psu.edu>
Message-ID: <haijm4$5s26$1@tr22n12.aset.psu.edu>
Source record: 12412

Richard Clark wrote:
> On Wed, 07 Oct 2009 09:34:50 -0400, Michael Coslo <mjc5@psu.edu>
> wrote:
>
>> Even though I know you're having some fun here Richard, your division by
>> pulse assumes that the effects are linear.
>
> Yes, they are. However, for some members who contribute to this group
> insofar as postings about ejected particels and Luxembourg effect,
> non-linearities may abound.

That gets me to wondering...

Is my theory about RF energy being little turds that fly off an antenna
in agreement or disagreement with those particels?

I'll refresh everyone if they didn't hear it before.

RF energy consists of little packets of waste material, like little
turds, that get ejected from an antenna (as the last link in the chain
as new material flows into the antenna. This is obvious as a
characteristic of conservation of mass as well as general digestion.

These little turds leave the antenna with great velocity. While flying
through the air, they are naturally attracted to other antennas (derived
from holistic like treats like principles) and are therefore received on
other radios.

The result and characteristics of this process are that unless
transmissions match reception, which is almost impossible, the little
turds accumulate on our antennas, and over time result in crappy
performance.

- 73 de Mike N3LI -

2651. Re: Focused EMP pulse?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-07 18:05:58 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <tilpc59fhhh626tg7novaqg5c7vefck5q5@4ax.com>
Source record: 12413

On Wed, 07 Oct 2009 13:38:10 -0400, Michael Coslo <mjc5@psu.edu>
wrote:

>Is my theory about RF energy being little turds that fly off an antenna
>in agreement or disagreement with those particels?

Yes, particels and these specimens are in fact derived from the same
source.

>I'll refresh everyone if they didn't hear it before.
>
>RF energy consists of little packets of waste material, like little
>turds, that get ejected from an antenna (as the last link in the chain
>as new material flows into the antenna. This is obvious as a
>characteristic of conservation of mass as well as general digestion.

One must expand on this to include impedance matching ointments such
as Preparation H (and the lowering of transmission line restriction
losses with Ex-Lax). Can it be said that diamagnetism is like a
greasy lube job for propagation?

>These little turds leave the antenna with great velocity. While flying
>through the air, they are naturally attracted to other antennas (derived
>from holistic like treats like principles) and are therefore received on
>other radios.

If they are to be circularly polarized, they will need a corriolis
evacuation.

>The result and characteristics of this process are that unless
>transmissions match reception, which is almost impossible, the little
>turds accumulate on our antennas, and over time result in crappy
>performance.

It must be true - evidence AM talk shows.

73's
Richard Clark, KB7QHC

2652. Re: Focused EMP pulse?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-07 19:03:26 UTC
From: Michael Coslo <mjc5@psu.edu>
Message-ID: <haiom0$5s2a$1@tr22n12.aset.psu.edu>
Source record: 12414

Richard Clark wrote:
> On Wed, 07 Oct 2009 13:38:10 -0400, Michael Coslo <mjc5@psu.edu>
> wrote:
>
>> Is my theory about RF energy being little turds that fly off an antenna
>> in agreement or disagreement with those particels?
>
> Yes, particels and these specimens are in fact derived from the same
> source.
>
>> I'll refresh everyone if they didn't hear it before.
>>
>> RF energy consists of little packets of waste material, like little
>> turds, that get ejected from an antenna (as the last link in the chain
>> as new material flows into the antenna. This is obvious as a
>> characteristic of conservation of mass as well as general digestion.
>
> One must expand on this to include impedance matching ointments such
> as Preparation H (and the lowering of transmission line restriction
> losses with Ex-Lax). Can it be said that diamagnetism is like a
> greasy lube job for propagation?
>
>> These little turds leave the antenna with great velocity. While flying
>> through the air, they are naturally attracted to other antennas (derived
>>from holistic like treats like principles) and are therefore received on
>> other radios.
>
> If they are to be circularly polarized, they will need a corriolis
> evacuation.
>
>> The result and characteristics of this process are that unless
>> transmissions match reception, which is almost impossible, the little
>> turds accumulate on our antennas, and over time result in crappy
>> performance.
>
> It must be true - evidence AM talk shows.

Dayum, you're Good! I think the theory has had the finishing touches and
is fully formed. This turd is polished!

- 73 de Mike N3LI -

2653. Re: Transmission Line Question

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-07 20:07:43 UTC
From: Owen Duffy <none@no.where>
Message-ID: <Xns9C9E488477C0nonenowhere@61.9.191.5>
Source record: 12415

steveeh131047 <google@karinya.net> wrote in news:0a13ea69-ccea-4555-a5c8-71e08eab7b31@k26g2000vbp.googlegroups.com:

> It works well.
>
> I needed some Zo=25 ohm for a 1:4 balun (12.5ohms>>50ohms) and simply
> used parallelled lengths of 50 ohm for the windings.

If you are talking about a balun made with an electrical half wave of coax, you may be hard put to observe the difference between using 50 ohm or 25 ohm line. If the load was an ideal resistor, using the 'matched' Zo gives least loss and best bandwidth, but on a narrowband antenna, the balun bandwidth is less an issue, and may even compensate the antenna (depending on the chosen Zo).

The OP's application to a quarter wave line is sensitive to Zo though, and it works fine, but it is quite important to bond the shields effectively at both ends of the line.

Owen

2654. Re: Transmission Line Question

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-07 21:04:58 UTC
From: Owen Duffy <none@no.where>
Message-ID: <Xns9C9E5238D81B1nonenowhere@61.9.191.5>
Source record: 12416

Ian White GM3SEK <gm3sek@ifwtech.co.uk> wrote in
news:9PC04UM1zKzKFA9g@ifwtech.co.uk:

...
>
> No problem. It's a standard technique for matching yagis, for example:
>
> http://www.mydarc.de/dk7zb/start1.htm
> (click the third item in menu list)

Ian,

The DK7ZB match (http://www.mydarc.de/dk7zb/images/match-12+28.gif) is interesting. Ideally, the transformation sections (the inside of the coax TL) are an electrical quarter wave, and the balun (the TL formed by the outside of the coaxes in parallel and the boom etc) is a quarter wave.

I would be surprised if constructions typically shown achieve that optimisation, due at least to the use of solid PE dielectric inside the line, and a air / vinyl dilectric outside.

The construction at http://www.mydarc.de/dk7zb/DK7ZB-Match/Schleife_Isolation.jpg is quite complex, containing what might be seen as as an electrical quarter wave transformer and the balun formed of a U shaped stub of physical length 0.5*0.25*0.66=0.08 wavelengths shunting one side of the DE, but this stub lies with its hot side against the cold boom forming another o/c TL element. If the balun shunts the DE with a high impedance, it will be due to not just the loop length, nor just the s/c stub length, but parallel resonance with the boom / half loop o/c stub.

If that is the case, the construction is not simply explained by the first diagram that I referenced above.

I am not suggesting that this implementation doesn't work, but that there are design parameters beyond those implied by the electrical circuit given.

Thoughts?

Owen

2655. The Need for Trolls - How Nonsense Sharpens the Intellect (but not the Troll's intellect)

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-07 22:10:19 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <v4vpc51u9ufv0mtdertpooc1nekv7botjd@4ax.com>
Source record: 12417

from NYT article of the same name ("How Nonsense...") @
http://www.nytimes.com/2009/10/06/health/06mind.html?em

"...when a hiker stumbles across an easy chair
sitting deep in the woods, as if dropped from
the sky - the brain gropes for something, anything
that makes sense. It may retreat to a familiar
ritual, like checking equipment. But it may also
turn its attention outward, the researchers argue,
and notice, say, a pattern in animal tracks that
was previously hidden. The urge to find a
coherent pattern makes it more likely that
the brain will find one."

Lest Art or Stefan stumble into this as vindication, the easy chair is
their wild notions, we are the hikers that are left with the
nonsensical application who then gain heightened perception. Students
who were subjected to a story by Kafka (and anyone who has read
through a tortured thread started by Art has experienced a lifetime's
exposure to Kafka poisoning) were then tested in their ability to
discover hidden patterns:

"The fact that the group who read the absurd story
identified more letter strings suggests that they were
more motivated to look for patterns than the others,"
Dr. Heine said. "And the fact that they were more
accurate means, we think, that theyï¿½re forming new
patterns they wouldnï¿½t be able to form otherwise."

73's
Richard Clark, KB7QHC

2656. Re: Transmission Line Question

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-08 04:26:25 UTC
From: David Ryeburn <ryeburn@sfu.caz>
Message-ID: <ryeburn-2FAF6A.21262507102009@morgoth.sfu.ca>
Source record: 12418

In article
<3ce427a9-b24e-470b-b086-6170269b9c6b@v15g2000prn.googlegroups.com>,
AndyS <andysharpe@juno.com> wrote:

> Andy writes:
>
> I have a need for a quarter-wavelength transmission line at 25 ohms
> impedance.
>
> My SPICE simulator tells me that I can connect two 50 ohm, quarter-
> wavelength
> transmission lines in parallel and get the exact same performance
> as the needed
> 25 ohm line.
>
> However, I have not seen anyone try this, nor seen it used in
> equipment.
>
> Does anyone here have any experience with doing this, or have any
> learned
> opinions as to why it might, or might not, be a good idea ??

In article
<0a13ea69-ccea-4555-a5c8-71e08eab7b31@k26g2000vbp.googlegroups.com>,
steveeh131047 <google@karinya.net> wrote:

> It works well.

It has to work well.

Suppose first that you connect a load with impedance Z to the far end of a quarter wave transmission line of 25 ohm surge impedance. At the near end of the quarter wave transmission line this will look like 25^2/Z ohms, or 625/Z ohms.

Now start over, but instead of the load with impedance Z suppose you have two identical loads, each of impedance 2*Z, which if they had been connected in parallel would have had an impedance Z. Take two different quarter wave transmission lines, each of surge impedance 50 ohms, and connect the two loads (separately) to the far ends of the two transmission lines. At the near ends of each of the transmission lines this will look like 50^2/(2*Z) ohms, which simplifies to 1250/Z ohms. Connect the near ends of the two transmission lines in parallel. You will then see 625/Z ohms, the same as you saw with the Z ohm load at the end of the quarter wave 25 ohm line.

By symmetry the voltages across, and the currents through, the two 2*Z ohm loads have to be the same. So nothing will change if they are connected in parallel. Do that and you will have a single Z ohm load at the far end of the two paralleled quarter wave 50 ohms lines.

David, ex-W8EZE

--
David Ryeburn
ryeburn@sfu.caz
To send e-mail, use "ca" instead of "caz".

2657. Re: Focused EMP pulse?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-08 07:02:20 UTC
From: Szczepan Bialek <sz.bialek@wp.pl>
Message-ID: <hajn9p$kg5$1@node1.news.atman.pl>
Source record: 12419

"Richard Clark" <kb7qhc@comcast.net> wrote
news:e6gpc5dj6asgbsao6so54tr3gr0sltd4fq@4ax.com...
> On Wed, 07 Oct 2009 09:34:50 -0400, Michael Coslo <mjc5@psu.edu>
> wrote:
>
>>Even though I know you're having some fun here Richard, your division by
>>pulse assumes that the effects are linear.
>
> Yes, they are. However, for some members who contribute to this group
> insofar as postings about ejected particels and Luxembourg effect,
> non-linearities may abound.

I am posting about such antennas:
http://en.wikipedia.org/wiki/File:Dipolentstehung.gif
Whwt is wrong here?
S*

2658. Re: Transmission Line Question

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-08 07:21:12 UTC
From: Ian White GM3SEK <gm3sek@ifwtech.co.uk>
Message-ID: <6O1IlpHoLZzKFAM3@ifwtech.co.uk>
Source record: 12420

Owen Duffy wrote:
>Ian White GM3SEK <gm3sek@ifwtech.co.uk> wrote in
>news:9PC04UM1zKzKFA9g@ifwtech.co.uk:
>
>...
>>
>> No problem. It's a standard technique for matching yagis, for example:
>>
>> http://www.mydarc.de/dk7zb/start1.htm
>> (click the third item in menu list)
>
>Ian,
>
>The DK7ZB match (http://www.mydarc.de/dk7zb/images/match-12+28.gif) is
>interesting. Ideally, the transformation sections (the inside of the coax
>TL) are an electrical quarter wave, and the balun (the TL formed by the
>outside of the coaxes in parallel and the boom etc) is a quarter wave.
>
>I would be surprised if constructions typically shown achieve that
>optimisation, due at least to the use of solid PE dielectric inside the
>line, and a air / vinyl dilectric outside.
>
>The construction at
>http://www.mydarc.de/dk7zb/DK7ZB-Match/Schleife_Isolation.jpg is quite
>complex, containing what might be seen as as an electrical quarter wave
>transformer and the balun formed of a U shaped stub of physical length
>0.5*0.25*0.66=0.08 wavelengths shunting one side of the DE, but this stub
>lies with its hot side against the cold boom forming another o/c TL
>element. If the balun shunts the DE with a high impedance, it will be due
>to not just the loop length, nor just the s/c stub length, but parallel
>resonance with the boom / half loop o/c stub.
>
>If that is the case, the construction is not simply explained by the
>first diagram that I referenced above.
>
>I am not suggesting that this implementation doesn't work, but that there
>are design parameters beyond those implied by the electrical circuit
>given.
>
>Thoughts?

There are two separate issues here. The impedance transformation with
paralleled coax is no problem (which answers the original question).

The other issue is the way the feedline is looped to form a balun... or so it is claimed. Like you, I am quite dubious about that.

It is highly reminiscent of a system used 20-30 years ago on the yagis made by Antennes Tonna (F9FT). The coax exited vertically downward from the feedpoint, and the instructions were to leave a quarter-wavelength hanging loop before the coax came back up to the boom. There was no electrical connection to the boom at this point - the coax was taped tightly down, and then continued along the boom as normal.

The quarter-wavelength loop was about 19in for 144MHz; but for 432MHz it should only have been one-third of that, which was an impossibly tight bend for heavy low-loss coax.

No doubt this arrangement would *somewhat* increase the common-mode impedance at the feedpoint, and thus act as a sort of balun, but it never seemed like a properly engineered solution. Many people replaced it with a home-made sleeve (bazooka) balun, and eventually the Tonna company did the same (though again, only sort of).

I completely agree that the velocity factor for the common-mode current on the outside of the coax will be different from the velocity factor inside the cable. This applies to both single and paralleled cable. Once again this makes a "quarter-wave" loop a less than satisfactory solution for a balun.

50MHz is much easier. For that band I have built several yagis using paralleled 75-ohm satellite TV coax to match a nominal 28-ohm feedpoint to 50 ohms [1]. An electrical quarter-wavelength is about 1.0m so there is no problem about coiling the paralleled coax to make a reasonably effective choke balun (the problem with velocity factors does not arise because the choking impedance is predominantly inductive). First tape the two cables together along their entire length, and then coil them into three turns.

However, the effect of any choke balun can be spoiled by the capacitance between the coax shield and the boom, which appears in parallel with only one side of the feedpoint. To minimise this effect, the entire coil should be spaced away from the boom by a *much* wider insulating gap than DK7ZB recommends. If I'm feeling cautious, I sometimes add a few ferrite beads at the start of the main 50 ohm feedline.

[1] All credit to DK7ZB for making the point that it's much easier to design high-performance yagis with a feedpoint impedance in the region of 25-30ohms. He feels that increasing the feedpoint impedance to 50 ohms (eg by adding a closely-spaced first director) makes optimization more difficult, especially when 28 ohms is such an easy impedance to match. But that is yet another separate issue...

--

73 from Ian GM3SEK 'In Practice' columnist for RadCom (RSGB)
http://www.ifwtech.co.uk/g3sek

2659. Re: fractals and HDTV antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-08 10:46:42 UTC
From: wood@itd.nrl.navy.mil
Message-ID: <wood-0810090646420001@jbw-mac.itd.nrl.navy.mil>
Source record: 12421

In article <Ce6dncVR9aT0EFbXnZ2dnUVZ_qednZ2d@giganews.com>, w7el@eznec.com wrote:

> For sure. I was on the verge of returning my last analog TV because it
> wouldn't get one channel at all, and several others were very poor. But
> then I got an idea and added an attenuator at the antenna input. Problem
> solved -- got a great picture on all channels. The new HDTV has a better
> dynamic range and can put up with the strong signals, so it doesn't need
> the attenuator. I'm about 10 - 15 miles line of sight from urban
> broadcast towers. I use a commercial TV antenna in the attic.
>
> Roy Lewallen, W7EL

Hello, Roy, and all. The trade-off here is that while putting a pad (attenuator) in front of the amplifier certainly results in a lower signal level at the amplifier output being presented to the down-stream components, the noise figure of the pad+amp cascade is increased by the attenuator loss (assuming a matched (e.g. 50 or 75 ohms)) pad. If the pad is placed at the amplifier output the noise figure is preserved but the dynamic range (usually specified in terms of a third-order intercept point) of the cascade is degraded. Noise figure and intercept points of RF distribution system amplifiers used in a shipboard environment have always been of vital interest to the USN. Sincerely, and 73s from N4GGO,

John Wood (Code 5550) e-mail: wood@itd.nrl.navy.mil
Naval Research Laboratory
4555 Overlook Avenue, SW
Washington, DC 20375-5337

2660. Watch very hot sex videos ,hot pics and get A to Z information.

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-08 11:28:19 UTC
From: Srinivasa Bulusu <diamondsrinivasa@gmail.com>
Message-ID: <6e76f9f5-4dd7-4ae5-8f36-20fc939a1768@g22g2000prf.googlegroups.com>
Source record: 12422

http://www.hotkissclub.blogspot.com

2661. Re: Focused EMP pulse?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-08 17:12:35 UTC
From: Jim Lux <james.p.lux@jpl.nasa.gov>
Message-ID: <4ACE1D83.30203@jpl.nasa.gov>
Source record: 12425

Richard Clark wrote:
> EMP is a fast charge/discharge event. EMP products come in three
> flavors, I will only discuss the fastest. The fastest is rarely
> described with a risetime less than 1nS, but I have seen others bandy
> about the frequency of 10GHz, so we have to assume they have links to
> literature that claim a risetime on the order of 33pS. Be that as it
> may, mercury switches can switch a 1000V pulse into a 50Ohm load in
> 500ps. This is laboratory stuff, not armament. Armament can be
> engineered to perform with larger supplies as one-shot disposable
> switches (you don't run lab equipment to failure, new out of the box
> on the first application of power). Such switches are controlled
> access and limited sale items.
>
> To generate this 10GHz pulse would require very, very short very, very
> low resistance leads; which would, of course, become part of a tuned
> (to 10GHz) circuit. The trigger device often employs a charge driven
> shorting bar. It is only a matter of capacitance and low resistance
> metalurgy from there.
>
> 73's
> Richard Clark, KB7QHC

One might want to distinguish between EMP from, e.g. a nuclear device,
which is a fast pulse (the rise time of which is fundamentally limited
by the size of the fireball.. EM energy from the far side takes longer
to get to you than the near side)

AND

EM weapons designed to create damage similar to that from EMP.

Those are usually high peak power microwave sources with moderately long
pulses, designed to put enough energy into the victim to cause the damage.

There is also, the much talked about and demonstrated broadband pulse
generator schemes... some sort of fast discharge into a broadband
antenna (often a bowtie).. You see these demonstrated as built into an
attache case. Put the briefcase EMP generator next to the victim
electronics, trigger the bang, look! dead PC.

This is typically a few hundred joules with a low inductance pulse cap
charged to a few kV or 10s of kV, discharging through a triggered spark
gap.

Ground Pulse Radar does a very similar thing (with better calibration, lower powers, etc.)

This thing is used to encourage funding of countermeasures or funding of "bigger and better" versions, particularly in front of folks who don't understand things like inverse square law.

2662. Re: Focused EMP pulse?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-08 17:19:13 UTC
From: Jim Lux <james.p.lux@jpl.nasa.gov>
Message-ID: <hal6uh$r6v$1@news.jpl.nasa.gov>
Source record: 12424

Richard Clark wrote:

>
> The capacitor is called a Marx bank (some cold-war irony there) in a
> Explosively Pumped Flux Compression Generator. There are issues of
> self shorting inductors wound around cylindrical explosive charges and
> reams of discussion which all basically devolves to very simple and
> fundamental LC with peak IR relationships.

Erwin Marx of the eponymous Marx bank has no connection to the Marx of political theory. Marx published his papers describing the design of his impulse generator in the teens or twenties, as I recall.

Flux compression generators are different. I suppose one could use a FCG to charge a Marx bank, which would self erect, but I don't know that would buy much in a weapons context.

The discharge time of a Marx is limited by the stage capacitance/inductance. The fact that you stack a bunch in series helps reduce the C, but the series L and R exactly counteracts it. The big advantage is that once you get outside the generator, higher voltage lets you have higher di/dt on the rest of the circuit, but that presumes the rise time of the Marx is faster than the limit imposed by the load R/L/C.

There are better ways to make very fast high voltage pulses, if that's your goal. Fruengel's books on "pulse discharge" provide a plethora of ideas.

Ultimately, the limit is the propagation speed in the conductors (so schemes using transmission lines are popular: Blumlein published one in the 40s(?) that's used a lot)

2663. Re: Focused EMP pulse?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-08 17:19:47 UTC
From: Jim Lux <james.p.lux@jpl.nasa.gov>
Message-ID: <4ACE1F33.2070203@jpl.nasa.gov>
Source record: 12423

Richard Clark wrote:
> EMP is a fast charge/discharge event. EMP products come in three
> flavors, I will only discuss the fastest. The fastest is rarely
> described with a risetime less than 1nS, but I have seen others bandy
> about the frequency of 10GHz, so we have to assume they have links to
> literature that claim a risetime on the order of 33pS. Be that as it
> may, mercury switches can switch a 1000V pulse into a 50Ohm load in
> 500ps. This is laboratory stuff, not armament. Armament can be
> engineered to perform with larger supplies as one-shot disposable
> switches (you don't run lab equipment to failure, new out of the box
> on the first application of power). Such switches are controlled
> access and limited sale items.
>
> To generate this 10GHz pulse would require very, very short very, very
> low resistance leads; which would, of course, become part of a tuned
> (to 10GHz) circuit. The trigger device often employs a charge driven
> shorting bar. It is only a matter of capacitance and low resistance
> metalurgy from there.
>
> 73's
> Richard Clark, KB7QHC

One might want to distinguish between EMP from, e.g. a nuclear device, which is a fast pulse (the rise time of which is fundamentally limited by the size of the fireball.. EM energy from the far side takes longer to get to you than the near side)

AND

EM weapons designed to create damage similar to that from EMP.

Those are usually high peak power microwave sources with moderately long pulses, designed to put enough energy into the victim to cause the damage.

There is also, the much talked about and demonstrated broadband pulse generator schemes... some sort of fast discharge into a broadband antenna (often a bowtie).. You see these demonstrated as built into an attache case. Put the briefcase EMP generator next to the victim electronics, trigger the bang, look! dead PC.

This is typically a few hundred joules with a low inductance pulse cap charged to a few kV or 10s of kV, discharging through a triggered spark gap.

Ground Pulse Radar does a very similar thing (with better calibration, lower powers, etc.)

This thing is used to encourage funding of countermeasures or funding of "bigger and better" versions, particularly in front of folks who don't understand things like inverse square law.

2664. Re: The Need for Trolls - How Nonsense Sharpens the Intellect (but not the Troll's intellect)

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-08 18:09:43 UTC
From: Wayne <mygarbagecan@verizon.net>
Message-ID: <hal9su$h3j$1@news.eternal-september.org>
Source record: 12426

<nm5k@wt.net> wrote in message
news:595ad544-ad70-424a-af1c-d459be9af7c9@h14g2000pri.googlegroups.com...
On Oct 7, 5:10 pm, Richard Clark <kb7...@comcast.net> wrote:
> from NYT article of the same name ("How Nonsense...")
> @http://www.nytimes.com/2009/10/06/health/06mind.html?em
>
> "...when a hiker stumbles across an easy chair
> sitting deep in the woods, as if dropped from
> the sky - the brain gropes for something, anything
> that makes sense.

Ya know, that don't sound like a half bad idea. I might just
have to do that some day. :/ I have the usual lawn type chairs,
but a thick padded recliner sounds like the cats ass.
Vinyl of course, due to the usual fowl fallout I'd probably encounter.
:/
Of course I'd then be motivated to add an end table for my radio,
small fridge to keep adult beverages, snacks, etc. Maybe a
flat screen so I can watch Wonder Woman and Lonesome Dove.
I wonder how a lost hiker would deal with something like that?
Would they bark at the moon? Or just sit down and drink all
my adult beverages while watching reruns of Lost in Space?
Only The Shadow and young Will Robinson know for sure.
****
This would be a good way to avoid ever getting lost. Just sit down in the
chair, and another hiker is CERTAIN to amble along to ask you what you are
doing!

2665. Re: The Need for Trolls - How Nonsense Sharpens the Intellect (but not the Troll's intellect)

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-08 18:49:44 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <naudnWi8lsDXqVPXnZ2dnUVZ_gudnZ2d@giganews.com>
Source record: 12427

Wayne wrote:
> <nm5k@wt.net> wrote in message
> news:595ad544-ad70-424a-af1c-d459be9af7c9@h14g2000pri.googlegroups.com...
> On Oct 7, 5:10 pm, Richard Clark <kb7...@comcast.net> wrote:
>> from NYT article of the same name ("How Nonsense...")
>> @http://www.nytimes.com/2009/10/06/health/06mind.html?em
>>
>> "...when a hiker stumbles across an easy chair
>> sitting deep in the woods, as if dropped from
>> the sky - the brain gropes for something, anything
>> that makes sense.
>
> Ya know, that don't sound like a half bad idea. I might just
> have to do that some day. :/ I have the usual lawn type chairs,
> but a thick padded recliner sounds like the cats ass.
> Vinyl of course, due to the usual fowl fallout I'd probably encounter.
> :/
> Of course I'd then be motivated to add an end table for my radio,
> small fridge to keep adult beverages, snacks, etc. Maybe a
> flat screen so I can watch Wonder Woman and Lonesome Dove.
> I wonder how a lost hiker would deal with something like that?
> Would they bark at the moon? Or just sit down and drink all
> my adult beverages while watching reruns of Lost in Space?
> Only The Shadow and young Will Robinson know for sure.
> **********
> This would be a good way to avoid ever getting lost. Just sit down in the
> chair, and another hiker is CERTAIN to amble along to ask you what you are
> doing!

If you come across one in this part of the country, it's much more likely to be an unpleasant guy with an A-47. You've probably stumbled across a major marijuana growing operation, and the smart thing to do is get the %@$! outta there before he ambles along.

Roy Lewallen, W7EL

2666. Re: Transmission Line Question

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-08 19:43:07 UTC
From: Owen Duffy <none@no.where>
Message-ID: <Xns9C9F4458DE7F3nonenowhere@61.9.191.5>
Source record: 12428

Owen Duffy <none@no.where> wrote in
news:Xns9C9E5238D81B1nonenowhere@61.9.191.5:

...
> The construction at
> http://www.mydarc.de/dk7zb/DK7ZB-Match/Schleife_Isolation.jpg is quite
> complex, containing what might be seen as as an electrical quarter
> wave transformer and the balun formed of a U shaped stub of physical
> length 0.5*0.25*0.66=0.08 wavelengths shunting one side of the DE, but
> this stub lies with its hot side against the cold boom forming another
> o/c TL element. If the balun shunts the DE with a high impedance, it
> will be due to not just the loop length, nor just the s/c stub length,
> but parallel resonance with the boom / half loop o/c stub.

I should have explained that looking at the reference picture, and
considering the insulation between cable and boom, I made the assumption
that the braid nearest the boom was connected to the DE, and other braid
end was effectively grounded.

It may actually be the other way round.

In any event, the physical construction is not IMHO well approximated by
the electrical equivalent shown, nor the description "This line is a
simplified coaxial sleeve balun to avoid sleeve-waves on the braid of the
cable running to the station". Making this balun adequately effective may
involve more than just cutting the line sections to the dimensions
indicated.

Owen.

2667. Re: Focused EMP pulse?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-08 19:48:01 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <2sfsc5hqcmlojedrmlfb2pr0ovj085d9am@4ax.com>
Source record: 12429

On Thu, 08 Oct 2009 10:19:47 -0700, Jim Lux <james.p.lux@jpl.nasa.gov>
wrote:

>One might want to distinguish between EMP from, e.g. a nuclear device,
>which is a fast pulse (the rise time of which is fundamentally limited
>by the size of the fireball.. EM energy from the far side takes longer
>to get to you than the near side)

Hi Jim,

Actually, a nuclear detonation propagates three forms of EMP. We both
discussed the fastest which correlates to discussions ongoing here in
the 1GHz and higher spectrum.

I will leave it to Art to wonder of the mysteries of an atom bomb
pushing aside magnetic field lines (what? no equilibrium?) for the
slowest pulse. For purposes of Focusing this EMP pulse he has his
shoebox sized 160M dipole/reflector technology to fall back on.
Perhaps he might consider a nuclear hand grenade. I would love to see
a youtube video of him pulling that pin and tossing it into the
reflector.

73's
Richard Clark, KB7QHC

2668. Re: Transmission Line Question

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-08 20:00:54 UTC
From: Owen Duffy <none@no.where>
Message-ID: <Xns9C9F475C79DA9nonenowhere@61.9.191.5>
Source record: 12430

Ian White GM3SEK <gm3sek@ifwtech.co.uk> wrote in news:6O1lIpHoLZzKFAM3
@ifwtech.co.uk:

...
> [1] All credit to DK7ZB for making the point that it's much easier to
> design high-performance yagis with a feedpoint impedance in the region
> of 25-30ohms. He feels that increasing the feedpoint impedance to 50
> ohms (eg by adding a closely-spaced first director) makes optimization
> more difficult, ...

Absolutely, and designing an effective, efficient, reproduceable matching
arrangement is an essential part of system design.

Whilst I have reservations about the design pics etc referenced, the
fundamentals of the Yagi itself look good, and with an impoved matching /
balun element, it looks like a practical high performance antenna. They
are certainly becoming more popular in this part of the world where most
home brew designs are DL6WU based (for good reasons, but peformance isn't
the principle goal).

An improved design could persue a more reproduceable balun that had an
adequately high shunt impedance on one side of the DE, or better, a
symmetric balun, and the shunt impedance was tuned out as part of the DE
tuning adjustment. The latter, if done properly, should result in more
symmetric current distribution on the DE, and pattern closer to that
modelled.

On that point, I am often somewhat amused at the out of hand dismissal of
gamma matches because of pattern distortion, and recommendation of
asymmetric baluns in their place. Symmetric baluns are just not very
popular with hams on VHF and UHF.

Owen

2669. Re: Transmission Line Question

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-08 23:32:41 UTC
From: Owen Duffy <none@no.where>
Message-ID: <Xns9C9F6B44BF6B0nonenowhere@61.9.191.5>
Source record: 12431

David Ryeburn <ryeburn@sfu.caz> wrote in
news:ryeburn-2FAF6A.21262507102009@morgoth.sfu.ca:

...
>
> It has to work well.
>

And, one is not restricted to two identical cables in parallel, it is possible to use more than two cables, and they do not need to be of the same Zo, but they must all be of the same electrical length for the simple explanation to hold.

Owen

2670. Re: Transmission Line Question

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-09 00:34:35 UTC
From: tom <news4792@taring.org>
Message-ID: <4ace858a$0$42839$8046368a@newsreader.iphouse.net>
Source record: 12432

Owen Duffy wrote:
> Whilst I have reservations about the design pics etc referenced, the
> fundamentals of the Yagi itself look good, and with an impoved matching /
> balun element, it looks like a practical high performance antenna. They
> are certainly becoming more popular in this part of the world where most
> home brew designs are DL6WU based (for good reasons, but peformance isn't
> the principle goal).
>
> An improved design could persue a more reproduceable balun that had an
> adequately high shunt impedance on one side of the DE, or better, a
> symmetric balun, and the shunt impedance was tuned out as part of the DE
> tuning adjustment. The latter, if done properly, should result in more
> symmetric current distribution on the DE, and pattern closer to that
> modelled.
>
> On that point, I am often somewhat amused at the out of hand dismissal of
> gamma matches because of pattern distortion, and recommendation of
> asymmetric baluns in their place. Symmetric baluns are just not very
> popular with hams on VHF and UHF.
>
> Owen

Interesting that you are among a group that uses the DL6WU designs.
They were very good for their day, but the K1FOs had better all over
performance, especially regarding wet weather degradation. And they
were around 20 years ago.

The T match combined with what I've always thought of as his "4 element
launcher" is pretty much bulletproof. I think he may have been the
first one to have the first director very tight to the DE, which had
very desirable effects.

All you had to do was splice the first 4 elements from one of his
designs onto a well designed group of directors and you had a great
antenna. OK, not quite that simple, but a good place to start.

And I agree on the gamma. I like the T, but have never been able to see
any real issues from a gamma. As a disclaimer, I only use gammas on 6m.

tom
K0TAR

2671. Re: Lightning Arrestors Question

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-09 01:44:15 UTC
From: Tom Horne <hornetd@gmail.com>
Message-ID: <fba98afd-b6b1-4981-a3e6-6d5e2aabfca4@f10g2000vbf.googlegroups.com>
Source record: 12433

On Sep 28, 10:20 am, "Rick" <rickn...@hotmail.com> wrote:
> > How does one protect against these without breaking the bank doing so ?
>
> Go on Mousers web site and look at gas tubes made by Littelfuse. Go to
> Littelfuses web site from the link on Mousers site and check out the specs
> on gas tubes. Compare them to the specs on your $50-70 commercial lightning
> arrestor.
> Then note that what's in that little casting box is two coax connectors, one
> capacitor and one $2-3 gas tube and you have the answer to your question.
> Myth revealed.
>
> Rick   K2XT

Rick or anyone else for that matter.

Can anyone suggest a strategy for reasonably safe operation of a
station when lightning is actually present in the area. The stations
located at the weather service offices are used to receive real time
weather reports from AROs. If they go off the air during lightning
events the whole network becomes useless to the weather service.
Television and radio stations continue to operate even after direct
strikes to their antennas so it must be possible to provide protection
that does not involve shutting down when lightning is present. Can
anyone draw me a written sketch of how that gets done so that I can
make a more knowledgeable decision on whether or not to try to
replicate the technique.

--
Tom Horne

2672. Re: fractals and HDTV antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-09 02:03:36 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <BvWdnUNRM4VnBFPXnZ2dnUVZ_qKdnZ2d@giganews.com>
Source record: 12434

J. B. Wood wrote:
> In article <Ce6dncVR9aT0EFbXnZ2dnUVZ_qednZ2d@giganews.com>, w7el@eznec.com
> wrote:
>
>> For sure. I was on the verge of returning my last analog TV because it
>> wouldn't get one channel at all, and several others were very poor. But
>> then I got an idea and added an attenuator at the antenna input. Problem
>> solved -- got a great picture on all channels. The new HDTV has a better
>> dynamic range and can put up with the strong signals, so it doesn't need
>> the attenuator. I'm about 10 - 15 miles line of sight from urban
>> broadcast towers. I use a commercial TV antenna in the attic.
>>
>> Roy Lewallen, W7EL
>
> Hello, Roy, and all. The trade-off here is that while putting a pad
> (attenuator) in front of the amplifier certainly results in a lower signal
> level at the amplifier output being presented to the down-stream
> components, the noise figure of the pad+amp cascade is increased by the
> attenuator loss (assuming a matched (e.g. 50 or 75 ohms)) pad. If the pad
> is placed at the amplifier output the noise figure is preserved but the
> dynamic range (usually specified in terms of a third-order intercept
> point) of the cascade is degraded. Noise figure and intercept points of
> RF distribution system amplifiers used in a shipboard environment have
> always been of vital interest to the USN. Sincerely, and 73s from N4GGO,
>
> John Wood (Code 5550) e-mail: wood@itd.nrl.navy.mil
> Naval Research Laboratory
> 4555 Overlook Avenue, SW
> Washington, DC 20375-5337

The attenuation of an attenuator at the input of an amplifier adds directly to the noise figure (e.g., a 20 dB pad increases the noise figure by 20 dB), but the dynamic range remains the same. The dynamic range is the ratio of the largest to smallest signal a receiver can handle with acceptable performance, often defined as the ratio of the third order intercept to the noise floor, which doesn't change when you add an attenuator. For example, just picking some numbers, suppose the noise floor is -100 dBm and the intercept 0 dBm, for a dynamic range of 100 dB. Add a 20 dB attenuator to the input. Now a signal (at the input of the attenuator) of -80 dBm will be at the noise floor, and +20 dBm at the third order intercept. The dynamic range is still 100 dB, just shifted 20 dB higher. Many of the finest receivers have switchable attenuators at the front end to increase the maximum signal handling capability.

In any case, there's no real alternative to an attenuator if the signal to a TV set is too large for it to handle.

Roy Lewallen, W7EL

2673. Re: Lightning Arrestors Question

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-09 02:37:13 UTC
From: Mike Luther <mike.luther@ziplog.com>
Message-ID: <4acea1d8$0$23780$bbae4d71@news.suddenlink.net>
Source record: 12435

Basic strategy

Tom Horne wrote:
> On Sep 28, 10:20 am, "Rick" <rickn...@hotmail.com> wrote:
>>> How does one protect against these without breaking the bank doing so ?
>> Go on Mousers web site and look at gas tubes made by Littelfuse. Go to
>> Littelfuses web site from the link on Mousers site and check out the specs
>> on gas tubes. Compare them to the specs on your $50-70 commercial lightning
>> arrestor.
>> Then note that what's in that little casting box is two coax connectors, one
>> capacitor and one $2-3 gas tube and you have the answer to your question.
>> Myth revealed.
>>
>> Rick K2XT
>
> Rick or anyone else for that matter.
>
> Can anyone suggest a strategy for reasonably safe operation of a
> station when lightning is actually present in the area. The stations
> located at the weather service offices are used to receive real time
> weather reports from AROs. If they go off the air during lightning
> events the whole network becomes useless to the weather service.
> Television and radio stations continue to operate even after direct
> strikes to their antennas so it must be possible to provide protection
> that does not involve shutting down when lightning is present. Can
> anyone draw me a written sketch of how that gets done so that I can
> make a more knowledgeable decision on whether or not to try to
> replicate the technique.
>
> --
> Tom Horne

Hi Tom. In general, remember that all lightning strike issues, from cloud to ground or .. ground to cloud, depending on how things develop focus on on thing. The radio wave which is produced by the affair is trying to distribute itself over the surface of the earth in the area of the strike point.

Recall that radio waves travel over the surface of the conductor involved. Thus, for example, the tower, pole, tree, building or whatever is the strike point is a conductor, good or bad, which is going to be used to carry the wave to the surface of the earth at that point. Then the wave expects to travel outward on the surface of the earth away from the focal point of the conductor until the energy of the wave is used up.

OK, think this way. A more or less usual lower frequency tower for an AM station in the 500-1650Khz band is actually built so that the metal tower is directly grounded at the earth surface. At the 1Mhz point, the tower height for a quarter wave tower is around 250 feet high. Actually, at the bottom of the tower there is usually a metal plate that spreads out over the surface of the earth that is tied to the tower bottom, (Legs?). As well, for transmitter antenna purposes, there are also a more or less standard 120 copper wires that go out like spokes in a wagon wheel at or just below the surface of the earth there too.

That means, very much surely, any lightning strike which hits that tower has a WONDERFUL way to go to the surface of the earth, then spread out over the surface away from the tower. The trick at this point is to keep the lightning strike from going on into the radio station from there. On a quarter wave length high tower, the conventional way to couple the transmitter to the tower is at the base to move out a little way from the tower, go up a little way with a separate wire, then couple the feed line to the tower via what is called a shunt feed system. It typically has a capacitor in series with the coaxial cable center conductor. And .. in all cases, the cable that goes back to the station will be close to or .. even in some cases under the surface of the earth for that run.

The lightning protector will be out at the tower and will arc or flash the lightning bolt that might go down the feed line to the station so that it shorts the feed line for that split second for SURE to the earth and that collection of the metal plates and radial wires that make SURE the strike out over the surface of the earth and NOT back toward the station. As well, there is usually another lightning protector which does a similar job back where the feed line goes into the station as well.

Using this technique, sure for a split second the station signal is shorted to ground when the strike is there. But it does NOT affect the station.

Now .. fast forward to VHF TV, FM stations and HF shortwave stations. For towers for FM or TV stations, they may be MUCH higher, But the feed lines for the antenna or antennas on them are brought down the tower to GROUND level. There they are also put through lightning protector devices that do the same stunt of shunting the strike to the EARTH at the bottom of the tower. Then, the feed lines are send back to the station at, again, a same low level which protects them from carrying in the strike back to the station, as above.

Variations of this sort of design are also present in on-building antenna systems that are done right to protect the equipment from strikes. One way or another the design ALWAYS should provide a VERY GOOD electrical path from the antenna to the earth, that is designed to have enough metal SURFACE to get the hit down to the earth without burning the conductor up. And again, this travels on the SURFACE of the wire, metal strip, pole or whatever.

Bottom line. You always create a really good metal surface conductor that shunts things to the earth. And connect the feed line(s) for the antenna so that they are isolated from this good path to ground by bonding the shielding to the earth bound system, while providing a lightning protector to guarantee that the hit will pop to the ground bound side on a hit, while positioning the

feed line so that it is a much less attractive path for the hit to go in to take down the equipment at or in the building.

There are other things that are also of importance to a radio operation for protection from power line connected strikes, as well as overhead phone line strikes and copper wire cable system connections too. But, in general, the same details as above are in place for them too.

My HF site gets hit at least two or three times directly every year. I operate right through thunderstorms, whatever in contests and have for decades now on 40 and 80 meter CW. With additional protection for the equipment this site is up 24X7 and hasn't lost a single radio, computer, modem, or ANYTHING for over 30 years now, though I also know enough to use isolation transformers and linear power supply computer systems, plus very carefully planned relay rack RF ground and surge protection techniques that do *NOT* use switching power supply CD voltage operations for computers and so on.

W5WQN

--

--> Sleep well; OS2's still awake! ;)

Mike Luther

2674. Re: Lightning Arrestors Question

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-09 02:54:15 UTC
From: "Geoffrey S. Mendelson" <gsm@mendelson.com>
Message-ID: <slrnhct9al.uru.gsm@cable.mendelson.com>
Source record: 12436

Tom Horne wrote:
> Can anyone suggest a strategy for reasonably safe operation of a
> station when lightning is actually present in the area. The stations
> located at the weather service offices are used to receive real time
> weather reports from AROs. If they go off the air during lightning
> events the whole network becomes useless to the weather service.
> Television and radio stations continue to operate even after direct
> strikes to their antennas so it must be possible to provide protection
> that does not involve shutting down when lightning is present. Can
> anyone draw me a written sketch of how that gets done so that I can
> make a more knowledgeable decision on whether or not to try to
> replicate the technique.

Got to polyphaser's web site, read their white papers and contact them.
Between them and Trans-Tector (they recently merged), they do antennas and
power lines for things like air traffic control centers.

Geoff.

--
Geoffrey S. Mendelson, Jerusalem, Israel gsm@mendelson.com N3OWJ/4X1GM

2675. Re: Lightning Arrestors Question

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-09 06:47:07 UTC
From: Szczepan Bialek <sz.bialek@wp.pl>
Message-ID: <hamaom$2m6$1@node1.news.atman.pl>
Source record: 12437

"Tom Horne" <hornetd@gmail.com> wrote
news:fba98afd-b6b1-4981-a3e6-6d5e2aabfca4@f10g2000vbf.googlegroups.com...
On Sep 28, 10:20 am, "Rick" <rickn...@hotmail.com> wrote:
>> > How does one protect against these without breaking the bank doing so ?
>
>> Go on Mousers web site and look at gas tubes made by Littelfuse. Go to
> Littelfuses web site from the link on Mousers site and check out the specs
> on gas tubes. Compare them to the specs on your $50-70 commercial
> lightning
> arrestor.
> Then note that what's in that little casting box is two coax connectors,
> one
> capacitor and one $2-3 gas tube and you have the answer to your question.
> Myth revealed.
>
>> Rick K2XT

>Rick or anyone else for that matter.

>Can anyone suggest a strategy for reasonably safe operation of a
station when lightning is actually present in the area. The stations
located at the weather service offices are used to receive real time
weather reports from AROs. If they go off the air during lightning
events the whole network becomes useless to the weather service.
Television and radio stations continue to operate even after direct
strikes to their antennas so it must be possible to provide protection
that does not involve shutting down when lightning is present. Can
anyone draw me a written sketch of how that gets done so that I can
make a more knowledgeable decision on whether or not to try to
replicate the technique.

Here are the two ways.

1. Provocation of lightning strikes, or
2. Eliminating of lightning strikes.

The instalation are the same only "tipping" is different. The blunt
provocate and the sharp eliminate.
Which is better I do not know.
S*

2676. Re: Transmission Line Question

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-09 07:45:26 UTC
From: Ian White GM3SEK <gm3sek@ifwtech.co.uk>
Message-ID: <LZqZ9iGWouzKFAbz@ifwtech.co.uk>
Source record: 12438

Apologies for what's going to be a fairly controversial posting and then not being able to reply, as I'll be away from this newsgroup for a few days.

Forgive me also for splicing Owen's and Tom's postings together and replying to both at once.

Owen wrote:

>> Whilst I have reservations about the design pics etc referenced, the
>>fundamentals of the Yagi itself look good, and with an impoved
>>matching / balun element, it looks like a practical high performance
>>antenna. They are certainly becoming more popular in this part of the
>>world where most home brew designs are DL6WU based (for good reasons,
>>but peformance isn't the principle goal).
>> An improved design could persue a more reproduceable balun that had
>>an adequately high shunt impedance on one side of the DE, or better,
>>a symmetric balun, and the shunt impedance was tuned out as part of
>>the DE tuning adjustment. The latter, if done properly, should result
>>in more symmetric current distribution on the DE, and pattern closer
>>to that modelled.
>> On that point, I am often somewhat amused at the out of hand
>>dismissal of gamma matches because of pattern distortion, and
>>recommendation of asymmetric baluns in their place. Symmetric baluns
>>are just not very popular with hams on VHF and UHF.
>> Owen
>

The most that anyone can claim for a balun is that it "helps to promote" a symmetric current distribution on the DE. Current baluns are quite successful in enforcing equal and opposite currents at the feedpoint itself, but that is only one of three requirements for a symmetric current distribution over the entire DE. The other two are symmetry in the DE's physical structure and symmetry in its environment, and the balun can do nothing to 'fix' those.

I'm not quite sure what you mean by "symmetric balun". If you look closely enough, no balun can be completely symmetric in every detail... but certainly some baluns and feed arrangements are much more symmetrical than others. Some help to promote symmetry, while others are "not part of the solution, but part of the problem".

I'd place the gamma match firmly in that second category. Far from promoting a symmetrical current distribution in the DE, by its one-sided physical structure it *creates* electrical asymmetry. An asymmetrical current distribution at the feedpoint implies that there will be an 'I3'

common-mode current on the feedline, and the gamma match also provides a hard-wired connection to launch this current onto the outside of the coax (and usually onto the metal boom as well).

As you may gather, I don't like gamma matches on principle! That has been confirmed by practical experience with a gamma-matched yagi for 50MHz (which I bought as a kit, foolishly thinking it would save time). RFI on both transmitting and receiving was severe, but cleared up remarkably when the DE was rebuilt to use centre feed through a choke balun. The improvement was simply due to blocking the common-mode current that the gamma match had been launching onto the feedline, boom, mast, rotator cable...

Tom wrote, replying to Owen:

>Interesting that you are among a group that uses the DL6WU designs.
>They were very good for their day, but the K1FOs had better all over
>performance, especially regarding wet weather degradation. And they
>were around 20 years ago.
>
>The T match combined with what I've always thought of as his "4 element
>launcher" is pretty much bulletproof. I think he may have been the
>first one to have the first director very tight to the DE, which had
>very desirable effects.
>
>All you had to do was splice the first 4 elements from one of his
>designs onto a well designed group of directors and you had a great
>antenna. OK, not quite that simple, but a good place to start.
>

DL6WU's yagi development pre-dates K1FO's work, but the latter was influenced by earlier development work by Tom Kirby, W1EJ. We also have to remember this was before the modern era of instant communication; people in different countries often worked for years on very similar projects with no idea of each other's existence.

Both DL6WU and K1FO designed 'families' of long yagis based on the same "launcher" structure (the first 4-6 elements) followed by a suitable array of directors. Also, both of them used a very close-spaced 1st director to increase the feedpoint impedance of the DE - it had been done before by cut-and-try, but DL6WU was probably the first to do this *knowingly* and explain why. (As an aside, G0KSC's new loop feed is doing essentially the same; the typical width of the loop is very similar to the typical spacing of a close-spaced 1st director.)

>And I agree on the gamma. I like the T, but have never been able to
>see any real issues from a gamma. As a disclaimer, I only use gammas
>on 6m.

See above!

Back in a few days - have fun, guys.

--

73 from Ian GM3SEK
http://www.ifwtech.co.uk/g3sek

2677. mesh radiator

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-10 00:31:50 UTC
From: Art Unwin <arthurunwin@gmail.com>
Message-ID: <4773615c-ddea-4ab2-b58b-bafbf9559540@11g2000yqp.googlegroups.com>
Source record: 12439

I have put the mesh radiator on my page
Nothing more to add, you have it all.

Unwin Antennas

2678. Re: mesh radiator

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-10 00:41:44 UTC
From: tom <news4792@taring.org>
Message-ID: <4acfd840$0$28114$8046368a@newsreader.iphouse.net>
Source record: 12440

Art Unwin wrote:
> I have put the mesh radiator on my page
> Nothing more to add, you have it all.
>
> Unwin Antennas

Zero is still zero.

tom
K0TAR

2679. Re: mesh radiator

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-10 01:46:53 UTC
From: tom <news4792@taring.org>
Message-ID: <4acfe7f2$0$42842$8046368a@newsreader.iphouse.net>
Source record: 12441

Art Unwin wrote:
> I have put the mesh radiator on my page
> Nothing more to add, you have it all.
>
> Unwin Antennas

And the Unwin Antennas is a nice touch.

"Unwin Antennas, where nothing is what it claims to be"

tom
K0TAR

2680. Re: mesh radiator

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-10 03:51:10 UTC
From: jaroslav lipka <jarolipka@gmail.com>
Message-ID: <0f4f9b9e-6d74-4229-bd11-beffd058a31a@t11g2000prh.googlegroups.com>
Source record: 12442

On Oct 10, 9:46 am, tom <news4...@taring.org> wrote:
> Art Unwin wrote:
> > I have put the mesh radiator on my page
> > Nothing more to add, you have it all.
>
> > Unwin Antennas
>
> And the Unwin Antennas is a nice touch.
>
> "Unwin Antennas, where nothing is what it claims to be"
>
> tom
> K0TAR

Tom
It was not so long ago you were whinging because art had not
told you how to build his antenna, I suggest you build one and find
out if it works before you
rubbish all, stop acting like the asshole you are, either you are
interested or you are not, make up your mind. Your knee jerk posts are
getting booring.

Jaro

2681. Re: mesh radiator

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-10 04:04:00 UTC
From: tom <news4792@taring.org>
Message-ID: <4ad007a8$0$28126$8046368a@newsreader.iphouse.net>
Source record: 12443

jaroslav lipka wrote:
> On Oct 10, 9:46 am, tom <news4...@taring.org> wrote:
>> Art Unwin wrote:
>>> I have put the mesh radiator on my page
>>> Nothing more to add, you have it all.
>>> Unwin Antennas
>> And the Unwin Antennas is a nice touch.
>>
>> "Unwin Antennas, where nothing is what it claims to be"
>>
>> tom
>> K0TAR
>
> Tom
> It was not so long ago you were whinging because art had not
> told you how to build his antenna, I suggest you build one and find
> out if it works before you
> rubbish all, stop acting like the asshole you are, either you are
> interested or you are not, make up your mind. Your knee jerk posts are
> getting booring.
>
> Jaro

So where are these antennas? I haven't seen a link.

tom
K0TAR

2682. Re: mesh radiator

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-10 05:49:41 UTC
From: jaroslav lipka <jarolipka@gmail.com>
Message-ID: <2e579297-efc5-4bef-9045-7fbca27bc0db@a39g2000pre.googlegroups.com>
Source record: 12444

On Oct 10, 12:04 pm, tom <news4...@taring.org> wrote:
> jaroslav lipka wrote:
> > On Oct 10, 9:46 am, tom <news4...@taring.org> wrote:
> >> Art Unwin wrote:
> >>> I have put the mesh radiator on my page
> >>> Nothing more to add, you have it all.
> >>> Unwin Antennas
> >> And the Unwin Antennas is a nice touch.
>
> >> "Unwin Antennas, where nothing is what it claims to be"
>
> >> tom
> >> K0TAR
>
> > Tom
> >   It was not so long ago you were whinging because art had not
> > told you how to build his antenna, I suggest you build one and find
> > out if it works before you
> > rubbish all, stop acting like the asshole you are, either you are
> > interested or you are not, make up your mind. Your knee jerk posts are
> > getting booring.
>
> > Jaro
>
> So where are these antennas? I haven't seen a link.
>
> tom
> K0TAR

Tom
And you call yourself intelligent, the fact you even asked the
question shows what a dipstick you are.
Read and absorb.

Jaro

2683. News Item: NASA plunges a chair from orbit into the forest, an ottoman follows to observe the effects

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-10 06:08:45 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <6v80d554ul7sch08dr7ultsiigh5ssbekm@4ax.com>
Source record: 12445

http://unwinantennas.com/

73's
Richard Clark, KB7QHC

2684. HERTZIAN WAVES.

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-10 07:47:12 UTC
From: Szczepan Bia&#65533;ek <sz.bialek@wp.pl>
Message-ID: <hap2kogtk1@node1.news.atman.pl>
Source record: 12446

See: http://earlyradiohistory.us/1901hz.htm

It was written in 1901. In that time the waves were the "electric waves".
When they becomes the TEM (electromagnetic transverse waves)?
S*

2685. Re: mesh radiator

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-10 10:59:35 UTC
From: Richard Fry <rfry@adams.net>
Message-ID: <d0a6f2e8-9514-46f8-b0c0-595f0586a869@c3g2000yqd.googlegroups.com>
Source record: 12447

On Oct 9, 7:31 pm, Art Unwin <arthurun...@gmail.com> wrote:
> I have put the mesh radiator on my page
> Nothing more to add, you have it all.

Not really.

For examples, over a given r-f bandwidth:

- Radiation pattern throughout the free-space radiation sphere?
- Free-space gain with respect to an isotropic radiator (dBi) or a matched, 1/2-wave dipole (dBd)?

Note that any particular r-f termination may have low feedpoint VSWR over a considerable bandwidth, for some reference impedance value -- but that does not necessarily make it a useful antenna (think: dummy load).

RF

2686. Re: mesh radiator

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-10 14:59:40 UTC
From: Richard Fry <rfry@adams.net>
Message-ID: <4b0333a7-3733-425a-a245-3c3957ffbbc9@d10g2000yqh.googlegroups.com>
Source record: 12448

In my previous post in this thread I asked about the gain and pattern of this mesh antenna. Hopefully the inventor will respond when he is able.

But being curious and not wanting to wait, I went back to his previous thread about small antennas, and modeled what he posted there -- just to learn what NEC would show for those parameters.

The results are given in the link below.

The h-plane azimuth gain of this mesh antenna is far from uniform, and its 0.0134 + j85.45 ohm feedpoint impedance is very unfriendly -- though the frequency is centered in Art's stated VSWR bandwidth.

Even if this feedpoint Z was perfectly matched there to a 72 ohm balanced transmission line, this mesh antenna would still be a poor radiator compared to a 1/2-wave dipole.

http://i62.photobucket.com/albums/h85/rfry-100/Arts_Mesh_Antenna.jpg

RF

2687. Re: an ontopic post about code

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-10 17:17:41 UTC
From: kb9rqz@yahoooo.com
Message-ID: <hdg1d5dp2jkd1052m7otmq29vudhs4475u@4ax.com>
Source record: 12449
Cross-posted to: alt.ham-radio.vhf-uhf,rec.radio.amateur.policy,rec.radio.amateur.antenna

On Fri, 01 Dec 2006 09:36:47 -0800, John Smith
<assemblywizard@gmail.com> wrote:

>K4YZ wrote:
>> Nope.
>>
>> The IP Address and servers are complete proof that I do NOT share
>> any annonymous character's "address".
>>
>> Sounds like Lennie, to me....
>>
>> Steve, K4YZ
>>
>
>To anyone with even an elementary understanding of anonymous proxies,
>anonymous remailers, zombie backdoors, etc., the ability to change ones
>IP address and header details is simplistic, indeed, with little time
>spent anyone can appear to be "coming" from anywhere in the world.
>
>You waste my time. Worse, you think us all idiots here. You remind me
>of the "street smart" prosecutors and defense attorneys who stack jurys
>with members of little or no technical knowledge and then call in
>"expert witnesses" and propose arguments of technical details to boggle
>their minds.
>
>You have only proven that you, yourself are either ignorant to such
>technical details, or else you are indeed street smart, I favor the
>latter in this case (however, if you in the dark about such things, 15
>minutes on google will enlighten you.)
>
>JS

"one useless man is disgrace 2 become a law firm 3 or more become a congress"
adams

woger you are a Congress all in your own head
"http://www.3ix.org/sys/aff.php?aff=7439" target="_blank"

altopia is never used by KB9RQZ
http://kb9rqz.cc.cc
http://kd8ctl.com
nor is Konstans@hotmail.com ever
btw i can be found at
17366 N River Rd

Chassel Mi

but the cowards asking lack the gut to act

2688. Re: mesh radiator

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-10 23:48:42 UTC
From: tom <news4792@taring.org>
Message-ID: <4ad11dba$0$42851$8046368a@newsreader.iphouse.net>
Source record: 12450

jaroslav lipka wrote:
>
> Tom
> And you call yourself intelligent, the fact you even asked the
> question shows what a dipstick you are.
> Read and absorb.
>
> Jaro

So then, based on all you've learned from Art, why don't you give a brief description of an antenna based on Art's principles. Please give some dimensions.

tom
K0TAR

2689. Re: mesh radiator

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-10 23:49:45 UTC
From: tom <news4792@taring.org>
Message-ID: <4ad11df9$0$42851$8046368a@newsreader.iphouse.net>
Source record: 12451

jaroslav lipka wrote:
> Tom
> And you call yourself intelligent, the fact you even asked the
> question shows what a dipstick you are.
> Read and absorb.
>
> Jaro

Oh, and let's make it a nice simple antenna for say 40m.

tom
K0TAR

2690. Re: mesh radiator

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-11 00:38:14 UTC
From: jaroslav lipka <jarolipka@gmail.com>
Message-ID: <887fcd25-5cbb-4f11-9389-d0cd618f01f2@m33g2000pri.googlegroups.com>
Source record: 12452

On Oct 11, 7:49 am, tom <news4...@taring.org> wrote:
> jaroslav lipka wrote:
> > Tom
> > And you call yourself intelligent, the fact you even asked the
> > question shows what a dipstick you are.
> > Read and absorb.
>
> > Jaro
>
> Oh, and let's make it a nice simple antenna for say 40m.
>
> tom
> K0TAR

Tom

There you go again asking others to do your work,
do you ever do things for yourself.
You asked for the information, you got it, use it or shut it.

Jaro

2691. Re: mesh radiator

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-11 00:54:20 UTC
From: tom <news4792@taring.org>
Message-ID: <4ad12cbc$0$28113$8046368a@newsreader.iphouse.net>
Source record: 12453

jaroslav lipka wrote:
> On Oct 11, 7:49 am, tom <news4...@taring.org> wrote:
>> jaroslav lipka wrote:
>>> Tom
>>> And you call yourself intelligent, the fact you even asked the
>>> question shows what a dipstick you are.
>>> Read and absorb.
>>> Jaro
>> Oh, and let's make it a nice simple antenna for say 40m.
>>
>> tom
>> K0TAR
>
> Tom
>
> There you go again asking others to do your work,
> do you ever do things for yourself.
> You asked for the information, you got it, use it or shut it.
>
> Jaro

Exactly the answer I expected.

So you don't understand him either, and are just posing.

GOAT! (Means "GO Away Troll" since you assuredly don't know that)

tom
K0TAR

2692. Re: mesh radiator

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-11 01:34:40 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <c9d2d55dg8qac9vbv3o2inpeqgr1j0vbtm@4ax.com>
Source record: 12454

On Sat, 10 Oct 2009 19:54:20 -0500, tom <news4792@taring.org> wrote:

>GOAT! (Means "GO Away Troll" since you assuredly don't know that)

Please, Tom, this is like rejecting the discovery of stumbling across
a piano bench frozen into a glacier. Art would expect us to next find
the piano, look at the music stand and discover the concert that had
been composed.

73's
Richard Clark, KB7QHC

2693. Re: mesh radiator

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-11 01:42:04 UTC
From: tom <news4792@taring.org>
Message-ID: <4ad137ec$0$28120$8046368a@newsreader.iphouse.net>
Source record: 12455

Richard Clark wrote:
>
> Please, Tom, this is like rejecting the discovery of stumbling across
> a piano bench frozen into a glacier. Art would expect us to next find
> the piano, look at the music stand and discover the concert that had
> been composed.
>
> 73's
> Richard Clark, KB7QHC

Of course. You are correct. How foolish of me.

tom
K0TAR

2694. Re: mesh radiator

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-11 03:03:20 UTC
From: JIMMIE <JIMMIEDEE123@YAHOO.COM>
Message-ID: <e7fb2422-c372-4f4e-8b80-f0f09ade8533@a32g2000yqm.googlegroups.com>
Source record: 12456

On Oct 10, 9:42 pm, tom <news4...@taring.org> wrote:
> Richard Clark wrote:
>
> > Please, Tom, this is like rejecting the discovery of stumbling across
> > a piano bench frozen into a glacier. Art would expect us to next find
> > the piano, look at the music stand and discover the concert that had
> > been composed.
>
> > 73's
> > Richard Clark, KB7QHC
>
> Of course. You are correct. How foolish of me.
>
> tom
> K0TAR

I think Art has learned to do sock puppets.

Jimmie

2695. Re: mesh radiator

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-11 03:59:28 UTC
From: orfus <orfus@orfus.net>
Message-ID: <CKcAm.328069$vp.4938@newsfe12.iad>
Source record: 12457

Wow! this Art guy is good, he actually got you to do his simulations for
him...
Olivier

Richard Fry wrote:
> In my previous post in this thread I asked about the gain and pattern
> of this mesh antenna. Hopefully the inventor will respond when he is
> able.
>
> But being curious and not wanting to wait, I went back to his previous
> thread about small antennas, and modeled what he posted there -- just
> to learn what NEC would show for those parameters.
>
> The results are given in the link below.
>
> The h-plane azimuth gain of this mesh antenna is far from uniform, and
> its 0.0134 + j85.45 ohm feedpoint impedance is very unfriendly --
> though the frequency is centered in Art's stated VSWR bandwidth.
>
> Even if this feedpoint Z was perfectly matched there to a 72 ohm
> balanced transmission line, this mesh antenna would still be a poor
> radiator compared to a 1/2-wave dipole.
>
> http://i62.photobucket.com/albums/h85/rfry-100/Arts_Mesh_Antenna.jpg
>
> RF

2696. Re: mesh radiator

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-11 12:03:02 UTC
From: Gerard <pe1oud@amsat.org>
Message-ID: <4ad1cc80$0$34886$dbd49001@news.wanadoo.nl>
Source record: 12458

"Richard Clark" <kb7qhc@comcast.net> schreef in bericht
news:c9d2d55dg8qac9vbv3o2inpeqgr1j0vbtm@4ax.com...
> On Sat, 10 Oct 2009 19:54:20 -0500, tom <news4792@taring.org>
> wrote:
>
> Please, Tom, this is like rejecting the discovery of stumbling
> across
> a piano bench frozen into a glacier. Art would expect us to
> next find
> the piano, look at the music stand and discover the concert
> that had
> been composed.
Hence, Art is an evolutionist? ;-)

73 - Gerard Oppewal - PE1OUD

2697. Re: mesh radiator

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-11 18:07:38 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <9h64d5pfc1h50ans88u17oktks1fk7428r@4ax.com>
Source record: 12459

On Sun, 11 Oct 2009 14:03:02 +0200, "Gerard" <pe1oud@amsat.org> wrote:

>Hence, Art is an evolutionist? ;-)

Evolved? Never.
Revolved (Corriolis)? Perhaps.
Devolved? Almost certainly.
According to Art, himself, he would a levitationist.

What would account for his astonishing description?
"Thus we have three types of Leptons
each able to produce one of the primary colours,
red, green or yellow."

I wonder what happened to Blue (or ultra blue for that matter, or even X-ray). It might astonish Art (belay my last, that isn't going to happen) that red and green combined ARE yellow (how does that not happen in Art's side of reality?). Even Newton understood this. Of course, this may be Art's spit-on-Newton week.

73's
Richard Clark, KB7QHC

2698. Re: mesh radiator

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-12 01:39:00 UTC
From: tom <news4792@taring.org>
Message-ID: <4ad28927$0$42845$8046368a@newsreader.iphouse.net>
Source record: 12460

Frank wrote:
>> Tom
>> It was not so long ago you were whinging because art had not
>> told you how to build his antenna, I suggest you build one and find
>> out if it works before you
>> rubbish all, stop acting like the asshole you are, either you are
>> interested or you are not, make up your mind. Your knee jerk posts are
>> getting booring.
>>
>> Jaro
>
> Art is the new Chip Cohen. Jaro is the new Phil Salkind. It has all
> been done before.
>

Biggest difference being that Chip at least had some connection with
reality. And Jaro is an idiot or a close approximation of one.

tom
K0TAR

2699. Re: mesh radiator

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-12 01:52:40 UTC
From: "Sal M. Onella" <sobars@cox.net>
Message-ID: <fd0e14ac-8874-4b61-a8c7-1f6ae01ae3db@b15g2000yqd.googlegroups.com>
Source record: 12461

On Oct 10, 8:03 pm, JIMMIE <JIMMIEDEE...@YAHOO.COM> wrote:
> On Oct 10, 9:42 pm, tom <news4...@taring.org> wrote:
>
> > Richard Clark wrote:
>
> > > Please, Tom, this is like rejecting the discovery of stumbling across
> > > a piano bench frozen into a glacier. Art would expect us to next find
> > > the piano, look at the music stand and discover the concert that had
> > > been composed.
>
> > > 73's
> > > Richard Clark, KB7QHC
>
> > Of course. You are correct. How foolish of me.
>
> > tom
> > K0TAR
>
> I think Art has learned to do sock puppets.
>
> Jimmie

Agreed.

"Art Unwin" is playing some of you guys like a cheap fiddle. For all
we know, Art is a pimply-faced 14-year old, armed only with a
thesaurus and delusions of adequacy. He might qualify as Exhibit A in
a college course in Abnormal Psychology.

I stopped taking any of his posts seriously several months ago.
Coming soon, the next step: ignoring any threads in which his name
appears.

Sal

2700. AIM 4170C antenna analyzer

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-12 02:50:18 UTC
From: Peter <pm@hotmail.com>
Message-ID: <XoidnVzSd8L3BE_XnZ2dnUVZ8oednZ2d@westnet.com.au>
Source record: 12462

Hi all

I'm looking to purchase an antenna analyser and after reviewing the various products on offer and viewing reviews at eham I'm leaning towards the AIM4170 analyzer.
The eham reviews seem very positive therefore I'm keen to hear the experience of others in this group regarding this product and perhaps some of its short comings.
I previously ask for comments on the MFJ-269 analyser and found comments valuable.

Thanks for your time.

--
Peter VK6YSF

http://members.optushome.com.au/vk6ysf/vk6ysf/main.htm

2701. Re: AIM 4170C antenna analyzer

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-12 09:06:08 UTC
From: Ian Wade G3NRW <g3nrw@yahoo.co.uk>
Message-ID: <PQ3cW1GAGv0KFwDG@ntlworld.com>
Source record: 12463

From: Peter <pm@hotmail.com>
Date: Mon, 12 Oct 2009 Time: 10:50:18

>Hi all
>
>I'm looking to purchase an antenna analyser and after reviewing the various
>products on offer and viewing reviews at eham I'm leaning towards the
>AIM4170 analyzer.
>The eham reviews seem very positive therefore I'm keen to hear the
>experience of others in this group regarding this product and perhaps some
>of its short comings.
>I previously ask for comments on the MFJ-269 analyser and found comments
>valuable.
>
>Thanks for your time.
>

Hi Peter,

I bought an AIM4170 about 10 months ago, and have absolutely no regrets.
It does everything as advertised, and is very easy to use. Apart from
all the good comments on eham.net, the unit doesn't eat batteries,
doesn't suffer from broadcast station interference, and doesn't burn out
if you set switches in the wrong order.

Other things I like about the 4170:
~~~~~~~~~~~~~~~~~~~~~~~~~~
-- It's easy to measure antenna feedpoint impedances (as well as
feedline input impedances).

-- It provides two sets of Smith charts.

-- It's easy to keep screen shots of your measurements, so you can refer
back to them later -- no more scribbling numbers on scraps of paper.
~~~~~~~~~~~~~~~~~~~~~~~~~~

You can't do those things with legacy analyzers.

Another benefit of the 4170 is that you can operate it remotely. This
means that you can leave the unit in the shack, then go out into the
yard with a notebook PC and control the 4170 from the notebook. Thus you
can make your antenna adjustments without having to trek back into the
house each time you make a change. Full details here:

<http://homepage.ntlworld.com/wadei/AIM4170/Remote%20AIM%20Control%20HOWT
O%20-%20090106.pdf>

The only snag with the 4170 is that the upper frequency limit is 170MHz, but that doesn't bother me.

If you have more questions, take a look at the 4170 forum:

<http://aim4150.proboards.com/index.cgi?board=analyzer>

I agonized for a long time over the price (and watched it getting more and more expensive as the GB pound slumped against the US$!). In the end, however, I figured that the 4170 was only a few tens of dollars more expensive than the legacy analyzers, and you get so much more. Go for it!

--
73
Ian, G3NRW

2702. Re: fractals and HDTV antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-12 10:31:48 UTC
From: christofire <christofire@btinternet.com>
Message-ID: <ILWdnY_PO6c9mE7XnZ2dnUVZ8gSdnZ2d@bt.com>
Source record: 12464

"Frank" <fmerriman@nycny.net> wrote in message
news:84907a0f-2e82-476c-9e8a-d585835639d6@d34g2000vbm.googlegroups.com...
>
>>
>> Some book-sized efforts contain a PCB bow tie in front of a plane
>> reflector.
>> In others, the shapes of the elements are fiddled around with
>> likehttp://www.instructables.com/id/How_to_make_a_fractal_antenna_for_HDT...
>>
>> Chris
>
> You are just asking to be sued by Nathan "Chip" Cohen, PhD.

Why's that then?

Chris

2703. Separation required between side mount Jpole and Metal Tower

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-12 19:13:46 UTC
From: Tom Horne <hornetd@gmail.com>
Message-ID: <6bd54cdb-f254-4ed4-9941-1eb66b48f214@e18g2000vbe.googlegroups.com>
Source record: 12465

I am trying to find out how far an open stub, dual band, two meter and seventy centimeter J-pole needs to be from a parallel metal support mast on which it is side mounted to avoid detuning the antenna. I'm not concerned about the effect on the radiation pattern as I can mount the antenna on the side of the mast towards the area I'm trying to cover. I have to build brackets to accomplish this mounting and I would like to avoid building multiple sets of them just to test for clearance. If anyone has the requisite skills and tools I would appreciate any information that can be readily found by modeling this antenna in proximity to a metal support mast consisting of four inch aluminum tube. I have two AB-952 masts on which to mount six antennas. Three of them will be two meter omnidirectional antennas. Since we need two limit interaction and interference between the three two meter stations We will be mounting one of these at the top of one mast, one a third of the way up the second mast, and the third two thirds of the way up the first mast. Both masts will be deployed with extension kits so they will be fifty feet in total height.

In truth I just do not have the skills or the time to develop them to do this so any help would be greatly appreciated. This is for a public service event that is now only two weeks away.

--
Tom Horne, W3TDH

2704. Re: Separation required between side mount Jpole and Metal Tower

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-13 04:29:52 UTC
From: "Sal M. Onella" <sobars@cox.net>
Message-ID: <a68fad94-c4c6-449c-9ae0-e5ac8a9d4356@37g2000yqm.googlegroups.com>
Source record: 12466

On Oct 12, 12:13 pm, Tom Horne <horn...@gmail.com> wrote:
> I am trying to find out how far an open stub, dual band, two meter and
> seventy centimeter J-pole needs to be from a parallel metal support
> mast on which it is side mounted to avoid detuning the antenna. I'm
> not concerned about the effect on the radiation pattern as I can mount
> the antenna on the side of the mast towards the area I'm trying to
> cover. I have to build brackets to accomplish this mounting and I
> would like to avoid building multiple sets of them just to test for
> clearance. If anyone has the requisite skills and tools I would
> appreciate any information that can be readily found by modeling this
> antenna in proximity to a metal support mast consisting of four inch
> aluminum tube. I have two AB-952 masts on which to mount six
> antennas. Three of them will be two meter omnidirectional antennas.
> Since we need two limit interaction and interference between the three
> two meter stations We will be mounting one of these at the top of one
> mast, one a third of the way up the second mast, and the third two
> thirds of the way up the first mast. Both masts will be deployed with
> extension kits so they will be fifty feet in total height.
>
> In truth I just do not have the skills or the time to develop them to
> do this so any help would be greatly appreciated. This is for a
> public service event that is now only two weeks away.
>
> --
> Tom Horne, W3TDH

I'm not a modeler. However, I did investigate this experimentally a
few years ago, although not with 4-inch aluminum mast. I used a 10-
foot section of one-inch galvanized mast. The tested j-pole was a 2m
copper pipe version, hanging vertically in the open, suspended by a
piece of line.

On transmit, I tuned to a simplex channel, keyed up, ID'ed and noted a
small amount of reflected power. I locked the key and slowly moved
the section of mast toward the antenna. I had to get within one and
one-half inches (1.5") before the reflected power increased.

On receive, I tuned to a repeater with a ragchew in progress and
opened the squelch. I inserted a switchable attenuator in line with
the radio and set the attenuator to the crappiest signal I could copy
-- one dB away from unintelligible. Enter the mast section, and once
again, I had to get within an inch and a half to lose the
conversation.

The direction from which I approached the antenna didn't seem to
matter, but I didn't do any real measurements of pattern distortion.

I hope this helps you.

Sal
(KD6VKW)

2705. The World Largest Online Digital Library.

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-13 09:02:38 UTC
From: Kitaabfair <cap.hat09@gmail.com>
Message-ID: <a1cfe075-7692-4599-b7af-9c67d1c92d11@w37g2000prg.googlegroups.com>
Source record: 12467

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and Get more Information about World Hotels & Motels.
www.kitaabfair.com

2706. Re: AIM 4170C antenna analyzer

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-13 11:21:46 UTC
From: Peter <pm@hotmail.com>
Message-ID: <7uednRIILbJW_0nXnZ2dnUVZ8h-dnZ2d@westnet.com.au>
Source record: 12468

"Ian Wade G3NRW" <g3nrw@yahoo.co.uk> wrote in message
news:PQ3cW1GAGv0KFwDG@ntlworld.com...
> From: Peter <pm@hotmail.com>
> Date: Mon, 12 Oct 2009 Time: 10:50:18
>
>>Hi all
>>
>>I'm looking to purchase an antenna analyser and after reviewing the
>>various
>>products on offer and viewing reviews at eham I'm leaning towards the
>>AIM4170 analyzer.
>>The eham reviews seem very positive therefore I'm keen to hear the
>>experience of others in this group regarding this product and perhaps some
>>of its short comings.
>>I previously ask for comments on the MFJ-269 analyser and found comments
>>valuable.
>>
>>Thanks for your time.
>>
>
> Hi Peter,
>
> I bought an AIM4170 about 10 months ago, and have absolutely no regrets.
> It does everything as advertised, and is very easy to use. Apart from all
> the good comments on eham.net, the unit doesn't eat batteries, doesn't
> suffer from broadcast station interference, and doesn't burn out if you
> set switches in the wrong order.
>
> Other things I like about the 4170:
> ~~~~~~~~~~~~~~~~~~~~~~~~~~
> -- It's easy to measure antenna feedpoint impedances (as well as feedline
> input impedances).
>
> -- It provides two sets of Smith charts.
>
> -- It's easy to keep screen shots of your measurements, so you can refer
> back to them later -- no more scribbling numbers on scraps of paper.
> ~~~~~~~~~~~~~~~~~~~~~~~~~~
>
> You can't do those things with legacy analyzers.
>
> Another benefit of the 4170 is that you can operate it remotely. This
> means that you can leave the unit in the shack, then go out into the yard
> with a notebook PC and control the 4170 from the notebook. Thus you can

> make your antenna adjustments without having to trek back into the house
> each time you make a change. Full details here:
>
> <http://homepage.ntlworld.com/wadei/AIM4170/Remote%20AIM%20Control%20HOWT
> O%20-%20090106.pdf>
>
> The only snag with the 4170 is that the upper frequency limit is 170MHz,
> but that doesn't bother me.
>
> If you have more questions, take a look at the 4170 forum:
>
> <http://aim4150.proboards.com/index.cgi?board=analyzer>
>
> I agonized for a long time over the price (and watched it getting more and
> more expensive as the GB pound slumped against the US$!). In the end,
> however, I figured that the 4170 was only a few tens of dollars more
> expensive than the legacy analyzers, and you get so much more. Go for it!
>
> --
> 73
> Ian, G3NRW

Ian

Thanks for the reply. It appears to be the stand out performer for the
price, but as you say the only limitation is the 170Mhz upper limit,
something I can live with.

Regards

--
Peter VK6YSF

http://members.optushome.com.au/vk6ysf/vk6ysf/main.htm

2707. Re: Separation required between side mount Jpole and Metal Tower

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-13 12:35:41 UTC
From: JIMMIE <JIMMIEDEE123@YAHOO.COM>
Message-ID: <395b5077-bbe8-463e-8f15-bb18b62dc60e@11g2000yqp.googlegroups.com>
Source record: 12469

On Oct 13, 12:29 am, "Sal M. Onella" <sob...@cox.net> wrote:
> On Oct 12, 12:13 pm, Tom Horne <horn...@gmail.com> wrote:
>
>
>
> > I am trying to find out how far an open stub, dual band, two meter and
> > seventy centimeter J-pole needs to be from a parallel metal support
> > mast on which it is side mounted to avoid detuning the antenna. I'm
> > not concerned about the effect on the radiation pattern as I can mount
> > the antenna on the side of the mast towards the area I'm trying to
> > cover. I have to build brackets to accomplish this mounting and I
> > would like to avoid building multiple sets of them just to test for
> > clearance. If anyone has the requisite skills and tools I would
> > appreciate any information that can be readily found by modeling this
> > antenna in proximity to a metal support mast consisting of four inch
> > aluminum tube. I have two AB-952 masts on which to mount six
> > antennas. Three of them will be two meter omnidirectional antennas.
> > Since we need two limit interaction and interference between the three
> > two meter stations We will be mounting one of these at the top of one
> > mast, one a third of the way up the second mast, and the third two
> > thirds of the way up the first mast. Both masts will be deployed with
> > extension kits so they will be fifty feet in total height.
>
> > In truth I just do not have the skills or the time to develop them to
> > do this so any help would be greatly appreciated. This is for a
> > public service event that is now only two weeks away.
>
> > --
> > Tom Horne, W3TDH
>
> I'm not a modeler. However, I did investigate this experimentally a
> few years ago, although not with 4-inch aluminum mast. I used a 10-
> foot section of one-inch galvanized mast. The tested j-pole was a 2m
> copper pipe version, hanging vertically in the open, suspended by a
> piece of line.
>
> On transmit, I tuned to a simplex channel, keyed up, ID'ed and noted a
> small amount of reflected power. I locked the key and slowly moved
> the section of mast toward the antenna. I had to get within one and
> one-half inches (1.5") before the reflected power increased.
>
> On receive, I tuned to a repeater with a ragchew in progress and
> opened the squelch. I inserted a switchable attenuator in line with
> the radio and set the attenuator to the crappiest signal I could copy

> -- one dB away from unintelligible. Enter the mast section, and once
> again, I had to get within an inch and a half to lose the
> conversation.
>
> The direction from which I approached the antenna didn't seem to
> matter, but I didn't do any real measurements of pattern distortion.
>
> I hope this helps you.
>
> Sal
> (KD6VKW)

I never tried it as close as Sal but It did mount one that stood off
about 2 ft from the tower with no discernible problems. I was also in
on making a J antenna where the tower was part of the antenna.

Jimmie

Jimmie

2708. Re: AIM 4170C antenna analyzer

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-14 21:36:20 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <2wrBm.4942$cL1.1783@newsfe20.iad>
Source record: 12470

Peter wrote:
> I'm leaning towards the AIM4170 analyzer.

How much does the AIM4170 cost?
--
73, Cecil, IEEE, OOTC, http://www.w5dxp.com

2709. Re: AIM 4170C antenna analyzer

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-14 23:11:12 UTC
From: Peter <pm@hotmail.com>
Message-ID: <pqadnb9V35cJx0vXnZ2dnUVZ8vGdnZ2d@westnet.com.au>
Source record: 12471

"Cecil Moore" <nospam@w5dxp.com> wrote in message
news:2wrBm.4942$cL1.1783@newsfe20.iad...
> Peter wrote:
>> I'm leaning towards the AIM4170 analyzer.
>
> How much does the AIM4170 cost?
> --
> 73, Cecil, IEEE, OOTC, http://www.w5dxp.com

About $520 US

--
Peter VK6YSF

http://members.optushome.com.au/vk6ysf/vk6ysf/main.htm

2710. Re: AIM 4170C antenna analyzer

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-14 23:17:01 UTC
From: Gary <jgboyles@aol.com>
Message-ID: <f2270b63-b7d1-4d44-a398-7c21d6ed8a85@p36g2000vbn.googlegroups.com>
Source record: 12472

On Oct 14, 4:36 pm, Cecil Moore <nos...@w5dxp.com> wrote:
> Peter wrote:
> > I'm leaning towards the AIM4170 analyzer.
>
> How much does the AIM4170 cost?
> --
> 73, Cecil, IEEE, OOTC, http://www.w5dxp.com

It's $500-$600, a bit more than the average ham would want to spend, unless you are into serious contesting or DX chasing. Myself, I would love to have one, but for my needs the MFJ at $225 has worked for years. In the future, I may get more real estate, and the AIM4170 may be just the ticket.

Gary N4AST

2711. Re: AIM 4170C antenna analyzer

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-15 00:35:12 UTC
From: Jim Lux <james.p.lux@jpl.nasa.gov>
Message-ID: <hb5qo1$jb0$1@news.jpl.nasa.gov>
Source record: 12473

Gary wrote:
> On Oct 14, 4:36 pm, Cecil Moore <nos...@w5dxp.com> wrote:
>> Peter wrote:
>>> I'm leaning towards the AIM4170 analyzer.
>> How much does the AIM4170 cost?
>> --
>> 73, Cecil, IEEE, OOTC, http://www.w5dxp.com
>
> It's $500-$600, a bit more than the average ham would want to spend,
> unless you are into serious contesting or DX chasing.

Or into antenna tinkering for its own sake.

For myself, I have the TAPR/TenTec VNA, because it was a better fit to my particular needs, but the 4170 is a nice, useful piece of gear.

It's hard to predict what the "average ham" would be interested in, in any case..

2712. Ground antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-15 13:42:05 UTC
From: Dave <db5151@hotmail.com>
Message-ID: <Y5GdnQC48qIlu0rXnZ2dnUVZ_ridnZ2d@posted.internetamerica>
Source record: 12474

Was talking with someone the other day and mentioned that I had just grounded the antenna (the mast, actually) to protect against lightning strikes, and they said that was not such a good idea because lightning is more likely to strike a path that goes straight to ground. Now I am not sure what to do. Anyone have any input on this topic? Ideas are gratefully received...

Thanks,

Dave

2713. Re: Ground antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-15 14:42:27 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <r0ded5lmtr0lhgslkanjhpkk8sci5o9d7a@4ax.com>
Source record: 12475

On Thu, 15 Oct 2009 08:42:05 -0500, "Dave" <db5151@hotmail.com> wrote:

>they said that was not such a good idea because lightning is
>more likely to strike a path that goes straight to ground.

Hi Dave,

Did they happen to mention what a great deal it was for that lightning
to go directly to your radio instead?

I suppose their next argument is that lightning won't strike an
"insulated" antenna....

73's
Richard Clark, KB7QHC

2714. Re: Ground antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-15 15:54:33 UTC
From: Ian Jackson <ianREMOVETHISjackson@g3ohx.demon.co.uk>
Message-ID: <3yc2NvL5W01KFw$b@g3ohx.demon.co.uk>
Source record: 12476

In message <r0ded5lmtr0lhgslkanjhpkk8sci5o9d7a@4ax.com>, Richard Clark
<kb7qhc@comcast.net> writes
>On Thu, 15 Oct 2009 08:42:05 -0500, "Dave" <db5151@hotmail.com> wrote:
>
>>they said that was not such a good idea because lightning is
>>more likely to strike a path that goes straight to ground.
>
>Hi Dave,
>
>Did they happen to mention what a great deal it was for that lightning
>to go directly to your radio instead?
>
>I suppose their next argument is that lightning won't strike an
>"insulated" antenna....
>
One reason for lightning conductors (and for grounding elevated
conductors, like radio antennas) is that it helps to stop a high
electrostatic charge from accumulating in the air immediately above
them. The intention is to PREVENT a direct lightning strike, rather than
conduct a strike to ground. Of course, if a direct strike DOES occur, an
antenna (and even a stout lightning conductor) may be seriously damaged.
--
Ian

2715. RE:Ground Antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-15 18:11:39 UTC
From: Cyclone651 <rollie@iowatelecom.net>
Message-ID: <hb7oku$34p$1@news.netins.net>
Source record: 12477

If you ground the antenna and the tower/mast the lightning will flow to the ground source of least resistance. ie: It will flow down the mast/tower to ground and not into your house, at least that's the theory.

2716. Re: Ground antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-15 18:36:58 UTC
From: nm5k@wt.net
Message-ID: <5457e112-ff43-4f60-9c51-cf699d1a7aaa@x5g2000prf.googlegroups.com>
Source record: 12478

On Oct 15, 10:54 am, Ian Jackson
<ianREMOVETHISjack...@g3ohx.demon.co.uk> wrote:

>
> One reason for lightning conductors (and for grounding elevated
> conductors, like radio antennas) is that it helps to stop a high
> electrostatic charge from accumulating in the air immediately above
> them. The intention is to PREVENT a direct lightning strike, rather than
> conduct a strike to ground. Of course, if a direct strike DOES occur, an
> antenna (and even a stout lightning conductor) may be seriously damaged.
> --
> Ian

The only problem with that is that the charge is so quickly
replenished
that I think trying to bleed off the charge is a waste of time.
Note the "brush" type conductors that supposedly dissipate the
charge to avoid a strike. They don't really work too well, and when
they do get struck, often you have blobs of molten metal flying
about.
The way I see it, the only way to really prevent a strike, and even
then I think it's iffy, is to provide a shape that does not stream
well.
And then have a lightning rod which does stream well to take the
strike vs the object that does not stream well.
IE: a rounded ball on top of a mast does not stream as well as
a sharp tip. This is why most flag poles have a ball on top.
To reduce the likelihood of streaming. And even those can still be
struck under some conditions. So I think trying to avoid a strike
using such methods is more wishful thinking than anything.
I look at it in a different way. I expect it to be struck, and it will
if it's any decent amount of distance above the surrounding objects.
It might take 6 months, or it might take 6 years, but it will be
struck some day. Count on it.
A strike does not know where it's going to hit until about the
last 150 yards or so. Then the streamers from the ground
are all pointing towards the down leader trying to entice it.
Usually the strongest streamer in the area will attract the
strike. And even that is never a sure thing. :/
So the best way to deal with lightning is to expect it to
strike sooner or later, and to provide the most efficient
path to ground when it happens.
A well grounded mast DOES NOT attract lightning any
better than a non grounded mast at the same location.
That's horse caca, and the OP can tell his friend I said so.

They will stream the same, and I consider the chances
of a direct strike about equal.
It's when you actually take a strike is when the differences
in grounding show up.
The well grounded mast will take the charge to ground
in an orderly military manner, and in most cases no
damage will occur.
The non grounded mast does not provide an orderly
path to ground, so the strike takes whatever path
has the least resistance. And even that path is likely
to be fairly high resistance and fireworks are likely
to occur. Houston, we have a problem.. :/
The OP did the proper thing by grounding his mast.
If properly grounded, if he does take a strike, the
mast will direct the charge to ground and little
damage should occur. This does not mean you
want a radio hooked up though. That takes extra
measures like suppressors, ground window, star
grounding, etc..
But at least he won't have to worry about burning the
house down.
I've had my mast directly struck more than once, and
I had no damage at all. Period. But my feed lines
were all grounded to my bulkhead outside the shack.
I don't leave them connected as I use no suppressors.
Two of those strikes were with me sitting in this chair
15 feet away from the base of the mast.
You can actually hear the difference between a strike
to a well grounded mast, and a strike to a poorly
grounded object.
The strike to the well grounded mast will be very quiet.
Just an arc sound like throwing a light bulb on the ground.
A strike to something poorly grounded like say a tree
will be much louder. More like a crack from a shotgun. :(
This is not to be confused with the overhead sonic boom
which both types of strikes will make. I'm just talking
about the local sound.
Anyway, that's my $12.47 worth from someone that lives
in lightning country and has taken multiple direct strikes
though the years.
If the OP wants some good lightning info, try searching for
Gary Coffman and lightning on google. I don't know if his
past posts are still archived, but they should be.
He had a lot of good posts on various aspects of lightning
protection.

2717. Online cheap pharmacy | Buy Free Viagra, Cialis, Levitra, Femigra. Shiping WorldWide

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-15 18:55:50 UTC
From: Meds Assistance <meds.assistance@gmail.com>
Message-ID: <90ac9811-4e22-41be-8e96-ee5030e77a4d@l13g2000yqb.googlegroups.com>
Source record: 12479

Some Advantages to choose our online drugstore http://femigra.viagranow.eu
:
Trustworthy. Rest assured that we've built a reputation of excellence
on helping you manage your healthcare, all from the privacy and
convenience of your own home.

Low prices. Our http://femigra.viagranow.eu pharmacy offers customers
exclusive benefits, all geared to saving your family up to 80% on
generic and brand-name drugs.

Privacy. http://femigra.viagranow.eu provides private, secure,
convenient shopping that lets our customers buy the products they need
for healthy everyday living without ever having to leave their own
home.

Information. At http://femigra.viagranow.euyour health and well-being
are extremely important to us so we offer a host of value-added
features including:
Drug Price Index – shows consumers the price savings from purchasing
larger quantities of a drug or choosing a generic version of the drug.
Drug Information Database – lists all relevant data about the drugs we
carry.
Drug Interaction Checker – provides information on drug interactions,
including drug-drug, drug-food, drug-vitamin, drug-herb, and drug-
alcohol interactions.

2718. Re: Ground antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-15 18:56:03 UTC
From: Jim Lux <james.p.lux@jpl.nasa.gov>
Message-ID: <hb7r83$4ot$1@news.jpl.nasa.gov>
Source record: 12480

Dave wrote:
> Was talking with someone the other day and mentioned that I had just
> grounded the antenna (the mast, actually) to protect against lightning
> strikes, and they said that was not such a good idea because lightning is
> more likely to strike a path that goes straight to ground.

Like many things, "it depends".. what else is near the antenna? From an electric field standpoint, whether it's actually physically connected to the ground isn't all that important. It's that it's a conductor sticking up, and that causes the field to change. As the surrounding E-field changes over a time span of milliseconds, a mast connected to the ground vs isolated will have a slightly different voltage distribution over time, but over long times, it's not much different.

Now I am not
> sure what to do. Anyone have any input on this topic? Ideas are gratefully
> received...
>
> Thanks,
>
> Dave
>
>

2719. Re: Separation required between side mount Jpole and Metal Tower

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-15 20:07:42 UTC
From: Karl Beckman <Karl.Beckman@motorola.com>
Message-ID: <hb7veefqv1@engnntp2.cig.mot.com>
Source record: 12489

You'll have better isolation between systems if you mount all three 2M antennas on the same mast, directly above/below each other. I'll recommend 19" spacing off the pole. Mounting one quarter-wave away from the reflector is one of the easiest pattern changes to model; it gives a nice cardioid pattern on 2M. The UHF side of the J-pole antenna will therefore be 3/4 wavelength from the reflector and the pattern on 440 will have three lobes, much like a clover leaf.

I suggest using 1/2" CPVC Schedule 40 water pipe for both the vertical support and the arms at top and bottom. That stuff is cheap, easy to cut, and glues together very quickly - don't make any assembly mistakes! Put a "T" fitting at the bottom to let both the coaxes and residual water vapor drop out of the radome assembly.
--
Karl Beckman, WA8NVW

"Tom Horne" <hornetd@gmail.com> wrote in message
news:6bd54cdb-f254-4ed4-9941-1eb66b48f214@e18g2000vbe.googlegroups.com...
>I am trying to find out how far an open stub, dual band, two meter and
> seventy centimeter J-pole needs to be from a parallel metal support
> mast on which it is side mounted to avoid detuning the antenna. I'm
> not concerned about the effect on the radiation pattern as I can mount
> the antenna on the side of the mast towards the area I'm trying to
> cover. I have to build brackets to accomplish this mounting and I
> would like to avoid building multiple sets of them just to test for
> clearance. If anyone has the requisite skills and tools I would
> appreciate any information that can be readily found by modeling this
> antenna in proximity to a metal support mast consisting of four inch
> aluminum tube. I have two AB-952 masts on which to mount six
> antennas. Three of them will be two meter omnidirectional antennas.
> Since we need two limit interaction and interference between the three
> two meter stations We will be mounting one of these at the top of one
> mast, one a third of the way up the second mast, and the third two
> thirds of the way up the first mast. Both masts will be deployed with
> extension kits so they will be fifty feet in total height.
>
> In truth I just do not have the skills or the time to develop them to
> do this so any help would be greatly appreciated. This is for a
> public service event that is now only two weeks away.
>
> --
> Tom Horne, W3TDH

2720. Re: an ontopic post about code

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-15 20:38:49 UTC
From: kb9rqz@yahoooo.com
Message-ID: <s51fd5h8d8ikrpnvu3va66anugo82i4hnq@4ax.com>
Source record: 12481
Cross-posted to: alt.ham-radio.vhf-uhf,rec.radio.amateur.policy,rec.radio.amateur.antenna

On Fri, 01 Dec 2006 09:36:47 -0800, John Smith
<assemblywizard@gmail.com> wrote:

>K4YZ wrote:
>> Nope.
>>
>> The IP Address and servers are complete proof that I do NOT share
>> any annonymous character's "address".
>>
>> Sounds like Lennie, to me....
>>
>> Steve, K4YZ
>>
>
>To anyone with even an elementary understanding of anonymous proxies,
>anonymous remailers, zombie backdoors, etc., the ability to change ones
>IP address and header details is simplistic, indeed, with little time
>spent anyone can appear to be "coming" from anywhere in the world.
>
>You waste my time. Worse, you think us all idiots here. You remind me
>of the "street smart" prosecutors and defense attorneys who stack jurys
>with members of little or no technical knowledge and then call in
>"expert witnesses" and propose arguments of technical details to boggle
>their minds.
>
>You have only proven that you, yourself are either ignorant to such
>technical details, or else you are indeed street smart, I favor the
>latter in this case (however, if you in the dark about such things, 15
>minutes on google will enlighten you.)
>
>JS

"one useless man is disgrace 2 become a law firm 3 or more become a congress"
adams

woger you are a Congress all in your own head
"http://www.3ix.org/sys/aff.php?aff=7439" target="_blank"

altopia is never used by KB9RQZ
http://kb9rqz.cc.cc
http://kd8ctl.com
nor is Konstans@hotmail.com ever
btw i can be found at
17366 N River Rd

Chassel Mi

but the cowards asking lack the gut to act

2721. Antenna Pattern: Carolina Windom

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-15 20:38:52 UTC
From: rikoski@earthlink.net.invalid
Message-ID: <wLLBm.21291$eJ4.3143@newsfe07.iad>
Source record: 12482

I am installing a Carolina Windom Short 80 and am not sure which way to orient it.

The company which sells the antenna says that because the antenna has a vertical section which radiates; the antenna is omni-directional.

But others say that it radiates best in the direction of the ends.

Some disagree saying that a dipole is a dipole and so its antenna pattern would be optimally broadside to the antenna.

Since the antenna is not center-fed; if it were a dipole the lobes along the longer section would produce more signal; is that the case here.

Is this a good antenna or just so much bs?

Thanks.

--
3D 4 ME

2722. Re: Antenna Pattern: Carolina Windom

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-15 21:22:00 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <BoMBm.284$gf1.59@newsfe19.iad>
Source record: 12483

rikoski@earthlink.net.invalid wrote:
> I am installing a Carolina Windom Short 80 and am not sure which way to
> orient it.
>
> ... the antenna is omni-directional.
> ... radiates best in the direction of the ends.
> ... a dipole is a dipole ...

See for yourself.

http://www.radioworks.com/ccwpat.html

An OCF has a distinctly different radiation pattern from
a dipole on certain frequencies. The vertical radiating
section of the Carolina Windom modifies the horizontal
radiation pattern.
--
73, Cecil, IEEE, OOTC, http://www.w5dxp.com

2723. Re: Antenna Pattern: Carolina Windom

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-15 21:26:58 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <934fd51ng3pvj5jbkq23b8ni89l794v44f@4ax.com>
Source record: 12484

On Thu, 15 Oct 2009 16:38:52 -0400, rikoski@earthlink.net.invalid
wrote:

>The company which sells the antenna says that because the antenna has a
>vertical section which radiates; the antenna is omni-directional.

That should be the end of it, then.

>But others say that it radiates best in the direction of the ends.

Amusing but false.

>Some disagree saying that a dipole is a dipole and so its antenna
>pattern would be optimally broadside to the antenna.

Possibly so, if the company who sells the antenna is wrong. Or
possibly so, if the user who bought the antenna from the company
doesn't follow installation instructions which lead to a vertical
section that radiates.

>Since the antenna is not center-fed; if it were a dipole the lobes along
>the longer section would produce more signal; is that the case here.

Amusing but false.

>Is this a good antenna or just so much bs?

Many users are satisfied. If they were to replace it tomorrow with a
design that was roughly the same over-all length, with the same
over-all match, then it they would report no differences could be
observed.

The only consideration that may fail in this proposed substitution
would be in the vertical section that radiates. The significance of
that polarization could be high, especially if the orientation of the
horizontal sections are not particularly well suited to your intended
propagation path.

In some points of the compass, your windom may exhibit interesting
polarization diversity that comes as a happy surprise; at other points
of the compass, you may need this diversity, and it isn't there
bringing a brooding disappointment. Such oddities spread over the
population of users make blood enemies and faithful converts.

73's
Richard Clark, KB7QHC

2724. Re: Antenna Pattern: Carolina Windom

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-15 22:17:46 UTC
From: dplatt@radagast.org
Message-ID: <aljkq6-k9r.ln1@radagast.org>
Source record: 12486

In article <wLLBm.21291$eJ4.3143@newsfe07.iad>,
<rikoski@earthlink.net.invalid> wrote:

>I am installing a Carolina Windom Short 80 and am not sure which way to
>orient it.
>
>The company which sells the antenna says that because the antenna has a
>vertical section which radiates; the antenna is omni-directional.
>
>But others say that it radiates best in the direction of the ends.
>
>Some disagree saying that a dipole is a dipole and so its antenna
>pattern would be optimally broadside to the antenna.
>
>Since the antenna is not center-fed; if it were a dipole the lobes along
>the longer section would produce more signal; is that the case here.

If it *were* a half-wavelength dipole, I don't believe that the
direction or strength of the lobes would depend on the point at which
it were fed... center, off-center, or end (as in a Zepp).

This antenna doesn't look like a simple dipole to me. It appears to
be a combination of a doublet/dipole with the ends folded back, and a
vertical section which is deliberately designed to radiate.

The radiation pattern is going to vary, between the horizontally-
polarized component (from the flat-top and folded-back sections) and
the vertically-polarized component (from the vertical radiator between
the matching unit and the line isolator).

Horizontally-polarized radiation from the flat-top section is (I
think) going to be primarily off to the sides (perpendicular to the
wire) when the antenna is used on 80 meters, and probably on 20 meters
as well (due to the presence of the resonator stubs). On other bands
it'll be a more complex pattern, with multiple lobes. I'd expect a
null directly off of each end, on all bands.

Vertically-polarized radiation will be near-omnidirectional, and will
tend to fill in the horizontally-polarized nulls off of the end (and
the inter-lobe nulls in other directions on other bands).

The angles of maximum radiation for horizontal and vertical components
of the signal will almost certainly be different.

In short, it's going to have a complex radiation pattern which will
vary both horizontally and vertically, and will differ from one band
to the next.

>Is this a good antenna or just so much bs?

Haven't used it myself, and so I can't say for sure.

Based on its design and what I expect its radiation pattern to be, I'd guess that it's a decent overall performer, with fewer "dead spots" than a dedicated half-wavelength dipole, slightly lower gain in some directions, possibly better DX performance than a low-mounted dipole (due to vertically-polarized radiation from the vertical section) but possibly more prone to pick up close-in manmade noise (also due to the presence of the vertical section).

--
Dave Platt <dplatt@radagast.org> AE6EO
Friends of Jade Warrior home page: http://www.radagast.org/jade-warrior
I do _not_ wish to receive unsolicited commercial email, and I will
boycott any company which has the gall to send me such ads!

2725. Re: Antenna Pattern: Carolina Windom

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-15 22:29:43 UTC
From: Ralph Mowery <rmowery28146@earthlink.net>
Message-ID: <8P2dnXGYvrVRPErXnZ2dnUVZ_sCdnZ2d@earthlink.com>
Source record: 12485

<rikoski@earthlink.net.invalid> wrote in message
news:wLLBm.21291$eJ4.3143@newsfe07.iad...
>I am installing a Carolina Windom Short 80 and am not sure which way to
> orient it.
>
> The company which sells the antenna says that because the antenna has a
> vertical section which radiates; the antenna is omni-directional.
>
> But others say that it radiates best in the direction of the ends.
>
> Some disagree saying that a dipole is a dipole and so its antenna
> pattern would be optimally broadside to the antenna.
>
> Since the antenna is not center-fed; if it were a dipole the lobes along
> the longer section would produce more signal; is that the case here.
>
> Is this a good antenna or just so much bs?

I am not sure what the short 80 is. I have a home built one that is up
about 50 feet and installed as flat across the top as two end supports and a
middle support will let it be. It is about 80 feet on one side and 40 feet
on the other side. The coax drops 20 feet down from the 4:1 balun to the
current choke.

It seems to work fine for me on 80 meters, the only band I normally work
with it. I have an 80 meter dipole up about 40 feet on one end and 20 feet
on the other end at right angles to it. In just about all cases the OCF is
beter than the 80 meter dipole. Only problem is when I run an amplifier the
4:1 balun overheats and the swr goes way high when I run more than about 700
watts ssb. The balun is rated for 1.5 KW.
When I had it fed with rg8X and a low power balun without the lower current
choke I could not tell much differance. I was only running 100 watts then
as I did not have an amplifier. There did seem to be some rf in the shack as
the computer speakers would make noise, but not with the current choke in
the line with the new antenna. Both antennas were ran to a 5 way antenna
switch just inside the window I was passing the coax through. The shack is
in a walkout basement and the switch has a wire ran outside to a ground rod
and that rod is also connected to another rod about 10 feet away and also to
the house ground rod about 10 feet in another direction.
With the choke and larger rg8 coax there does not seem to be any rf in the
computer speakers.

It seems to work well in all directions. I don't know if it is because of
the vertical section or just because it is only 50 feet up.
The lower 80 meter dipole seems not to be very directional either.

2726. Re: Ground Antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-16 02:24:11 UTC
From: "pdrahn@coinet.com" <co_farmer@yahoo.com>
Message-ID: <c93772d6-3c86-49f5-bf45-1998fcb22eca@12g2000pri.googlegroups.com>
Source record: 12487

On Oct 15, 11:11 am, "Cyclone651" <rol...@iowatelecom.net> wrote:
> If you ground the antenna and the tower/mast the lightning will flow to the
> ground source of least resistance. ie: It will flow down the mast/tower to
> ground and not into your house, at least that's the theory.

Actually only partially true. Think if two parallel resistors or
inductors. The current will be divided between the two. If only 1%
flows to the house, it could be very damaging.

Paul, KD7HB

2727. Re: Antenna Pattern: Carolina Windom

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-16 08:42:46 UTC
From: steveeh131047 <google@karinya.net>
Message-ID: <5361a1b9-704c-4aad-8c76-d66317cd36ad@m38g2000yqd.googlegroups.com>
Source record: 12488

There's no single answer because, as Cecil said, the response changes markedly with frequency.

Maximum radiation will be broadside at frequencies where it is a half-wave, and it will progressively develop multiple lobes and nulls as the frequency is increased.

The common-mode current on the "vertical radiator" tends to fill in some of those nulls, but its contribution is also very frequency-dependent.

Here's an example of the difference that the "vertical radiator" makes to a 132ft OCF dipole on 20m - one of the bands where it has most effect. Red trace is the azimuth response at 10 degrees elevation without the vertical radiator; the blue trace is with it:

http://www.karinya.net/g3txq/temp/ocf_low_angle.png

73,
Steve G3TXQ

2728. Re: Antenna Pattern: Carolina Windom

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-16 13:28:03 UTC
From: rikoski@earthlink.net
Message-ID: <rikoski-F4EA75.09280216102009@news.newsrazor.net>
Source record: 12490

Hi Steve,

Thanks for the azimuth plot. This was just what I was looking for.

I am on a sand dune above Lake Michigan 32 miles east southeast of the Sears Tower.

The antenna that I am writing about is the Radio Works 80 Special with 41' and 25' element lengths. The radiating coax is 10' strapped to a fiberglass mast. The dipole feedpoint is 30' above the sand and about 90' above Lake Michigan across the road. It is broadside to due north.

I get a lot of contacts from Georgia, Texas and the US northwest but nothing from Europe, Japan or Australia.

I work 20m ssb primarily and so have cut and put up a 3/2 wavelength centerfed dipole; slightly different location but same orientation with an aluminum mast. Similar performance on 20. With the Palstar tuner; it loads on 40.

My choices come down to keeping the Carolina Windom up, taking it down or re-orienting (But I am squeezed by 7200v powerlines and large oak trees in a terminal forest.).

It would be useful to have azimuth plots for 40 and 80 for this antenna; if for nothing else than a starting point.

Thoughts?

Rick
W9ZD

2729. Re: Ground antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-16 13:37:02 UTC
From: Dave <k1ttt@arrl.net>
Message-ID: <ea628754-82dd-4165-8775-5f5ecb5cb93c@k33g2000yqa.googlegroups.com>
Source record: 12491

> A well grounded mast DOES NOT attract lightning any
> better than a non grounded mast at the same location.

actually it does. both the ieee and cigre have been using lightning
statistics data collected mostly from tall masts for many years.
There are well known formulas used to calculate the number of strokes
to a pole or power line, both include the height, and as height
increases so does the number of strokes to the object. The height
also skews the current distribution with higher structures more likely
to get more high current strokes.

2730. Re: Antenna Pattern: Carolina Windom

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-16 15:25:51 UTC
From: JIMMIE <JIMMIEDEE123@YAHOO.COM>
Message-ID: <7fce33af-986c-4802-b75e-746d3f724a12@k19g2000yqc.googlegroups.com>
Source record: 12492

On Oct 16, 9:28 am, riko...@earthlink.net wrote:
> Hi Steve,
>
> Thanks for the azimuth plot. This was just what I was looking for.
>
> I am on a sand dune above Lake Michigan 32 miles east southeast of the
> Sears Tower.
>
> The antenna that I am writing about is the Radio Works 80 Special with
> 41¹ and 25¹ element lengths. The radiating coax is 10¹ strapped to a
> fiberglass mast. The dipole feedpoint is 30¹ above the sand and about
> 90¹ above Lake Michigan across the road. It is broadside to due north.
>
> I get a lot of contacts from Georgia, Texas and the US northwest but
> nothing from Europe, Japan or Australia.
>
> I work 20m ssb primarily and so have cut and put up a 3/2 wavelength
> centerfed dipole; slightly different location but same orientation with
> an aluminum mast. Similar performance on 20. With the Palstar tuner; it
> loads on 40.
>
> My choices come down to keeping the Carolina Windom up, taking it down
> or re-orienting (But I am squeezed by 7200v powerlines and large oak
> trees in a terminal forest.).
>
> It would be useful to have azimuth plots for 40 and 80 for this antenna;
> if for nothing else than a starting point.
>
> Thoughts?
>
> Rick
> W9ZD

I got to try a Windom antenna over a really good ground system and was
pretty much amazed at the performance. The antenna was a
decommissioned LOM antenna waiting for the bulldozers for about 2
years. Good grounds certainly make a difference.

Jimmie

2731. Re: Ground antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-16 17:13:20 UTC
From: Jim Lux <james.p.lux@jpl.nasa.gov>
Message-ID: <hba9ji$d96$1@news.jpl.nasa.gov>
Source record: 12493

Dave wrote:
>> A well grounded mast DOES NOT attract lightning any
>> better than a non grounded mast at the same location.
>
> actually it does. both the ieee and cigre have been using lightning
> statistics data collected mostly from tall masts for many years.
> There are well known formulas used to calculate the number of strokes
> to a pole or power line, both include the height, and as height
> increases so does the number of strokes to the object. The height
> also skews the current distribution with higher structures more likely
> to get more high current strokes.

But, is there a difference in strike rate between grounded and
ungrounded towers of the same height. I would think that the difference
would be very small, and smaller as the height gets bigger.

Since the vast majority of commercial masts,towers,buildings used to
collect the stats are probably grounded (Because the code requires
it...), it might be hard to find decent data for "ungrounded" things.
(for one thing, the equipment used to collect the strike data, until
recently, probably measured the current spike on the grounding wire..
these days, you could use the RF lightning detection systems, and match
up strike locations against structure locations)

Maybe wooden poles? (which are only "sort of grounded")

2732. Re: Ground antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-16 18:43:08 UTC
From: Dave <k1ttt@arrl.net>
Message-ID: <07ccc38d-5bfb-47cc-97f8-ea7b2e67cb3c@p35g2000yqh.googlegroups.com>
Source record: 12494

On Oct 16, 5:13 pm, Jim Lux <james.p....@jpl.nasa.gov> wrote:
> Dave wrote:
> >> A well grounded mast DOES NOT attract lightning any
> >> better than a non grounded mast at the same location.
>
> > actually it does. both the ieee and cigre have been using lightning
> > statistics data collected mostly from tall masts for many years.
> > There are well known formulas used to calculate the number of strokes
> > to a pole or power line, both include the height, and as height
> > increases so does the number of strokes to the object. The height
> > also skews the current distribution with higher structures more likely
> > to get more high current strokes.
>
> But, is there a difference in strike rate between grounded and
> ungrounded towers of the same height. I would think that the difference
> would be very small, and smaller as the height gets bigger.
>
> Since the vast majority of commercial masts,towers,buildings used to
> collect the stats are probably grounded (Because the code requires
> it...), it might be hard to find decent data for "ungrounded" things.
> (for one thing, the equipment used to collect the strike data, until
> recently, probably measured the current spike on the grounding wire..
> these days, you could use the RF lightning detection systems, and match
> up strike locations against structure locations)
>
> Maybe wooden poles? (which are only "sort of grounded")

'sort of grounded' is as good as grounded. The current that builds up
the charge to initiate the upward streamer is relatively small, that
can be seen in the use of the high value resistors commonly used to
'bleed off' charge from antennas. instead of bleeding it off they are
actually just equalizing it with the local ground potential, the same
as happens on a 'properly' grounded tower/vertical. in most cases you
won't find an amateur tower that isn't grounded one way or another
anyway, even if a specific ground rod or other system isn't supplied
at the base there is still a decent ground through the foundation.
and if not then there is through any cable going up the tower that
connects to a rotor or most antennas. it takes real work to really
insulate a tower from ground in such a way that it would not allow
charge attracted to the area under a downward leader from moving up
the tower... the large rf isolators and tower lighting isolators used
on base insulated AM broadcast towers are a good example... and even
on those types of towers you will hear reports of 'lots of snapping
and popping' before a stroke, those sounds are small flashovers of the

guy wire insulators as the charge flows up them toward the tower. So to do it right would mean using insulating guys also. Then, even if you got that far a tower of any height would end up going into corona at the bottom and top anyway due to the high vertical electric fields under a storm cloud... even if the corona didn't reach nearby ground conductors it would still collect/dissipate charge on the conducting vertical section which may still initiate a streamer. So the short answer is that i have not seen any comparison between grounded and ungrounded vertical structures.

2733. Re: Ground antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-16 19:27:02 UTC
From: nm5k@wt.net
Message-ID: <a7a06c10-deb4-42d0-b31f-1cc177d7d8d4@w37g2000prg.googlegroups.com>
Source record: 12495

On Oct 16, 12:13 pm, Jim Lux <james.p....@jpl.nasa.gov> wrote:
> Dave wrote:
> >> A well grounded mast DOES NOT attract lightning any
> >> better than a non grounded mast at the same location.
>
> > actually it does. both the ieee and cigre have been using lightning
> > statistics data collected mostly from tall masts for many years.
> > There are well known formulas used to calculate the number of strokes
> > to a pole or power line, both include the height, and as height
> > increases so does the number of strokes to the object. The height
> > also skews the current distribution with higher structures more likely
> > to get more high current strokes.
>
> But, is there a difference in strike rate between grounded and
> ungrounded towers of the same height. I would think that the difference
> would be very small, and smaller as the height gets bigger.

That's what I'm thinking. I know my well grounded mast is not a
lightning magnet. Some years I get no strikes to it. In fact, I think
it's been a few since the last one. Well, unless it was hit when I
was not at home.
I'm still of the opinion that the ability of an object to stream means
more than if it's grounded or not.
Airplanes are not grounded, and they get popped all the time.
Trees are poorly grounded, and they get popped all the time.
I've known quite a few people over the years that stuck a vertical
on their roof and didn't ground it, and they got popped. Blew
the ungrounded antenna to smithereens too..
Many golfers get popped on the golf course and they are not
really grounded too well unless they are wearing spikes on their
shoes. :/
I think the height of the object relative to it's surroundings, and
it's ability to stream mean more than anything.
Trees are a target lightning pick probably as much as anything,
and most are fairly poorly grounded due to being wood with some
moisture to helps things a bit. I think the trees ability to stream
well is why they get picked on so often. The pointy ends of a
leaf stream well, much like the pointy hairs on the head of a
golfer. And when you have hundreds of leaves on a tree... :(

But lets say a grounded mast does get struck slightly more than
an ungrounded mast. That would not a logical reason to avoid
grounding it, when the act of grounding the mast pretty much
negates the likelihood of a strike doing much damage to the mast
or the building next to, or under it.

A wooden mast would act much the same as a tree if it did not
have any kind of ground wire running along it's length.
That's why I never use wood masts here.
I'd rather have a grounded mast struck every 5 years with no damage,
vs an ungrounded mast struck every 10 years that led to heavy
damage or even burned the house down.
So worrying about that is kind of silly I think, when you know
an ungrounded mast is big trouble if it ever does get hit.

2734. LOM Antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-16 19:38:55 UTC
From: rikoski@earthlink.net
Message-ID: <rikoski-1D5302.15385516102009@news.newsrazor.net>
Source record: 12496

Hi Jimmie,

Inquiring minds want to know dept: You mentioned an LOM antenna.

Did that have something to do with aviation markers; loran or position locators?

Rick
W9ZD

2735. Re: Ground antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-16 20:02:33 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <8k4Cm.166488$nL7.69303@newsfe18.iad>
Source record: 12497

nm5k@wt.net wrote:
> I know my well grounded mast is not a lightning magnet.

At my last QTH, lightning passed up my 40' grounded
tower, my 40' vertical antenna, and all the surrounding
power poles. It instead struck a nearby 6' tall live oak
tree that, on a sunny day, was in the shadow of the tower,
antenna, and power poles. Half of the tree died but the
other half survives.
--
73, Cecil, IEEE, OOTC, http://www.w5dxp.com

2736. Re: Ground antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-16 20:08:24 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <c2khd5hk9i3b3v5jtudn8an71ki9ec32u2@4ax.com>
Source record: 12498

On Fri, 16 Oct 2009 12:27:02 -0700 (PDT), nm5k@wt.net wrote:

>I think the height of the object relative to it's surroundings, and
>it's ability to stream mean more than anything.

Hi Mark,

There's another angle to be observed here. Globally, there is a potential difference between earth and sky that runs to several hundred volts per meter, with a current flow on the order of femtoAmperes per square cM. Not much locally, but for the full surface area of earth it is the electron conveyor belt charging the clouds through dust migration.

At this potential and current, absolutely everything is a short circuit that penetrates the voltage isoclines raising earth towards the clouds.

73's
Richard Clark, KB7QHC

2737. Re: Ground antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-16 20:55:13 UTC
From: John Gilmer <jlgilmer@localnet.com>
Message-ID: <h8idnfWtBf1KQEXXnZ2dnUVZ_oKdnZ2d@posted.localnet>
Source record: 12499

<nm5k@wt.net> wrote in message
news:5457e112-ff43-4f60-9c51-cf699d1a7aaa@x5g2000prf.googlegroups.com...
On Oct 15, 10:54 am, Ian Jackson
<ianREMOVETHISjack...@g3ohx.demon.co.uk> wrote:

>
> One reason for lightning conductors (and for grounding elevated
> conductors, like radio antennas) is that it helps to stop a high
> electrostatic charge from accumulating in the air immediately above
> them. The intention is to PREVENT a direct lightning strike, rather than
> conduct a strike to ground. Of course, if a direct strike DOES occur, an
> antenna (and even a stout lightning conductor) may be seriously damaged.
> --
> Ian

"The only problem with that is that the charge is so quickly
replenished
that I think trying to bleed off the charge is a waste of time."

The turn of the century genius, Testla, patented some lighting protection
devices based on having an insulated "cap" at the highest object on the
protected property. The "cap" would rise thousands of volts above the
protected structure and this would reduce the tendency of lightning to
strike.

Seems to me that the federal government has lots and lots of buildings and
would relatively inexpensively conduct definitive experiments to see what
works and what doesn't in the area of lightning protection.

So far as I know, the feds have done no such thing.

2738. Re: Ground antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-16 21:34:36 UTC
From: Dave <k1ttt@arrl.net>
Message-ID: <51b5ee25-d81d-4fcc-be2d-4df985e4d7e1@s31g2000yqs.googlegroups.com>
Source record: 12500

On Oct 16, 8:55 pm, "John Gilmer" <jlgil...@localnet.com> wrote:
> <n...@wt.net> wrote in message
>
> news:5457e112-ff43-4f60-9c51-cf699d1a7aaa@x5g2000prf.googlegroups.com...
> On Oct 15, 10:54 am, Ian Jackson
>
> <ianREMOVETHISjack...@g3ohx.demon.co.uk> wrote:
>
> > One reason for lightning conductors (and for grounding elevated
> > conductors, like radio antennas) is that it helps to stop a high
> > electrostatic charge from accumulating in the air immediately above
> > them. The intention is to PREVENT a direct lightning strike, rather than
> > conduct a strike to ground. Of course, if a direct strike DOES occur, an
> > antenna (and even a stout lightning conductor) may be seriously damaged.
> > --
> > Ian
>
> "The only problem with that is that the charge is so quickly
> replenished
> that I think trying to bleed off the charge is a waste of time."
>
> The turn of the century genius, Testla, patented some lighting protection
> devices based on having an insulated "cap" at the highest object on the
> protected property. The "cap" would rise thousands of volts above the
> protected structure and this would reduce the tendency of lightning to
> strike.
>
> Seems to me that the federal government has lots and lots of buildings and
> would relatively inexpensively conduct definitive experiments to see what
> works and what doesn't in the area of lightning protection.
>
> So far as I know, the feds have done no such thing.

yes, they have, not that i believe everything the government has said,
but this stuff i do.

this presentation lists several reports by the navy and faa among
other agencies: http://www.docstoc.com/docs/4177489/Validity-of-the-Lightning-Elimination-Claim-Abdul-M-Mousa

the nfpa and others are quoted here, even though the author is
skeptical: http://www.straightdope.com/columns/read/2776/lightning-strikes-again

this one again quotes the onr, nasa, and air force studies as well as
others. http://lightning-protection-institute.com/fact-fallacy.htm

as far as tesla's stuff, i file it with most of the other experiments with lightning protection and prevention, if it really worked it would be used all over the place. the only system that has stood the test of time is the old franklin rod system, it doesn't prevent strikes, but it does try to provide a safe route to ground besides through the protected structure. much of the success of it depends on the quality of the installer, mostly how well they bond the various wires and how well they take it to ground.

2739. Re: Ground antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-16 22:43:40 UTC
From: Jim Lux <james.p.lux@jpl.nasa.gov>
Message-ID: <hbasus$2or$1@news.jpl.nasa.gov>
Source record: 12351

John Gilmer wrote:
> <nm5k@wt.net> wrote in message
> news:5457e112-ff43-4f60-9c51-cf699d1a7aaa@x5g2000prf.googlegroups.com...
> On Oct 15, 10:54 am, Ian Jackson
> <ianREMOVETHISjack...@g3ohx.demon.co.uk> wrote:
>
>> One reason for lightning conductors (and for grounding elevated
>> conductors, like radio antennas) is that it helps to stop a high
>> electrostatic charge from accumulating in the air immediately above
>> them. The intention is to PREVENT a direct lightning strike, rather than
>> conduct a strike to ground. Of course, if a direct strike DOES occur, an
>> antenna (and even a stout lightning conductor) may be seriously damaged.
>> --
>> Ian
>
> "The only problem with that is that the charge is so quickly
> replenished
> that I think trying to bleed off the charge is a waste of time."
>
> The turn of the century genius, Testla, patented some lighting protection
> devices based on having an insulated "cap" at the highest object on the
> protected property. The "cap" would rise thousands of volts above the
> protected structure and this would reduce the tendency of lightning to
> strike.
>

This is done in some HV test laboratories to avoid flashover to the ceiling and to make the field more representative of "outdoors".. they hang a semiconductive curtain in a horizontal plane above the apparatus which charges up and makes what's above look less like "ground"

There's also the whole thing of surrounding a valuable structure (e.g. ammunition storage bunker, rocket launch pad) with an array of high towers with grounded wires from the tops of the towers. While no guarantee that lightning won't strike elsewhere, it definitely ups the odds of the protective structure taking the hit.

here's a picture:
http://commons.wikimedia.org/wiki/File:Ariane_5_launch_pad.jpg

2740. 30 seconds Ad View work - Get 16 dollars in your account for signup and earn money for life time.

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-16 23:06:14 UTC
From: Gavaskar <gavaskarme@gmail.com>
Message-ID: <0439f7ea-a361-4f0e-a17a-cd11923ee119@h40g2000prf.googlegroups.com>
Source record: 12352

Read this if need more money.
I am engineer. I have been searching for a real money paying website about 1-1/2 years. Finally I found five which works just like an ATM. I have signed up and doing evaluvation of website work (real work is: wait for 30 seconds and then click the similar number shown at the top of webpage) and I have seen that money in my account was automatically increased. I exclaimed and became happy. After two weeks, I got a lot of money in my account. Yes it’s really working. Initially I didn’t believe it. But now I am earning money in dollars greater than my monthly income and using this extra income, I pay my internet bill, cellphone recharge, electric board bill, petrol bill, house rent and more. If you like to earn money just like me, open the URLs below in seperate windows and follow the procedure below.
Procedue: Open the links mentioned below in seperate windows and create an account by clicking register button in each page. After that earn money by clicking view ads button. View ads for 30 seconds and click the number mentioned. For example, Click number 5 if they mention Click 5. That all. Now money in your account is increasing in dollars.

http://tinyurl.com/ygbogs8
http://tinyurl.com/yfncu7g
http://tinyurl.com/yzqf7do
http://tinyurl.com/ylopa2l
http://tinyurl.com/yjq63gy

Login to your account daily to earn everyday.

2741. Re: LOM Antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-17 03:05:10 UTC
From: JIMMIE <JIMMIEDEE123@YAHOO.COM>
Message-ID: <cd6a3a7a-f444-4cb2-9673-6b488fb84225@a31g2000yqn.googlegroups.com>
Source record: 12353

On Oct 16, 3:38 pm, riko...@earthlink.net wrote:
> Hi Jimmie,
>
> Inquiring minds want to know dept: You mentioned an LOM antenna.
>
> Did that have something to do with aviation markers; loran or position
> locators?
>
> Rick
> W9ZD

Aviation, one of the first grunt jobs I had after working with the FAA was the decommissioning of an LOM site. The took out the equipment and the building but the antenna was there for several years. I didnt have a place I could put up a decent antenna so I would grab my 100 watt Icom and MFJ tuner and ride out to the site. I do mostly radar work now.

Jimmie

2742. Re: LOM Antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-17 12:07:02 UTC
From: christofire <christofire@btinternet.com>
Message-ID: <Gfidnc5MQpnxLkTXnZ2dnUVZ8judnZ2d@bt.com>
Source record: 12354

"JIMMIE" <JIMMIEDEE123@YAHOO.COM> wrote in message
news:cd6a3a7a-f444-4cb2-9673-6b488fb84225@a31g2000yqn.googlegroups.com...
On Oct 16, 3:38 pm, riko...@earthlink.net wrote:
> Hi Jimmie,
>
> Inquiring minds want to know dept: You mentioned an LOM antenna.
>
> Did that have something to do with aviation markers; loran or position
> locators?
>
> Rick
> W9ZD

Aviation, one of the first grunt jobs I had after working with the FAA
was the decommissioning of an LOM site. The took out the equipment and
the building but the antenna was there for several years. I didnt have
a place I could put up a decent antenna so I would grab my 100 watt
Icom and MFJ tuner and ride out to the site. I do mostly radar work
now.

Jimmie

http://en.mimi.hu/aviation/lom.html

Chris

2743. Re: Ground antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-17 12:25:08 UTC
From: Dave <k1ttt@arrl.net>
Message-ID: <fce74636-b6bf-48bf-be87-f2dd01423f7b@l2g2000yqd.googlegroups.com>
Source record: 12355

On Oct 16, 10:43 pm, Jim Lux <james.p....@jpl.nasa.gov> wrote:
> John Gilmer wrote:
> > <n...@wt.net> wrote in message
> >news:5457e112-ff43-4f60-9c51-cf699d1a7aaa@x5g2000prf.googlegroups.com...
> > > On Oct 15, 10:54 am, Ian Jackson
> > > <ianREMOVETHISjack...@g3ohx.demon.co.uk> wrote:
>
> >> One reason for lightning conductors (and for grounding elevated
> >> conductors, like radio antennas) is that it helps to stop a high
> >> electrostatic charge from accumulating in the air immediately above
> >> them. The intention is to PREVENT a direct lightning strike, rather than
> >> conduct a strike to ground. Of course, if a direct strike DOES occur, an
> >> antenna (and even a stout lightning conductor) may be seriously damaged.
> >> --
> >> Ian
>
> > "The only problem with that is that the charge is so quickly
> > replenished
> > that I think trying to bleed off the charge is a waste of time."
>
> > The turn of the century genius, Testla, patented some lighting protection
> > devices based on having an insulated "cap" at the highest object on the
> > protected property. The "cap" would rise thousands of volts above the
> > protected structure and this would reduce the tendency of lightning to
> > strike.
>
> This is done in some HV test laboratories to avoid flashover to the
> ceiling and to make the field more representative of "outdoors".. they
> hang a semiconductive curtain in a horizontal plane above the apparatus
> which charges up and makes what's above look less like "ground"
>
> There's also the whole thing of surrounding a valuable structure (e.g.
> ammunition storage bunker, rocket launch pad) with an array of high
> towers with grounded wires from the tops of the towers. While no
> guarantee that lightning won't strike elsewhere, it definitely ups the
> odds of the protective structure taking the hit.
>
> here's a picture:http://commons.wikimedia.org/wiki/File:Ariane_5_launch_pad.jpg- Hide
quoted text -
>
> - Show quoted text -

yeah, the nasa pads have towers and long sloped wires to try to catch
lightning also.

for hv work we mostly do it outside or in a very tall building (the octagonal one just left of center in the top picture is open inside and about 80' tall.
http://www.ewh.ieee.org/r1/schenectady/oct26_2007_lenox.pdf

2744. Re: LOM Antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-17 14:35:47 UTC
From: "J. Mc Laughlin" <jcm@power-net.net>
Message-ID: <8oadnfTGg_beS0TXnZ2dnUVZ_gadnZ2d@bright.net>
Source record: 12356

Dear Group:

Still not as clear as it could be. "Jimmie" is not talking about the 75 MHz yagi pointing straight up that provides a reference cone. The context seems to indicate a non-directional beacon that operated in the 200 kHz region using AM and a T antenna often supported by wooden poles. See: http://en.wikipedia.org/wiki/Locator_Outer_Marker

I recall, in an earlier life, 160 meters on a daytime-only AM broadcast antenna at night.

73, Mac N8TT

--
J. McLaughlin; Michigan, USA
Home: JCM@power-net.net
"christofire" <christofire@btinternet.com> wrote in message
news:Gfidnc5MQpnxLkTXnZ2dnUVZ8judnZ2d@bt.com...
>
> "JIMMIE" <JIMMIEDEE123@YAHOO.COM> wrote in message
> news:cd6a3a7a-f444-4cb2-9673-6b488fb84225@a31g2000yqn.googlegroups.com...
> On Oct 16, 3:38 pm, riko...@earthlink.net wrote:
>> Hi Jimmie,
>>
>> Inquiring minds want to know dept: You mentioned an LOM antenna.
>>
>> Did that have something to do with aviation markers; loran or position
>> locators?
>>
>> Rick
>> W9ZD
>
> Aviation, one of the first grunt jobs I had after working with the FAA
> was the decommissioning of an LOM site. The took out the equipment and
> the building but the antenna was there for several years. I didnt have
> a place I could put up a decent antenna so I would grab my 100 watt
> Icom and MFJ tuner and ride out to the site. I do mostly radar work
> now.
>
> Jimmie
>
>
> http://en.mimi.hu/aviation/lom.html
>
> Chris

>

2745. Re: LOM Antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-17 20:06:59 UTC
From: JIMMIE <JIMMIEDEE123@YAHOO.COM>
Message-ID: <364a877e-818c-438c-abf0-b6aec0687e39@g31g2000yqc.googlegroups.com>
Source record: 12357

On Oct 17, 10:35 am, "J. Mc Laughlin" <j...@power-net.net> wrote:
> Dear Group:
>
> Still not as clear as it could be. "Jimmie" is not talking about the 75 MHz
> yagi pointing straight up that provides a reference cone. The context seems
> to indicate a non-directional beacon that operated in the 200 kHz region
> using AM and a T antenna often supported by wooden poles.
 See:http://en.wikipedia.org/wiki/Locator_Outer_Marker
>
> I recall, in an earlier life, 160 meters on a daytime-only AM broadcast
> antenna at night.
>
> 73,   Mac   N8TT
>
> --
> J. McLaughlin; Michigan, USA
> Home: J...@power-net.net"christofire" <christof...@btinternet.com> wrote in message
>
> news:Gfidnc5MQpnxLkTXnZ2dnUVZ8judnZ2d@bt.com...
>
>
>
>
>
> > "JIMMIE" <JIMMIEDEE...@YAHOO.COM> wrote in message
> >news:cd6a3a7a-f444-4cb2-9673-6b488fb84225@a31g2000yqn.googlegroups.com...
> > > On Oct 16, 3:38 pm, riko...@earthlink.net wrote:
> > >> Hi Jimmie,
>
> > >> Inquiring minds want to know dept: You mentioned an LOM antenna.
>
> > >> Did that have something to do with aviation markers; loran or position
> > >> locators?
>
> > >> Rick
> > >> W9ZD
>
> > > Aviation, one of the first grunt jobs I had after working with the FAA
> > > was the decommissioning of an LOM site. The took out the equipment and
> > > the building but the antenna was there for several years. I didnt have
> > > a place I could put up a decent antenna so I would grab my 100 watt
> > > Icom and MFJ tuner and ride out to the site. I do mostly radar work
> > > now.
>

> > Jimmie
>
> >http://en.mimi.hu/aviation/lom.html
>
> > Chris- Hide quoted text -
>
> - Show quoted text -

Yes an NDB, sorry I was a newbie back then with a hand that fit a shovel. I went into radar and automation instead of Navaids. Sorry for confusion. I think the site was called LOM/NDB. Sometime I confuse the heck out of all those acronyms. I never learned what most of them mean, just what they are. Stuff I work on like FDIO,SCIP,SRAP, I know what they are but cant tell you what the acronyms mean. Nav-aids stuff has really gotten foriegn to me over the years.

NDB is non directional beacon I forget what LOM stands for. It may have something to do with "outer marker". I believe that was part of the equipment and it was on centerline.

JImmie

2746. Re: LOM Antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-17 20:14:37 UTC
From: JIMMIE <JIMMIEDEE123@YAHOO.COM>
Message-ID: <00949fa1-45b8-4925-9407-8d66cbbe7c65@k4g2000yqb.googlegroups.com>
Source record: 12358

On Oct 17, 10:35 am, "J. Mc Laughlin" <j...@power-net.net> wrote:
> Dear Group:
>
> Still not as clear as it could be. "Jimmie" is not talking about the 75 MHz
> yagi pointing straight up that provides a reference cone. The context seems
> to indicate a non-directional beacon that operated in the 200 kHz region
> using AM and a T antenna often supported by wooden poles.
 See:http://en.wikipedia.org/wiki/Locator_Outer_Marker
>
> I recall, in an earlier life, 160 meters on a daytime-only AM broadcast
> antenna at night.
>
> 73,   Mac   N8TT
>
> --
> J. McLaughlin; Michigan, USA
> Home: J...@power-net.net"christofire" <christof...@btinternet.com> wrote in message
>
> news:Gfidnc5MQpnxLkTXnZ2dnUVZ8judnZ2d@bt.com...
>
>
>
>
>
> > "JIMMIE" <JIMMIEDEE...@YAHOO.COM> wrote in message
> >news:cd6a3a7a-f444-4cb2-9673-6b488fb84225@a31g2000yqn.googlegroups.com...
> > > On Oct 16, 3:38 pm, riko...@earthlink.net wrote:
> > >> Hi Jimmie,
>
> > >> Inquiring minds want to know dept: You mentioned an LOM antenna.
>
> > >> Did that have something to do with aviation markers; loran or position
> > >> locators?
>
> > >> Rick
> > >> W9ZD
>
> > > Aviation, one of the first grunt jobs I had after working with the FAA
> > > was the decommissioning of an LOM site. The took out the equipment and
> > > the building but the antenna was there for several years. I didnt have
> > > a place I could put up a decent antenna so I would grab my 100 watt
> > > Icom and MFJ tuner and ride out to the site. I do mostly radar work
> > > now.
>

> > Jimmie
>
> >http://en.mimi.hu/aviation/lom.html
>
> > Chris- Hide quoted text -
>
> - Show quoted text -

Yeah, the device in the pictue is usually just called a OM, MM, IM dependening on its position and has evolved from a wire antenna from when I got into the FAA to the double Yagi to the single Yagi . I havent been out there in a long time but I think there is a single yagi OM there now and all the wooded area is now turned in to condos.

Jimmie

2747. Site for DIY 2.4Ghz impedance equipment help

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-18 18:41:23 UTC
From: amdx <amdx@knology.net>
Message-ID: <491f3$4adb614e$18ec6dd7$30459@KNOLOGY.NET>
Source record: 12359
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

Hi all,
I saw a site where a fellow designed a unit to measure impedance at 2.4 ghz, for use on wifi antennas. I don't recall if it was return loss or impedance.
It gave detailed instructions on how to build and he also had ready built units
for sale.
I think it was a ham that designed the unit. I also think he was not in the states, possibly a P or PY call sign, but the memory is not good!
Any help would be appreciated.
Thanks, Mike

2748. Re: Site for DIY 2.4Ghz impedance equipment help

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-18 20:21:13 UTC
From: Brian Howie <brian@nospam.demon.co.uk>
Message-ID: <KeX$LfD5i32KFwSR@b-howie.demon.co.uk>
Source record: 12360
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

In message <491f3$4adb614e$18ec6dd7$30459@KNOLOGY.NET>, amdx
<amdx@knology.net> writes
>Hi all,
> I saw a site where a fellow designed a unit to measure impedance at 2.4
>ghz, for use on wifi antennas. I don't recall if it was return loss or
>impedance.
>It gave detailed instructions on how to build and he also had ready built
>units
>for sale.
>I think it was a ham that designed the unit. I also think he was not in the
>states, possibly a P or PY call sign, but the memory is not good!
> Any help would be appreciated.
> Thanks, Mike
>
This it ?

http://www.frars.org.uk/cgi-bin/render.pl?pageid=1085

73 Brian GM4DIJ
--
Brian Howie

2749. Re: Site for DIY 2.4Ghz impedance equipment help

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-18 20:34:24 UTC
From: christofire <christofire@btinternet.com>
Message-ID: <8u2dnfZiA89G5kbXnZ2dnUVZ8oCdnZ2d@bt.com>
Source record: 12361
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

"Brian Howie" <brian@nospam.demon.co.uk> wrote in message
news:KeX$LfD5i32KFwSR@b-howie.demon.co.uk...
> In message <491f3$4adb614e$18ec6dd7$30459@KNOLOGY.NET>, amdx
> <amdx@knology.net> writes
>>Hi all,
>> I saw a site where a fellow designed a unit to measure impedance at 2.4
>>ghz, for use on wifi antennas. I don't recall if it was return loss or
>>impedance.
>>It gave detailed instructions on how to build and he also had ready built
>>units
>>for sale.
>>I think it was a ham that designed the unit. I also think he was not in
>>the
>>states, possibly a P or PY call sign, but the memory is not good!
>> Any help would be appreciated.
>> Thanks, Mike
>>
> This it ?
>
> http://www.frars.org.uk/cgi-bin/render.pl?pageid=1085
>
> 73 Brian GM4DIJ
> --
> Brian Howie

A piece of Sage Wireline and a PCB to terminate it would be easier.

Chris

2750. Re: Site for DIY 2.4Ghz impedance equipment help

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-19 00:14:52 UTC
From: Jeff Liebermann <jeffl@cruzio.com>
Message-ID: <upbnd5tethul84llpcsdql49oi84fdanrh@4ax.com>
Source record: 12362
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

On Sun, 18 Oct 2009 13:41:23 -0500, "amdx" <amdx@knology.net> wrote:

>Hi all,
> I saw a site where a fellow designed a unit to measure impedance at 2.4
>ghz, for use on wifi antennas. I don't recall if it was return loss or
>impedance.
>It gave detailed instructions on how to build and he also had ready built
>units
>for sale.
>I think it was a ham that designed the unit. I also think he was not in the
>states, possibly a P or PY call sign, but the memory is not good!
> Any help would be appreciated.
> Thanks, Mike

This is a copy of my reply to your duplicate posting to
alt.internet.wireless. Please don't do that again:

This one?
<http://pe2er.nl/wifiswr/index.htm>
or one of these:
<http://www.qsl.net/n9zia/wireless/appendixF.html>

What I do is use a return loss bridge as in:
<http://www.qsl.net/n9zia/wireless/pics/rtrn_loss_bridge.png>
I've built several out of chip resistors and junk parts. I have one
that works well up to about 8GHz. Great for testing antennas. That's
what's inside a Telonic Rho-tector (which can usually be found on eBay
for cheap). A few models go up to 2.4Ghz.

You'll also *might* need a microwave load or three. 50 ohms for a
reference, but also some other known values for calibration.

The problem is that you'll need an RF sweep generator to use this
effectively. It's also not a VNA (vector network analyzer) so it
won't tell you if any reactance is capacitive or inductive.

--
Jeff Liebermann jeffl@cruzio.com
150 Felker St #D http://www.LearnByDestroying.com
Santa Cruz CA 95060 http://802.11junk.com
Skype: JeffLiebermann AE6KS 831-336-2558

2751. Re: Site for DIY 2.4Ghz impedance equipment help

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-19 00:34:54 UTC
From: amdx <amdx@knology.net>
Message-ID: <421e$4adbb429$18ec6dd7$28138@KNOLOGY.NET>
Source record: 12363
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

"Jeff Liebermann" <jeffl@cruzio.com> wrote in message
news:upbnd5tethul84llpcsdql49oi84fdanrh@4ax.com...
> On Sun, 18 Oct 2009 13:41:23 -0500, "amdx" <amdx@knology.net> wrote:
>
>>Hi all,
>> I saw a site where a fellow designed a unit to measure impedance at 2.4
>>ghz, for use on wifi antennas. I don't recall if it was return loss or
>>impedance.
>>It gave detailed instructions on how to build and he also had ready built
>>units
>>for sale.
>>I think it was a ham that designed the unit. I also think he was not in
>>the
>>states, possibly a P or PY call sign, but the memory is not good!
>> Any help would be appreciated.
>> Thanks, Mike
>
>
> This is a copy of my reply to your duplicate posting to
> alt.internet.wireless. Please don't do that again:
>

Sorry, I thought about putting it on these other groups just as I hit send.

> This one?
> <http://pe2er.nl/wifiswr/index.htm>
> or one of these:
> <http://www.qsl.net/n9zia/wireless/appendixF.html>
>
> What I do is use a return loss bridge as in:
> <http://www.qsl.net/n9zia/wireless/pics/rtrn_loss_bridge.png>
> I've built several out of chip resistors and junk parts. I have one
> that works well up to about 8GHz. Great for testing antennas. That's
> what's inside a Telonic Rho-tector (which can usually be found on eBay
> for cheap). A few models go up to 2.4Ghz.
>
> You'll also *might* need a microwave load or three. 50 ohms for a
> reference, but also some other known values for calibration.
>
> The problem is that you'll need an RF sweep generator to use this
> effectively. It's also not a VNA (vector network analyzer) so it
> won't tell you if any reactance is capacitive or inductive.
>
>

> --
> Jeff Liebermann jeffl@cruzio.com
> 150 Felker St #D http://www.LearnByDestroying.com
> Santa Cruz CA 95060 http://802.11junk.com
> Skype: JeffLiebermann AE6KS 831-336-2558

2752. Re: Site for DIY 2.4Ghz impedance equipment help

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-19 00:37:06 UTC
From: amdx <amdx@knology.net>
Message-ID: <5a2c7$4adbb4ac$18ec6dd7$28328@KNOLOGY.NET>
Source record: 12364
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

"Brian Howie" <brian@nospam.demon.co.uk> wrote in message
news:KeX$LfD5i32KFwSR@b-howie.demon.co.uk...
> In message <491f3$4adb614e$18ec6dd7$30459@KNOLOGY.NET>, amdx
> <amdx@knology.net> writes
>>Hi all,
>> I saw a site where a fellow designed a unit to measure impedance at 2.4
>>ghz, for use on wifi antennas. I don't recall if it was return loss or
>>impedance.
>>It gave detailed instructions on how to build and he also had ready built
>>units
>>for sale.
>>I think it was a ham that designed the unit. I also think he was not in
>>the
>>states, possibly a P or PY call sign, but the memory is not good!
>> Any help would be appreciated.
>> Thanks, Mike
>>
> This it ?
>
> http://www.frars.org.uk/cgi-bin/render.pl?pageid=1085
>
> 73 Brian GM4DIJ
> --
> Brian Howie

Thanks for the site Brian, that is not the one I was thinking though.

Jeff found the one I wanted,
<http://pe2er.nl/wifiswr/index.htm>
Mike

2753. Re: Site for DIY 2.4Ghz impedance equipment help

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-19 07:22:17 UTC
From: "Helmut Wabnig"
Message-ID: <3r4od5lktaq1v7jnf8ni4vthfmbg9a3p5f@4ax.com>
Source record: 12365
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

On Sun, 18 Oct 2009 13:41:23 -0500, "amdx" <amdx@knology.net> wrote:

>Hi all,
> I saw a site where a fellow designed a unit to measure impedance at 2.4
>ghz, for use on wifi antennas. I don't recall if it was return loss or
>impedance.
>It gave detailed instructions on how to build and he also had ready built
>units
>for sale.
>I think it was a ham that designed the unit. I also think he was not in the
>states, possibly a P or PY call sign, but the memory is not good!
> Any help would be appreciated.
> Thanks, Mike
>

For the price of 1 tranceiver

http://www.youtube.com/watch?v=N0w5U0Xj1MU

w.

2754. Re: Site for DIY 2.4Ghz impedance equipment help

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-19 08:05:32 UTC
From: Jeff Liebermann <jeffl@cruzio.com>
Message-ID: <d37od555a9tl1vkefha0gcesc0u5npne0j@4ax.com>
Source record: 12366
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

On Mon, 19 Oct 2009 09:22:17 +0200, Helmut Wabnig <hwabnig@ .- --- -.
dotat> wrote:

>For the price of 1 tranceiver
>http://www.youtube.com/watch?v=N0w5U0Xj1MU

Clever but I think the OP wanted test equipment, not tuning methods.
Also, I noticed that the markers were set to 2400.500 and 2900.500MHz
instead of US band limits of 2400.0 and 2483.5Mhz.

--
Jeff Liebermann jeffl@cruzio.com
150 Felker St #D http://www.LearnByDestroying.com
Santa Cruz CA 95060 http://802.11junk.com
Skype: JeffLiebermann AE6KS 831-336-2558

2755. Re: Site for DIY 2.4Ghz impedance equipment help

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-19 11:34:06 UTC
From: amdx <amdx@knology.net>
Message-ID: <a136a$4adc4ea8$18ec6dd7$22389@KNOLOGY.NET>
Source record: 12367
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

"Jeff Liebermann" <jeffl@cruzio.com> wrote in message
news:d37od555a9tl1vkefha0gcesc0u5npne0j@4ax.com...
> On Mon, 19 Oct 2009 09:22:17 +0200, Helmut Wabnig <hwabnig@ .- --- -.
> dotat> wrote:
>
>>For the price of 1 tranceiver
>>http://www.youtube.com/watch?v=N0w5U0Xj1MU
>
> Clever but I think the OP wanted test equipment, not tuning methods.
> Also, I noticed that the markers were set to 2400.500 and 2900.500MHz
> instead of US band limits of 2400.0 and 2483.5Mhz.
>
> --
> Jeff Liebermann jeffl@cruzio.com
> 150 Felker St #D http://www.LearnByDestroying.com
> Santa Cruz CA 95060 http://802.11junk.com
> Skype: JeffLiebermann AE6KS 831-336-2558

So did the (plexiglas?) change the velocity factor for tuning.
Ya, I'll take his test equipment.
Mike

2756. Re: Site for DIY 2.4Ghz impedance equipment help

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-19 14:39:08 UTC
From: Jeff Liebermann <jeffl@cruzio.com>
Message-ID: <5ptod5l4t98pf0km70c0j1crc566jqe2mn@4ax.com>
Source record: 12368
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

On Mon, 19 Oct 2009 06:34:06 -0500, "amdx" <amdx@knology.net> wrote:

>>>For the price of 1 tranceiver
>>>http://www.youtube.com/watch?v=N0w5U0Xj1MU

>So did the (plexiglas?) change the velocity factor for tuning.

The plastic raised the dielectric constant of the space between the patch and the ground plane. In effect, it increased the effective wavelength of the patch slightly, thus lowering its tuned frequency. You can (accidentally) get the same effect by tuning the antenna, and then placing it inside a PVC radome, which will also slower its tuning frequency. The author will probably find himself re-tuning the plastic piece after he's installed the patch antenna in an enclosure.

>Ya, I'll take his test equipment.
> Mike

Build your own test equipment first. When that fails, mortgage the house, wife, kids, car, dog, cat, toys, etc and buy something better. However, beware of test equipment envy. Once you get on the test equipment upgrade path, nothing you own will be good enough, and there always will be something better.

--
Jeff Liebermann jeffl@cruzio.com
150 Felker St #D http://www.LearnByDestroying.com
Santa Cruz CA 95060 http://802.11junk.com
Skype: JeffLiebermann AE6KS 831-336-2558

2757. Re: Antenna Pattern: Carolina Windom

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-19 16:02:54 UTC
From: Michael Coslo <mjc5@psu.edu>
Message-ID: <hbi2je$gs0k$1@tr22n12.aset.psu.edu>
Source record: 12369

rikoski@earthlink.net wrote:
> Hi Steve,
>
> Thanks for the azimuth plot. This was just what I was looking for.
>
> I am on a sand dune above Lake Michigan 32 miles east southeast of the
> Sears Tower.
>
> The antenna that I am writing about is the Radio Works 80 Special with
> 41ï¿½ and 25ï¿½ element lengths. The radiating coax is 10ï¿½ strapped to a
> fiberglass mast. The dipole feedpoint is 30ï¿½ above the sand and about
> 90ï¿½ above Lake Michigan across the road. It is broadside to due north.
>
> I get a lot of contacts from Georgia, Texas and the US northwest but
> nothing from Europe, Japan or Australia.

Ahh, you are in the great RF black hole, according to some.

Anyhow, propagation to some of the places you haven't reached might be
problematic. Not really antenna problems.

> I work 20m ssb primarily and so have cut and put up a 3/2 wavelength
> centerfed dipole; slightly different location but same orientation with
> an aluminum mast. Similar performance on 20. With the Palstar tuner; it
> loads on 40.
>
> My choices come down to keeping the Carolina Windom up, taking it down
> or re-orienting (But I am squeezed by 7200v powerlines and large oak
> trees in a terminal forest.).

> It would be useful to have azimuth plots for 40 and 80 for this antenna;
> if for nothing else than a starting point.
>
> Thoughts?

Maybe time to download EZnec?

The OCF antenna can work very well. I put one up once because the place
where the coax dropped was really handy to my shack entrance. It worked
"well". I did some QRP into California on 80 meters during a contest,
and I worked what I heard. That doesn't specifically mean that the
antenna performed well, but it does mean that I worked QRP into
California on 80 from the middle of PA.

- 73 de Mike N3LI -

2758. Re: Antenna Pattern: Carolina Windom

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-19 16:29:16 UTC
From: Jim Lux <james.p.lux@jpl.nasa.gov>
Message-ID: <hbi44svos1@news.jpl.nasa.gov>
Source record: 12370

Michael Coslo wrote:
> rikoski@earthlink.net wrote:
>
>> Thoughts?
>
> Maybe time to download EZnec?
>
> The OCF antenna can work very well. I put one up once because the place
> where the coax dropped was really handy to my shack entrance. It worked
> "well". I did some QRP into California on 80 meters during a contest,
> and I worked what I heard. That doesn't specifically mean that the
> antenna performed well, but it does mean that I worked QRP into
> California on 80 from the middle of PA.
>

How will you model the radiating feedline? I suppose one could just put a "wire" in the model to represent the coax shield (which is what radiates) and tie it to something useful. Someone's probably figured out what the equivalent impedances are for the "isolator" and "balun" that form part of that antenna. Maybe googling "NEC model Carolina Windom" might turn up something useful.

2759. Re: Site for DIY 2.4Ghz impedance equipment help

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-19 17:27:53 UTC
From: brian whatcott <betwys1@sbcglobal.net>
Message-ID: <nJednaQfGPVdPEHXnZ2dnUVZ_uidnZ2d@giganews.com>
Source record: 12371
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

Brian Howie wrote:
> In message <491f3$4adb614e$18ec6dd7$30459@KNOLOGY.NET>, amdx
> <amdx@knology.net> writes
>> Hi all,
>> I saw a site where a fellow designed a unit to measure impedance at 2.4
>> ghz, for use on wifi antennas. I don't recall if it was return loss or
>> impedance.
>> It gave detailed instructions on how to build and he also had ready built
>> units
>> for sale.
>> I think it was a ham that designed the unit. I also think he was not
>> in the
>> states, possibly a P or PY call sign, but the memory is not good!
>> Any help would be appreciated.
>> Thanks, Mike
>>
> This it ?
>
> http://www.frars.org.uk/cgi-bin/render.pl?pageid=1085
>
> 73 Brian GM4DIJ

This was a cool hamradio site, to my mind. I enjoyed the puzzle about
the unbalanced bridge current. A clear simple description of Thevenin
versus Kirchoff.

Thanks

Brian W

2760. Re: Antenna Pattern: Carolina Windom

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-19 18:05:47 UTC
From: Michael Coslo <mjc5@psu.edu>
Message-ID: <hbi9pr$gs0o$1@tr22n12.aset.psu.edu>
Source record: 12372

Jim Lux wrote:
> Michael Coslo wrote:
>> rikoski@earthlink.net wrote:
>>
>>> Thoughts?
>>
>> Maybe time to download EZnec?
>>
>> The OCF antenna can work very well. I put one up once because the
>> place where the coax dropped was really handy to my shack entrance. It
>> worked "well". I did some QRP into California on 80 meters during a
>> contest, and I worked what I heard. That doesn't specifically mean
>> that the antenna performed well, but it does mean that I worked QRP
>> into California on 80 from the middle of PA.
>>
>
>
> How will you model the radiating feedline? I suppose one could just put
> a "wire" in the model to represent the coax shield (which is what
> radiates) and tie it to something useful. Someone's probably figured
> out what the equivalent impedances are for the "isolator" and "balun"
> that form part of that antenna. Maybe googling "NEC model Carolina
> Windom" might turn up something useful.

That's pretty much what I would do re the wire. I suspect that the
pattern would be complex in any event. Richard was closest to correct
when he advised to listen to the manufacturer.

At first blush, I would think that the antenna is probably not far from
omnidirectional, but the horizontal component might skew it a bit. Any
rate, I don't think that his issues with working EU are antenna related.

- 73 de Mike N3LI -

2761. Re: LOM Antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-19 19:03:30 UTC
From: Brian Howie <brian@nospam.demon.co.uk>
Message-ID: <YS474cCCgL3KFwZS@b-howie.demon.co.uk>
Source record: 12373

I
>
>Yeah, the device in the pictue is usually just called a OM, MM, IM
>dependening on its position and has evolved from a wire antenna from
>when I got into the FAA to the double Yagi to the single Yagi . I
>havent been out there in a long time but I think there is a single
>yagi OM there now and all the wooded area is now turned in to condos.

Http://www.b-howie.demon.co.uk/pw.jpg

This was the OM for Prestwick Airport in Scotland . It has the NBD mast
and a pair 75MHz Yagis. The 75MHz marker was switched off some time
ago, and the NDB on 326KHz disappeared earlier in the year.

Brian GM4DIJ
--
Brian Howie

2762. FS/WTT Solid Brass Straight Key/ PRO 76 Scanner

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-19 19:53:09 UTC
From: Mike Kulyk <mkulyk@optonline.net>
Message-ID: <4adcc3b0$1$31274$607ed4bc@cv.net>
Source record: 12374

Nice one of a kind solid brass straight key, on oak base. Real nice looking and feels great. My carpel tunnel is saying no to CW at this time..

This key was made by a ham in 4 land.

Pictures by e-mail Accepting best reasonable offer..

Radio Shack Pro 76 hand held 200 channel scanner.. Runs on 4 AA cells.

Also best reasonable offer.. Pic by e-mail..

I am looking for a Hy-Gain AV-18VS antenna.

Mike WB2GLW

2763. Re: Antenna Pattern: Carolina Windom

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-20 12:29:37 UTC
From: steveeh131047 <google@karinya.net>
Message-ID: <6c278430-84fd-463b-b5f3-d58548f11383@33g2000vbe.googlegroups.com>
Source record: 12375

On Oct 16, 2:28 pm, riko...@earthlink.net wrote:
> Hi Steve,
>
> Thanks for the azimuth plot. This was just what I was looking for.
>
> It would be useful to have azimuth plots for 40 and 80 for this antenna;
> if for nothing else than a starting point.
>
> Rick
> W9ZD

Rick,

On 80m it's almost omni-directional; worst-case eccentricity is around
4.5dB at 26 degrees elevation angle. The preferred directions are
broadside.

On 40m the pattern is more complex. At medium elevation angles (40-70
degrees) end-to-end is slightly better than broadside; at lower
elevation angles the pattern develops into 4 lobes NE/NW/SE/SW
(ssuming the antenna runs N-S)

Hope that helps,

Steve G3TXQ

2764. radials vs radialless @ 144/430 MHz - "stealth" antennae

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-20 23:02:33 UTC
From: Marc Heusser <marc.heusser@byeheusser.commercialspammers.invalid>
Message-ID: <marc.heusser-0EF060.01020321102009@news.uzh.ch>
Source record: 12376

Because of an antenna unfriendly neighborhood and limited space I am
considering using a Diamond antenna either with or without radials,
specifically X-50 vs SE-100.
They are the same length, but the SE-100 is a "marine" antenna without
radials. Nominally they both sport the same gain etc.

What are the tradeoffs?
Without radials it would certainly look less conspicious.

TIA

Marc

--
remove bye and from mercial to get valid e-mail
<http://www.heusser.com>

2765. Re: radials vs radialless @ 144/430 MHz - "stealth" antennae

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-20 23:31:28 UTC
From: dplatt@radagast.org
Message-ID: <grt1r6-8qs.ln1@radagast.org>
Source record: 12377

In article <marc.heusser-0EF060.01020321102009@news.uzh.ch>,
Marc Heusser <marc.heusser@byeheusser.commercialspammers.invalid> wrote:

>Because of an antenna unfriendly neighborhood and limited space I am
>considering using a Diamond antenna either with or without radials,
>specifically X-50 vs SE-100.
>They are the same length, but the SE-100 is a "marine" antenna without
>radials. Nominally they both sport the same gain etc.
>
>What are the tradeoffs?
>Without radials it would certainly look less conspicious.

In an antenna of this sort, I believe that the primary function
of the radials is to act as a sort of feedline choke... they minimize
any tendency of RF coming up the inside of the feedline shield to flow
back down along the outside of the feedline. Such RF on the feedline
can cause radiation which will disturb the pattern of the antenna to
some extent.

A radial-less version of the antenna has no such choking, and there
might be some RF flow on the feedline as a result. This might cause a
slight reduction in gain in some directions, due to changes in the
antenna pattern.

If there's a *lot* of RF current flow on the outside of the feedline,
it might tend to couple into nearby conductors, and might (in some
installations) be the cause of QRM (e.g. TVI).

Is this likely to present a problem? In most installations I'd tend
to doubt it. If it is, you might be able to correct it by (1)
insulating the antenna from its mast, and (2) adding some sort of
choke to the feedline, just below the antenna feedpoint... either wind
a foot or two of the coax into a coil, or clamp a ferrite or two
around the coax.

--
Dave Platt <dplatt@radagast.org> AE6EO
Friends of Jade Warrior home page: http://www.radagast.org/jade-warrior
I do _not_ wish to receive unsolicited commercial email, and I will
boycott any company which has the gall to send me such ads!

2766. Re: radials vs radialless @ 144/430 MHz - "stealth" antennae

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-21 04:47:35 UTC
From: n9zas <n9zas.524942b@radiobanter.com>
Message-ID: <n9zas.524942b@radiobanter.com>
Source record: 12381

Marc Heusser;691477 Wrote:
> Because of an antenna unfriendly neighborhood and limited space I am
> considering using a Diamond antenna either with or without radials,
> specifically X-50 vs SE-100.
> They are the same length, but the SE-100 is a "marine" antenna without
>
> radials. Nominally they both sport the same gain etc.
>
> What are the tradeoffs?
> Without radials it would certainly look less conspicious.
>
> TIA
>
> Marc
>
> --
> remove bye and from mercial to get valid e-mail
> http://www.heusser.com

Do what you wish but the ground radials on the diamond A50 are there
for a reason. It would be in your best interest to leave them on. It's
small enough to begin with that you should not have any problem hiding
it. I have one up and it's well hid at 30'.
N9ZAS

--
n9zas

2767. Re: radials vs radialless @ 144/430 MHz - "stealth" antennae

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-21 05:33:33 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <pq4td5hqncbu2svpdhusdngppva13n47mc@4ax.com>
Source record: 12378

On Tue, 20 Oct 2009 16:31:28 -0700, dplatt@radagast.org (Dave Platt)
wrote:

>In an antenna of this sort, I believe that the primary function
>of the radials is to act as a sort of feedline choke... they minimize
>any tendency of RF coming up the inside of the feedline shield to flow
>back down along the outside of the feedline.

Hi Dave,

I've modeled the conventional 4 radial GP, in free space; and, if
anything, the down lead (added as a 1/4 wave drop wire) supports more
current than the "radiator."

When I did the same thing with a ground plane of 120 radials (and the
added drop wire), the down lead supported nearly as much current as
the "radiator."

Neither radial configuration exhibits any/much choking.

In essence, these models were simply vertical dipoles with a star of
neutral elements. Of course, changing the length of the drop wire
complexifies the outcome; and would, I suspect, merely mimic nature.

Going further by following up on that last thought:

When for both radial configurations I vary the length of the down lead
(starting at 0.1 then adding 0.05 wl increments), the down lead shows
the current distribution of any inverted radiator that correlates to
that length (up to and including 3/4ths). However, the drive point
Z's R varies considerably ONLY around resonances (quarter and three
quarter wl) while the Z's X barely shifts value except (and again) at
those resonances.

What the elevated radials appear to do is dominate (buffer) the feed
point Z against variations of a feedline's length. Without these
radials, then this would be nothing other than a vertical Off Center
Dipole - if the feedline doesn't find ground, that is. The presence
of ground takes all bets off the table, but I don't think ground will
introduce choking action to the list of qualities for elevated
radials.

73's
Richard Clark, KB7QHC

2768. Re: Ground antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-21 07:49:43 UTC
From: Szczepan Bialek <sz.bialek@wp.pl>
Message-ID: <hbm2n8$40s$1@node1.news.atman.pl>
Source record: 12379

"Richard Clark" <kb7qhc@comcast.net> wrote
news:c2khd5hk9i3b3v5jtudn8an71ki9ec32u2@4ax.com...
> On Fri, 16 Oct 2009 12:27:02 -0700 (PDT), nm5k@wt.net wrote:
>
>>I think the height of the object relative to it's surroundings, and
>>it's ability to stream mean more than anything.
>
> Hi Mark,
>
> There's another angle to be observed here. Globally, there is a
> potential difference between earth and sky that runs to several
> hundred volts per meter,

The Earth has the excess of electrons. The Earth produce the electric field
about one hundred volts per meter. In a suuny day the electrons migrate up
with the heavy ions (aggregates of H2O molecukes).

> with a current flow on the order of
> femtoAmperes per square cM. Not much locally, but for the full
> surface area of earth it is the electron conveyor belt charging the
> clouds through dust migration.

This "electron conveyor belt" charge the air. Next the air becomes cooler
and the condensation take place. Clouds appear. The condensation cause the
voltage rise. All types of sparks jump.
Under clouds the electric field has the opposite direction and thousands
volts per meter.

>
> At this potential and current, absolutely everything is a short
> circuit that penetrates the voltage isoclines raising earth towards
> the clouds.

The high voltagi in the clouds is lowered by the "electron conveyor belt"
and the lightning.

The "electron conveyor belt" is more effective if the Earth have many sharp
needle.
So there are the two possibilities:

1. If "The intention is to PREVENT a direct lightning strike," - many sharp
needle is used,

2. If the intention is to CATCH a direct lightning strike and conduct a
strike to ground - a polished big ball is used.
S*

2769. Re: Ground antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-21 08:06:01 UTC
From: Ian Jackson <ianREMOVETHISjackson@g3ohx.demon.co.uk>
Message-ID: <Rq6$riIpDs3KFwLV@g3ohx.demon.co.uk>
Source record: 12380

In message <hbm2n8$40s$1@node1.news.atman.pl>, Szczepan Bialek
<sz.bialek@wp.pl> writes
>
>"Richard Clark" <kb7qhc@comcast.net> wrote
>news:c2khd5hk9i3b3v5jtudn8an71ki9ec32u2@4ax.com...
>> On Fri, 16 Oct 2009 12:27:02 -0700 (PDT), nm5k@wt.net wrote:
>>
>>>I think the height of the object relative to it's surroundings, and
>>>it's ability to stream mean more than anything.
>>
>> Hi Mark,
>>
>> There's another angle to be observed here. Globally, there is a
>> potential difference between earth and sky that runs to several
>> hundred volts per meter,
>
>The Earth has the excess of electrons. The Earth produce the electric field
>about one hundred volts per meter. In a suuny day the electrons migrate up
>with the heavy ions (aggregates of H2O molecukes).
>
>> with a current flow on the order of
>> femtoAmperes per square cM. Not much locally, but for the full
>> surface area of earth it is the electron conveyor belt charging the
>> clouds through dust migration.
>
>This "electron conveyor belt" charge the air. Next the air becomes cooler
>and the condensation take place. Clouds appear. The condensation cause the
>voltage rise. All types of sparks jump.
>Under clouds the electric field has the opposite direction and thousands
>volts per meter.
>
>>
>> At this potential and current, absolutely everything is a short
>> circuit that penetrates the voltage isoclines raising earth towards
>> the clouds.
>
>The high voltagi in the clouds is lowered by the "electron conveyor belt"
>and the lightning.
>
>The "electron conveyor belt" is more effective if the Earth have many sharp
>needle.
>So there are the two possibilities:
>
>1. If "The intention is to PREVENT a direct lightning strike," - many sharp

>needle is used,
>
>2. If the intention is to CATCH a direct lightning strike and conduct a
>strike to ground - a polished big ball is used.
>S*
>
In the early days of lightning conductors, I believe that the French
didn't like the nasty pointy things which the British had installed.
Instead, they decorated theirs with fancy balls at the top - with
sometimes disastrous results.
--
Ian

2770. now see this

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-21 12:42:01 UTC
From: pet <maheswari.kumaravel@gmail.com>
Message-ID: <7408a921-aa8e-40f4-941e-f41c3f8b18b6@r24g2000prf.googlegroups.com>
Source record: 12382

http://www.123maza.com/domain-web-design/earn-money/

2771. Modeling an FM transmitter with LTspice?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-21 14:31:36 UTC
From: "dave.harper" <dave.harper@gmail.com>
Message-ID: <452cfa58-f0c3-4544-a8eb-cea0507a1ad9@z34g2000vbl.googlegroups.com>
Source record: 12383
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.antenna

I'm trying to model an FM transmitter with LTspice. The schematic of the circuit I'm trying to model is shown here:

http://www.sentex.ca/~mec1995/circ/fmt1.htm

It takes a while to start oscillating, but when it does reach a steady oscillation, the lower half of the waveforms look a little distorted. Interestingly, when I reduce the inductor value (to say .01uH), the waveforms are less distorted, but when I only decrease the capacitor (to say 3pF), the waveforms become more distorted. Any insight into the source of this distortion?

Could it be that I need to model an equivalent antenna?

I've copied the LTspice .asc file below.

Thanks in advance!
Dave

```
---------------------------------
Version 4
SHEET 1 928 680
WIRE 160 -144 48 -144
WIRE 272 -144 272 -176
WIRE 272 -144 160 -144
WIRE 416 -144 272 -144
WIRE 528 -144 416 -144
WIRE 624 -144 528 -144
WIRE 704 -144 624 -144
WIRE 416 -128 416 -144
WIRE 704 -128 704 -144
WIRE 528 -112 528 -144
WIRE 624 -112 624 -144
WIRE 48 -96 48 -144
WIRE 160 -96 160 -144
WIRE 272 -96 272 -144
WIRE -384 -80 -384 -128
WIRE -336 -80 -384 -80
WIRE -224 -80 -256 -80
WIRE -144 -80 -144 -128
WIRE -144 -80 -224 -80
WIRE -144 -48 -144 -80
WIRE 416 -48 368 -48
WIRE 528 -48 416 -48
WIRE -384 -32 -384 -80
```

```
WIRE -224 -32 -224 -80
WIRE 336 -16 272 -16
WIRE 144 0 96 0
WIRE 624 0 624 -48
WIRE 704 0 704 -48
WIRE 704 0 624 0
WIRE 336 16 336 -16
WIRE 368 16 336 16
WIRE 144 32 144 0
WIRE 160 32 160 -16
WIRE 160 32 144 32
WIRE 208 32 160 32
WIRE 416 48 416 -48
WIRE 560 48 416 48
WIRE 48 64 48 -16
WIRE 96 64 48 64
WIRE -384 80 -384 48
WIRE -224 80 -224 48
WIRE -144 80 -144 16
WIRE 160 96 160 32
WIRE 272 96 272 80
WIRE 704 96 704 64
WIRE 704 96 624 96
WIRE 48 176 48 144
WIRE 160 176 48 176
WIRE 272 176 160 176
WIRE 416 176 272 176
WIRE 512 176 416 176
WIRE 624 176 624 96
WIRE 624 176 592 176
WIRE 416 192 416 176
FLAG -384 80 0
FLAG -384 -128 +9V
FLAG -144 80 0
FLAG -224 80 0
FLAG -144 -128 +4.5V
FLAG 272 -176 +9V
FLAG 416 192 0
SYMBOL voltage -384 -48 R0
WINDOW 123 0 0 Left 0
WINDOW 39 0 0 Left 0
WINDOW 0 -66 54 Left 0
WINDOW 3 47 51 Left 0
SYMATTR InstName V1
SYMATTR Value 9
SYMBOL res -352 -64 R270
WINDOW 0 32 56 VTop 0
WINDOW 3 0 56 VBottom 0
SYMATTR InstName R6
SYMATTR Value 1k
```

```
SYMBOL res -240 -48 R0
SYMATTR InstName R7
SYMATTR Value 1k
SYMBOL polcap -160 -48 R0
SYMATTR InstName C3
SYMATTR Value 10µ
SYMBOL res 32 -112 R0
SYMATTR InstName R2
SYMATTR Value 10k
SYMBOL res 144 -112 R0
SYMATTR InstName R3
SYMATTR Value 1000k
SYMBOL res 256 -112 R0
SYMATTR InstName R8
SYMATTR Value 10k
SYMBOL res 144 80 R0
SYMATTR InstName R9
SYMATTR Value 100k
SYMBOL res 256 80 R0
SYMATTR InstName R11
SYMATTR Value 100
SYMBOL res 400 -144 R0
SYMATTR InstName R12
SYMATTR Value 10k
SYMBOL polcap 512 -112 R0
SYMATTR InstName C1
SYMATTR Value .01µ
SYMBOL polcap 608 -112 R0
SYMATTR InstName C2
SYMATTR Value 30pF
SYMBOL cap 352 -48 R0
SYMATTR InstName C5
SYMATTR Value .1µF
SYMBOL npn 208 -16 R0
SYMATTR InstName Q1
SYMATTR Value 2N3904
SYMBOL cap 80 0 R0
SYMATTR InstName C6
SYMATTR Value .1µF
SYMBOL npn 560 0 R0
SYMATTR InstName Q2
SYMATTR Value 2N3904
SYMBOL res 496 192 R270
WINDOW 0 32 56 VTop 0
WINDOW 3 0 56 VBottom 0
SYMATTR InstName R13
SYMATTR Value 1k
SYMBOL ind 688 -144 R0
SYMATTR InstName L1
SYMATTR Value .1µH
```

```
SYMBOL cap 688 0 R0
SYMATTR InstName C4
SYMATTR Value 4.7pF
SYMBOL res 32 48 R0
SYMATTR InstName R1
SYMATTR Value 10
TEXT -440 -464 Left 0 !.tran 0 5u 0 .0001u
TEXT -440 -424 Left 0 !.ic V(in1)=2.7
TEXT -440 -512 Left 0 ;FM transmitter
```

2772. Re: Modeling an FM transmitter with LTspice?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-21 16:11:07 UTC
From: Tim Wescott <tim@seemywebsite.com>
Message-ID: <AN-dnTK6mskGr0LXnZ2dnUVZ_jJi4p2d@web-ster.com>
Source record: 12384
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.antenna

On Wed, 21 Oct 2009 07:31:36 -0700, dave.harper wrote:

> I'm trying to model an FM transmitter with LTspice. The schematic of
> the circuit I'm trying to model is shown here:
>
> http://www.sentex.ca/~mec1995/circ/fmt1.htm
>
> It takes a while to start oscillating, but when it does reach a steady
> oscillation, the lower half of the waveforms look a little distorted.
> Interestingly, when I reduce the inductor value (to say .01uH), the
> waveforms are less distorted, but when I only decrease the capacitor (to
> say 3pF), the waveforms become more distorted. Any insight into the
> source of this distortion?
>
> Could it be that I need to model an equivalent antenna?
>
> I've copied the LTspice .asc file below.
>
> Thanks in advance!
> Dave
>

What are you trying to find out with your simulation? Simulation is usually either pointless or time consuming unless you have some narrow thing to look for, and have a good idea what it is.

I suspect that the waveform distortion is related to the impedance of the tank more than the resonant frequency. Reducing the inductor value lowers impedance and raises frequency; reducing the capacitor value raises impedance and frequency together.

Yes, you probably need to model an equivalent antenna. In fact, for many things you may want to find out from simulation you would need to model several different equivalent antennas.

--
www.wescottdesign.com

2773. Re: Ground antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-21 17:02:11 UTC
From: Szczepan Bialek <sz.bialek@wp.pl>
Message-ID: <hbneio$9nc$1@node1.news.atman.pl>
Source record: 12385

"Ian Jackson" <ianREMOVETHISjackson@g3ohx.demon.co.uk> wrote
news:Rq6$riIpDs3KFwLV@g3ohx.demon.co.uk...
> In message <hbm2n8$40s$1@node1.news.atman.pl>, Szczepan Bialek
> <sz.bialek@wp.pl> writes
>>
>>"Richard Clark" <kb7qhc@comcast.net> wrote
>>news:c2khd5hk9i3b3v5jtudn8an71ki9ec32u2@4ax.com...
>>> On Fri, 16 Oct 2009 12:27:02 -0700 (PDT), nm5k@wt.net wrote:
>>>
>>>>I think the height of the object relative to it's surroundings, and
>>>>it's ability to stream mean more than anything.
>>>
>>> Hi Mark,
>>>
>>> There's another angle to be observed here. Globally, there is a
>>> potential difference between earth and sky that runs to several
>>> hundred volts per meter,
>>
>>The Earth has the excess of electrons. The Earth produce the electric
>>field
>>about one hundred volts per meter. In a suuny day the electrons migrate up
>>with the heavy ions (aggregates of H2O molecukes).
>>
>>> with a current flow on the order of
>>> femtoAmperes per square cM. Not much locally, but for the full
>>> surface area of earth it is the electron conveyor belt charging the
>>> clouds through dust migration.
>>
>>This "electron conveyor belt" charge the air. Next the air becomes cooler
>>and the condensation take place. Clouds appear. The condensation cause the
>>voltage rise. All types of sparks jump.
>>Under clouds the electric field has the opposite direction and thousands
>>volts per meter.
>>
>>>
>>> At this potential and current, absolutely everything is a short
>>> circuit that penetrates the voltage isoclines raising earth towards
>>> the clouds.
>>
>>The high voltagi in the clouds is lowered by the "electron conveyor belt"
>>and the lightning.
>>
>>The "electron conveyor belt" is more effective if the Earth have many
>>sharp

>>needle.
>>So there are the two possibilities:
>>
>>1. If "The intention is to PREVENT a direct lightning strike," - many
>>sharp
>>needle is used,
>>
>>2. If the intention is to CATCH a direct lightning strike and conduct a
>>strike to ground - a polished big ball is used.
>>S*
>>
> In the early days of lightning conductors, I believe that the French
> didn't like the nasty pointy things which the British had installed.
> Instead, they decorated theirs with fancy balls at the top - with
> sometimes disastrous results.

Now everywhere are "the nasty pointy things" but most people do not know why
and if they PREVENT or CATCH.
S*

2774. Re: Ground antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-21 18:28:55 UTC
From: nm5k@wt.net
Message-ID: <b8dae726-29ed-4ca9-8c89-38a64ca1df89@f20g2000prn.googlegroups.com>
Source record: 12386

On Oct 21, 2:49 am, "Szczepan Bialek" <sz.bia...@wp.pl> wrote:

>
> 1. If "The intention is to PREVENT a direct lightning strike," - many sharp
> needle is used,

Good luck.
>
> 2. If the intention is to CATCH a direct lightning strike and conduct a
> strike to ground - a polished big ball is used.
> S*

Good luck.

2775. Re: Modeling an FM transmitter with LTspice?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-21 18:53:52 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <cvmdnYis6slVxULXnZ2dnUVZ_uSdnZ2d@giganews.com>
Source record: 12387
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.antenna

dave.harper wrote:
> I'm trying to model an FM transmitter with LTspice. The schematic of
> the circuit I'm trying to model is shown here:
>
> http://www.sentex.ca/~mec1995/circ/fmt1.htm
>
> It takes a while to start oscillating, but when it does reach a steady
> oscillation, the lower half of the waveforms look a little distorted.
> Interestingly, when I reduce the inductor value (to say .01uH), the
> waveforms are less distorted, but when I only decrease the capacitor
> (to say 3pF), the waveforms become more distorted. Any insight into
> the source of this distortion?
>
> Could it be that I need to model an equivalent antenna?
>
> I've copied the LTspice .asc file below.
>
> Thanks in advance!
> Dave

In order to start, an oscillator has a loop gain greater than one. This causes the oscillation amplitude to continually increase. Eventually, the amplitude is limited by something nonlinear, since it can't increase forever. Oscillators designed for low noise, high stability, or other precise characteristics have some stable limiting mechanism such as diodes to limit the amplitude at a known value. Most, like this one, depend on distortion caused by overdriving one or both transistors to limit the amplitude. Consequently, distortion virtually always occurs(*). To get a clean output requires filtering, and the more distortion in the basic feedback waveform, the better the filtering required. All this circuit has is a single tank circuit in one transistor collector. The loaded Q of this circuit is just too low and the fundamental distortion too great to get a clean waveform. Adding an antenna might help or hurt the distortion, depending on the type of antenna -- it might filter some harmonics but not others, and at resonance it'll further load the tank. You might try tapping the collector and antenna down on the tank, but I'd be prone to add some additional filtering between the tank and antenna. Even that might not work as you expect because of the complex way the antenna impedance changes with frequency, but it'll help.

(*) It's usually not practical to filter audio oscillators, so some low distortion audio oscillators are made by using feedback limiting that has a very slow time constant -- one that's many cycles of the waveform.

A light bulb is often used for the limiter. In general, you can trade loop gain for distortion -- the closer you make the loop gain in the linear region to 1, the less distortion you get. But the slower it starts, and it won't start at all if anything like temperature or component value variation drops the loop gain below 1.

Roy Lewallen, W7EL

2776. Re: Modeling an FM transmitter with LTspice?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-21 18:58:08 UTC
From: JIMMIE <JIMMIEDEE123@YAHOO.COM>
Message-ID: <ee127daa-5743-47c1-8703-8209874a368a@l34g2000vba.googlegroups.com>
Source record: 12388
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.antenna

On Oct 21, 12:11 pm, Tim Wescott <t...@seemywebsite.com> wrote:
> On Wed, 21 Oct 2009 07:31:36 -0700, dave.harper wrote:
> > I'm trying to model an FM transmitter with LTspice. The schematic of
> > the circuit I'm trying to model is shown here:
>
> >http://www.sentex.ca/~mec1995/circ/fmt1.htm
>
> > It takes a while to start oscillating, but when it does reach a steady
> > oscillation, the lower half of the waveforms look a little distorted.
> > Interestingly, when I reduce the inductor value (to say .01uH), the
> > waveforms are less distorted, but when I only decrease the capacitor (to
> > say 3pF), the waveforms become more distorted. Any insight into the
> > source of this distortion?
>
> > Could it be that I need to model an equivalent antenna?
>
> > I've copied the LTspice .asc file below.
>
> > Thanks in advance!
> > Dave
>
> What are you trying to find out with your simulation? Simulation is
> usually either pointless or time consuming unless you have some narrow
> thing to look for, and have a good idea what it is.
>
> I suspect that the waveform distortion is related to the impedance of the
> tank more than the resonant frequency. Reducing the inductor value
> lowers impedance and raises frequency; reducing the capacitor value
> raises impedance and frequency together.
>
> Yes, you probably need to model an equivalent antenna. In fact, for many
> things you may want to find out from simulation you would need to model
> several different equivalent antennas.
>
> --www.wescottdesign.com- Hide quoted text -
>
> - Show quoted text -

Whoever said to expect something like a clean signal from a
transmitter like that in the first place. I ve build a few of those
little toy FM transmitters and the output is far from clean. Unless
this is just an exercise in Spice modeling
its probably a waste of time to do so. Intead of worrying about the

antenna I would try to figure out what was the best load for the circuit and design an antenna to meet that requirement otherwise I would just hang a 8 inch piece of hookup wire off it aand call it done.

Jimmie

2777. RE:radials vs. radialess

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-21 19:14:27 UTC
From: Cyclone651 <rollie@iowatelecom.net>
Message-ID: <hbnmik$14b$1@news.netins.net>
Source record: 12389

I use the Arrow 2m/70cm Jpole which works well. No radials, of course, and small in size which could be used in the attic. They're made of solid aluminum stock and are as bulletproof as an antenna can be made. Check arrow's website, I think you'll be impressed

2778. Re: radials vs. radialess

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-21 20:03:22 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <_OJDm.41651$4E.11599@newsfe08.iad>
Source record: 12390

Cyclone651 wrote:
> I use the Arrow 2m/70cm Jpole which works well. No radials, of course, and
> small in size which could be used in the attic.

I've got one and it works well. It resembles an
end-fed Zepp more than a J-Pole.
--
73, Cecil, IEEE, OOTC, http://www.w5dxp.com

2779. Re: Modeling an FM transmitter with LTspice?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-21 22:58:12 UTC
From: Brian Howie <brian@nospam.demon.co.uk>
Message-ID: <MA5essBEI53KFw6a@b-howie.demon.co.uk>
Source record: 12391
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.antenna

In message
<452cfa58-f0c3-4544-a8eb-cea0507a1ad9@z34g2000vbl.googlegroups.com>,
dave.harper <dave.harper@gmail.com> writes
>I'm trying to model an FM transmitter with LTspice. The schematic of
>the circuit I'm trying to model is shown here:
>
>http://www.sentex.ca/~mec1995/circ/fmt1.htm
>
>It takes a while to start oscillating, but when it does reach a steady
>oscillation, the lower half of the waveforms look a little distorted.
>Interestingly, when I reduce the inductor value (to say .01uH), the
>waveforms are less distorted, but when I only decrease the capacitor
>(to say 3pF), the waveforms become more distorted. Any insight into
>the source of this distortion?
>
>Could it be that I need to model an equivalent antenna?
>
>I've copied the LTspice .asc file below.

I ran the file. It looks like the output voltage is forward biasing the
collector-base junction of the output transistor Q2 , causing some
clipping. Q2 is saturating.

Brian GM4DIJ
--
Brian Howie

2780. Re: Modeling an FM transmitter with LTspice?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-21 23:34:24 UTC
From: Tim Wescott <tim@seemywebsite.com>
Message-ID: <H42dnZ8vz_sdB0LXnZ2dnUVZ_vmdnZ2d@web-ster.com>
Source record: 12392
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.antenna

On Wed, 21 Oct 2009 11:58:08 -0700, JIMMIE wrote:

> On Oct 21, 12:11 pm, Tim Wescott <t...@seemywebsite.com> wrote:
>> On Wed, 21 Oct 2009 07:31:36 -0700, dave.harper wrote:
>> > I'm trying to model an FM transmitter with LTspice. The schematic of
>> > the circuit I'm trying to model is shown here:
>>
>> >http://www.sentex.ca/~mec1995/circ/fmt1.htm
>>
>> > It takes a while to start oscillating, but when it does reach a
>> > steady oscillation, the lower half of the waveforms look a little
>> > distorted. Interestingly, when I reduce the inductor value (to say
>> > .01uH), the waveforms are less distorted, but when I only decrease
>> > the capacitor (to say 3pF), the waveforms become more distorted. Any
>> > insight into the source of this distortion?
>>
>> > Could it be that I need to model an equivalent antenna?
>>
>> > I've copied the LTspice .asc file below.
>>
>> > Thanks in advance!
>> > Dave
>>
>> What are you trying to find out with your simulation? Simulation is
>> usually either pointless or time consuming unless you have some narrow
>> thing to look for, and have a good idea what it is.
>>
>> I suspect that the waveform distortion is related to the impedance of
>> the tank more than the resonant frequency. Reducing the inductor value
>> lowers impedance and raises frequency; reducing the capacitor value
>> raises impedance and frequency together.
>>
>> Yes, you probably need to model an equivalent antenna. In fact, for
>> many things you may want to find out from simulation you would need to
>> model several different equivalent antennas.
>>
>> --www.wescottdesign.com- Hide quoted text -
>>
>> - Show quoted text -
>
> Whoever said to expect something like a clean signal from a transmitter
> like that in the first place. I ve build a few of those little toy FM
> transmitters and the output is far from clean. Unless this is just an

> exercise in Spice modeling
> its probably a waste of time to do so. Intead of worrying about the
> antenna I would try to figure out what was the best load for the circuit
> and design an antenna to meet that requirement otherwise I would just
> hang a 8 inch piece of hookup wire off it aand call it done.

I was going to suggest that if he wants a clean signal he should probably
filter the snot out of the signal, and maybe even buffer it.

But he didn't ask...

--
www.wescottdesign.com

2781. Re: Modeling an FM transmitter with LTspice?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-22 00:00:02 UTC
From: brian whatcott <betwys1@sbcglobal.net>
Message-ID: <3uydndywrvk6PULXnZ2dnUVZ_uKdnZ2d@giganews.com>
Source record: 12393
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.antenna

dave.harper wrote:
> I'm trying to model an FM transmitter with LTspice. The schematic of
> the circuit I'm trying to model is shown here:
>
> http://www.sentex.ca/~mec1995/circ/fmt1.htm
>
> It takes a while to start oscillating, but when it does reach a steady
> oscillation, the lower half of the waveforms look a little distorted.
> Interestingly, when I reduce the inductor value (to say .01uH), the
> waveforms are less distorted, but when I only decrease the capacitor
> (to say 3pF), the waveforms become more distorted. Any insight into
> the source of this distortion?
>
> Could it be that I need to model an equivalent antenna?
>
> I've copied the LTspice .asc file below.
>
> Thanks in advance!
> Dave
>
That would be my guess too....I suspect you have set the output tuned
circuit Q way high. Tapping the antenna into the coil might serve you
better, and placing a small resistor in the emitter path before the
feedback cap would hold the gain down, but planting a resistor to
represent the antenna load might do the trick right there??

Brian W

2782. Re: Antenna Pattern: Carolina Windom

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-22 01:21:49 UTC
From: David Thompson <thompson@mindspring.com>
Message-ID: <5PadnTN_ttswLkLXnZ2dnUVZ_o-dnZ2d@earthlink.com>
Source record: 12394

I have a Carolina Short 80 formerly called the Carolina 80 Beam up. Its been up since about 1990 and is a good performer.

On 80 it does good off the ends but has a skewed figure 8. My antenna is broadside N and S. K4UEE told me that from the Juan Fernandez operation a few years back I was about the loudest on 75 SSB. I regularly worked EM1 from near the South pole with 9+ both ways. On 20 the pattern is still a figure 8 but with a big lobe off the ends so I worked VK and ZL from Georgia one year in the Oceania Contest.

I have two vertical short dipoles on 75 and 80 and another Carolina Short 80 broadside say NE/SW would probably do as good. To be really effective you have to get it up at lesat 50 feet and higher is better!

My version of the Short 80 is only 84 feet horizontal.
I have the three vertical sections with the one at the feedpoint radiating. The DMU matching 52 ohm coax to the 300 ohm point. The DMU also lets the shield radiate. The 22 foot piece of coax teminates in a Line Isolator balun to cut the radiation to the shack at that point.

Just wish Radio Works would fully explain the antenna. It is very difficult to model but thanks to Dr. Dave then W0MHS (now W7FB) he ran it on his mainframe modeling program. We never got NEC to show us anything beyond a OCF windom model.

Dave K4JRB

2783. Re: Ground antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-22 08:40:18 UTC
From: Szczepan Bialek <sz.bialek@wp.pl>
Message-ID: <hbp5hb$k3o$1@node1.news.atman.pl>
Source record: 12395

<nm5k@wt.net> wrote
news:b8dae726-29ed-4ca9-8c89-38a64ca1df89@f20g2000prn.googlegroups.com...
On Oct 21, 2:49 am, "Szczepan Bialek" <sz.bia...@wp.pl> wrote:

>
>> 1. If "The intention is to PREVENT a direct lightning strike," - many
>> sharp
> needle is used,

>Good luck.
>
>> 2. If the intention is to CATCH a direct lightning strike and conduct a
> strike to ground - a polished big ball is used.
> S*

>Good luck.

The above apply to grounded tower.

For:
" But, is there a difference in strike rate between grounded and
> ungrounded towers of the same height. I would think that the difference
> would be very small, and smaller as the height gets bigger."

You wrote: "I'd rather have a grounded mast struck every 5 years with no
damage,
vs an ungrounded mast struck every 10 years that led to heavy
damage or even burned the house down.
So worrying about that is kind of silly I think, when you know
an ungrounded mast is big trouble if it ever does get hit."

The grounded tower catch the electrons in form of "electron conveyer belt"
and lightning. If the "belt" is efective enough no lightnings. All local
exces of electrons from the cloud flow without lightning. If no the
lightning appears but it is weak (the sum of electrons is the same).

The strike in the ungrouded tower is always strong.
So You are right.
S*

2784. Non Government Organization–NGO’s–Karachi Pakistan

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-22 17:45:07 UTC
From: muhammed iqbal <resourts06@gmail.com>
Message-ID: <9c22ebff-2b98-4e70-9aec-fce422b4eefb@d23g2000vbm.googlegroups.com>
Source record: 12396

Non Government Organization–NGO’s–Karachi Pakistan
We doing work on old house (fathers/mothers) looking free rent
bungalow for make old house Karachi-Lahore Islamabad & others city’s
[looking very help full donor’s]
http://fatimaz-foundation-international.blogspot.com

2785. Re: Ground antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-22 23:20:34 UTC
From: Dave <k1ttt@arrl.net>
Message-ID: <e9c4e4e3-4156-4bd4-8eaa-25ab5b73620e@s6g2000vbp.googlegroups.com>
Source record: 12397

On Oct 22, 8:40 am, "Szczepan Bialek" <sz.bia...@wp.pl> wrote:
> <n...@wt.net>
wrotenews:b8dae726-29ed-4ca9-8c89-38a64ca1df89@f20g2000prn.googlegroups.com...
> On Oct 21, 2:49 am, "Szczepan Bialek" <sz.bia...@wp.pl> wrote:
>
>
>
> >> 1. If "The intention is to PREVENT a direct lightning strike," - many
> >> sharp
> > needle is used,
> >Good luck.
>
> >> 2. If the intention is to CATCH a direct lightning strike and conduct a
> > strike to ground - a polished big ball is used.
> > S*
> >Good luck.
>
> The above apply to grounded tower.
>
> For:
> " But, is there a difference in strike rate between grounded and
>
> > ungrounded towers of the same height. I would think that the difference
> > would be very small, and smaller as the height gets bigger."
> You wrote: "I'd rather have a grounded mast struck every 5 years with no
>
> damage,
> vs an ungrounded mast struck every 10 years that led to heavy
> damage or even burned the house down.
> So worrying about that is kind of silly I think, when you know
> an ungrounded mast is big trouble if it ever does get hit."
>
> The grounded tower catch the electrons in form of "electron conveyer belt"
> and lightning. If the "belt" is efective enough no lightnings. All local
> exces of electrons from the cloud flow without lightning. If no the
> lightning appears but it is weak (the sum of electrons is the same).
>
> The strike in the ungrouded tower is always strong.
> So You are right.
> S*

no, that is not right. a grounded tower can not dissipate enough
charge to reduce the stroke intensity. towers actually attract MORE
high current strokes than the surrounding ground.

2786. Re: Ground antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-23 00:29:27 UTC
From: tom <news4792@taring.org>
Message-ID: <4ae0f957$0$42840$8046368a@newsreader.iphouse.net>
Source record: 12398

Dave wrote:
> On Oct 22, 8:40 am, "Szczepan Bialek" <sz.bia...@wp.pl> wrote:
>> You wrote: "I'd rather have a grounded mast struck every 5 years with no
>>
>> damage,
>> vs an ungrounded mast struck every 10 years that led to heavy
>> damage or even burned the house down.
>> So worrying about that is kind of silly I think, when you know
>> an ungrounded mast is big trouble if it ever does get hit."
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>> The grounded tower catch the electrons in form of "electron conveyer belt"
>> and lightning. If the "belt" is efective enough no lightnings. All local
>> exces of electrons from the cloud flow without lightning. If no the
>> lightning appears but it is weak (the sum of electrons is the same).
>>
>> The strike in the ungrouded tower is always strong.
>> So You are right.
>> S*
>
> no, that is not right. a grounded tower can not dissipate enough
> charge to reduce the stroke intensity. towers actually attract MORE
> high current strokes than the surrounding ground.

Well, Szechuan obviously hasn't figured out which way the belt is
pumping electrons, so it's not surprising he's wrong. He also doesn't
understand anything of the physics involved, either, so none of his
nonsensical answers should be a surprise.

tom
K0TAR*

2787. Re: Ground antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-23 07:51:17 UTC
From: Szczepan Bialek <sz.bialek@wp.pl>
Message-ID: <hbrn0v$8a5$1@node1.news.atman.pl>
Source record: 12399

"Dave" <k1ttt@arrl.net> wrote
news:e9c4e4e3-4156-4bd4-8eaa-25ab5b73620e@s6g2000vbp.googlegroups.com...
On Oct 22, 8:40 am, "Szczepan Bialek" <sz.bia...@wp.pl> wrote:
> <n...@wt.net>
> wrotenews:b8dae726-29ed-4ca9-8c89-38a64ca1df89@f20g2000prn.googlegroups.com...
> On Oct 21, 2:49 am, "Szczepan Bialek" <sz.bia...@wp.pl> wrote:
>
>
>
> >> 1. If "The intention is to PREVENT a direct lightning strike," - many
> >> sharp
> > > needle is used,
> > >Good luck.
>
> >> 2. If the intention is to CATCH a direct lightning strike and conduct a
> > > strike to ground - a polished big ball is used.
> > > S*
> > >Good luck.
>
> The above apply to grounded tower.
>
> For:
>>> " But, is there a difference in strike rate between grounded and
> > ungrounded towers of the same height. I would think that the difference
> > would be very small, and smaller as the height gets bigger."
> You wrote: "I'd rather have a grounded mast struck every 5 years with no
> damage,
> vs an ungrounded mast struck every 10 years that led to heavy
> damage or even burned the house down.
> So worrying about that is kind of silly I think, when you know
> an ungrounded mast is big trouble if it ever does get hit."
>
>> The grounded tower catch the electrons in form of "electron conveyer
>> belt"
> and lightning. If the "belt" is efective enough no lightnings. All local
> excess of electrons from the cloud flow without lightning. If no, the
> lightning appears but it is weak (the sum of electrons is the same).
>
>> The strike in the ungrouded tower is always strong.
> So You are right.
> S*

>no, that is not right. a grounded tower can not dissipate enough
charge to reduce the stroke intensity. towers actually attract MORE

high current strokes than the surrounding ground.

Grounded towers with the many spikes dissipate more charge then the simmilar towers with the polished big ball.
That with the many spikes PREVENT (or minimalise), that with the balls CATCH (high current strokes).

2788. Re: Ground antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-23 08:03:13 UTC
From: Szczepan Bialek <sz.bialek@wp.pl>
Message-ID: <hbrnn8$8dv$1@node1.news.atman.pl>
Source record: 12400

"tom" <news4792@taring.org> wrote
news:4ae0f957$0$42840$8046368a@newsreader.iphouse.net...
> Dave wrote:
>> On Oct 22, 8:40 am, "Szczepan Bialek" <sz.bia...@wp.pl> wrote:
>>> You wrote: "I'd rather have a grounded mast struck every 5 years with no
>>> damage,
>>> vs an ungrounded mast struck every 10 years that led to heavy
>>> damage or even burned the house down.
>>> So worrying about that is kind of silly I think, when you know
>>> an ungrounded mast is big trouble if it ever does get hit."
>>>
>>> The grounded tower catch the electrons in form of "electron conveyer
>>> belt"
>>> and lightning. If the "belt" is efective enough no lightnings. All local
>>> excess of electrons from the cloud flow without lightning. If no, the
>>> lightning appears but it is weak (the sum of electrons is the same).
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>>> The strike in the ungrouded tower is always strong.
>>> So You are right.
>>> S*
>>
>> no, that is not right. a grounded tower can not dissipate enough
>> charge to reduce the stroke intensity. towers actually attract MORE
>> high current strokes than the surrounding ground.
>
> Well, Szechuan obviously hasn't figured out which way the belt is pumping
> electrons, so it's not surprising he's wrong. He also doesn't understand
> anything of the physics involved, either, so none of his nonsensical
> answers should be a surprise.

The atmospheric electricity was described in XIX century. At that time
Armstrong and Kelvin build the High Voltage Generators (steam and drop).
Also the way how the spikes work.
Have you the old books?
S*
S*

2789. Re: Ground antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-23 10:50:12 UTC
From: rikoski@earthlink.net
Message-ID: <rikoski-007516.05501223102009@news.newsrazor.net>
Source record: 12251

In article <hbrn0v$8a5$1@node1.news.atman.pl>,
"Szczepan Bialek" <sz.bialek@wp.pl> wrote:

> "Dave" <k1ttt@arrl.net> wrote
> news:e9c4e4e3-4156-4bd4-8eaa-25ab5b73620e@s6g2000vbp.googlegroups.com...
> On Oct 22, 8:40 am, "Szczepan Bialek" <sz.bia...@wp.pl> wrote:
> > <n...@wt.net>
> > wrotenews:b8dae726-29ed-4ca9-8c89-38a64ca1df89@f20g2000prn.googlegroups.com.
> > ..
> > On Oct 21, 2:49 am, "Szczepan Bialek" <sz.bia...@wp.pl> wrote:
> >
> >
> >
> > >> 1. If "The intention is to PREVENT a direct lightning strike," - many
> > >> sharp
> > > needle is used,
> > >Good luck.
> >
> > >> 2. If the intention is to CATCH a direct lightning strike and conduct a
> > > strike to ground - a polished big ball is used.
> > > S*
> > >Good luck.
> >
> > The above apply to grounded tower.
> >
> > For:
> >>> " But, is there a difference in strike rate between grounded and
> > > ungrounded towers of the same height. I would think that the difference
> > > would be very small, and smaller as the height gets bigger."
> > You wrote: "I'd rather have a grounded mast struck every 5 years with no
> > damage,
> > vs an ungrounded mast struck every 10 years that led to heavy
> > damage or even burned the house down.
> > So worrying about that is kind of silly I think, when you know
> > an ungrounded mast is big trouble if it ever does get hit."
> >
> >> The grounded tower catch the electrons in form of "electron conveyer
> >> belt"
> > and lightning. If the "belt" is efective enough no lightnings. All local
> > excess of electrons from the cloud flow without lightning. If no, the
> > lightning appears but it is weak (the sum of electrons is the same).
> >
> >> The strike in the ungrouded tower is always strong.
> > So You are right.

> > S*
>
> >no, that is not right. a grounded tower can not dissipate enough
> charge to reduce the stroke intensity. towers actually attract MORE
> high current strokes than the surrounding ground.
>
> Grounded towers with the many spikes dissipate more charge then the simmilar
> towers with the polished big ball.
> That with the many spikes PREVENT (or minimalise), that with the balls CATCH
> (high current strokes).

Much of this is speculation.

With 10 million volts; currents of 10,000 amperes and strokes that can
travel 30 miles: whether you have a ball or a spike on top of a roof
isn't going to make much difference.

It has been shown that a properly installed lightning rod system; and UL
rated materials connected to low resistance grounds will increase the
odds of protecting lives and property substantially.

(The TV stations on top the Sears tower in Chicago continue to transmit
even as they are being struck.)

2790. Re: Ground antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-23 11:04:14 UTC
From: Dave <k1ttt@arrl.net>
Message-ID: <3eb6696b-b1c9-485e-964d-a8c213c391a5@d34g2000vbm.googlegroups.com>
Source record: 12252

On Oct 23, 8:03 am, "Szczepan Bialek" <sz.bia...@wp.pl> wrote:
> "tom" <news4...@taring.org>
wrotenews:4ae0f957$0$42840$8046368a@newsreader.iphouse.net...
>
>
>
>
>
> > Dave wrote:
> >> On Oct 22, 8:40 am, "Szczepan Bialek" <sz.bia...@wp.pl> wrote:
> >>> You wrote: "I'd rather have a grounded mast struck every 5 years with no
> >>> damage,
> >>> vs an ungrounded mast struck every 10 years that led to heavy
> >>> damage or even burned the house down.
> >>> So worrying about that is kind of silly I think, when you know
> >>> an ungrounded mast is big trouble if it ever does get hit."
>
> >>> The grounded tower catch the electrons in form of "electron conveyer
> >>> belt"
> >>> and lightning. If the "belt" is efective enough no lightnings. All local
> >>> excess of electrons from the cloud flow without lightning. If no, the
> >>> lightning appears but it is weak (the sum of electrons is the same).
>
> >>> The strike in the ungrouded tower is always strong.
> >>> So You are right.
> >>> S*
>
> >> no, that is not right. a grounded tower can not dissipate enough
> >> charge to reduce the stroke intensity. towers actually attract MORE
> >> high current strokes than the surrounding ground.
>
> > Well, Szechuan obviously hasn't figured out which way the belt is pumping
> > electrons, so it's not surprising he's wrong. He also doesn't understand
> > anything of the physics involved, either, so none of his nonsensical
> > answers should be a surprise.
>
> The atmospheric electricity was described in XIX century. At that time
> Armstrong and Kelvin build the High Voltage Generators (steam and drop).
> Also the way how the spikes work.
> Have you the old books?
> S*
> S*- Hide quoted text -
>
> - Show quoted text -

I find that the new books have the good information that has been well proved over the last 100 years or so. There were lots of theories in those old books that have been proved false over the years. It also helps to work in the field, at the hv lab i work at we can run 3 phase 765kv, +/- 1Mv dc, and about 5Mv pulses. one of my personal jobs is writing software for lightning protection design on hv power lines, so i have been through this stuff many times.

2791. Re: Ground antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-23 18:18:32 UTC
From: Szczepan Bia&#65533;ek <sz.bialek@wp.pl>
Message-ID: <hbsron$e48$1@node1.news.atman.pl>
Source record: 12253

<rikoski@earthlink.net> wrote
news:rikoski-007516.05501223102009@news.newsrazor.net...
> In article <hbrn0v$8a5$1@node1.news.atman.pl>,
> "Szczepan Bialek" <sz.bialek@wp.pl> wrote:
>
>>
>> Grounded towers with the many spikes dissipate more charge then the
>> simmilar
>> towers with the polished big ball.
>> That with the many spikes PREVENT (or minimalise), that with the balls
>> CATCH
>> (high current strokes).
>
> Much of this is speculation.

It is a history: "In the early days of lightning conductors, I believe that
the French
didn't like the nasty pointy things which the British had installed.
Instead, they decorated theirs with fancy balls at the top - with
sometimes disastrous results.
--
Ian"
>
> With 10 million volts; currents of 10,000 amperes and strokes that can
> travel 30 miles: whether you have a ball or a spike on top of a roof
> isn't going to make much difference.

The volts appear when no chance to dissipation. To have it on the roof must
be multiplicity of spikes (not one).
>
> It has been shown that a properly installed lightning rod system; and UL
> rated materials connected to low resistance grounds will increase the
> odds of protecting lives and property substantially.
>
> (The TV stations on top the Sears tower in Chicago continue to transmit
> even as they are being struck.)

All is true. I only wanted to add something about the spikes and balls. It
was nice that Ian support me with the funny anecdote.
S*

2792. Re: Ground antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-23 18:23:35 UTC
From: Szczepan Bialek <sz.bialek@wp.pl>
Message-ID: <hbss27$e5a$1@node1.news.atman.pl>
Source record: 12254

"Dave" <k1ttt@arrl.net>wrote
news:3eb6696b-b1c9-485e-964d-a8c213c391a5@d34g2000vbm.googlegroups.com...
On Oct 23, 8:03 am, "Szczepan Bialek" <sz.bia...@wp.pl> wrote:
>>
>> The atmospheric electricity was described in XIX century. At that time
> Armstrong and Kelvin build the High Voltage Generators (steam and drop).
> Also the way how the spikes work.
> Have you the old books?
> S*
> - Show quoted text -

>I find that the new books have the good information that has been well
proved over the last 100 years or so. There were lots of theories in
those old books that have been proved false over the years. It also
helps to work in the field, at the hv lab i work at we can run 3 phase
765kv, +/- 1Mv dc, and about 5Mv pulses. one of my personal jobs is
writing software for lightning protection design on hv power lines, so
i have been through this stuff many times.

Tell us than what do you use: Plenty of spikes or balls?
S*

2793. Re: Ground antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-23 19:32:59 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <nynEm.48361$Lw1.16394@newsfe03.iad>
Source record: 12255

Szczepan Biaï¿½ek wrote:
> It is a history: "In the early days of lightning conductors, I believe that
> the French
> didn't like the nasty pointy things which the British had installed.
> Instead, they decorated theirs with fancy balls at the top - with
> sometimes disastrous results.

I assume a certain biased reporting of anecdotal evidence.:-)

A ball at the top hat of a Tesla coil allows a greater
amplitude of voltage to build up before arcing than does
a point at the top. Therefore:

Points should result in more lightning strikes at lower
voltages.

Balls should result in fewer lightning strikes at lower
voltages.

Can't think of any valid reason why either design
should be able to avoid the really big one.
--
73, Cecil, IEEE, OOTC, http://www.w5dxp.com

2794. Re: Ground antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-23 19:48:17 UTC
From: Ian Jackson <ianREMOVETHISjackson@g3ohx.demon.co.uk>
Message-ID: <CkPb4rDBig4KFwQl@g3ohx.demon.co.uk>
Source record: 12256

In message <nynEm.48361$Lw1.16394@newsfe03.iad>, Cecil Moore
<nospam@w5dxp.com> writes
>Szczepan Biaï¿½ek wrote:
>> It is a history: "In the early days of lightning conductors, I
>>believe that the French
>> didn't like the nasty pointy things which the British had installed.
>> Instead, they decorated theirs with fancy balls at the top - with
>> sometimes disastrous results.
>
>I assume a certain biased reporting of anecdotal evidence.:-)
>
>A ball at the top hat of a Tesla coil allows a greater
>amplitude of voltage to build up before arcing than does
>a point at the top. Therefore:
>
>Points should result in more lightning strikes at lower
>voltages.
>
>Balls should result in fewer lightning strikes at lower
>voltages.
>
Did you mean 'higher'?

>Can't think of any valid reason why either design
>should be able to avoid the really big one.

Surely, when lightning is about, points allow an essentially continuous
discharge at a low current, while balls allow the voltage to build up
and up, until there is a big 'splat'?
--
Ian

2795. Re: Ground antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-23 20:24:55 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <3joEm.35208$cL1.21121@newsfe20.iad>
Source record: 12257

Ian Jackson wrote:
> Cecil Moore <nospam@w5dxp.com> writes
>> Balls should result in fewer lightning strikes at lower
>> voltages.
>>
> Did you mean 'higher'?

Two people separated by a common language? :-)

Allow me to rephrase: When the voltages are low,
the ball will tend to discourage the lightning
strikes because the voltage may be too low to
achieve the ionizing threshold potential
surrounding the ball.
--
73, Cecil, IEEE, OOTC, http://www.w5dxp.com

2796. Re: Ground antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-23 21:13:48 UTC
From: nm5k@wt.net
Message-ID: <912b5818-81d5-4023-bcca-197979c39d04@z3g2000prd.googlegroups.com>
Source record: 12258

On Oct 23, 2:48 pm, Ian Jackson
<ianREMOVETHISjack...@g3ohx.demon.co.uk> wrote:
> In message <nynEm.48361$Lw1.16...@newsfe03.iad>, Cecil Moore
> <nos...@w5dxp.com> writes
>
> >Szczepan Bia³ek wrote:
> >> It is a history: "In the early days of lightning conductors, I
> >>believe that the French
> >> didn't like the nasty pointy things which the British had installed.
> >> Instead, they decorated theirs with fancy balls at the top - with
> >> sometimes disastrous results.
>
> >I assume a certain biased reporting of anecdotal evidence.:-)
>
> >A ball at the top hat of a Tesla coil allows a greater
> >amplitude of voltage to build up before arcing than does
> >a point at the top. Therefore:
>
> >Points should result in more lightning strikes at lower
> >voltages.
>
> >Balls should result in fewer lightning strikes at lower
> >voltages.
>
> Did you mean 'higher'?
>
> >Can't think of any valid reason why either design
> >should be able to avoid the really big one.
>
> Surely, when lightning is about, points allow an essentially continuous
> discharge at a low current, while balls allow the voltage to build up
> and up, until there is a big 'splat'?
> --
> Ian

In the end, that's about the way I see it, but I consider
any discharge by either to really be fairly irrelevant.
Trying to avoid strikes by discharge is like whizzing in
a whirlwind. :/
The sharp point streams much easier than the ball,
so the chances of streaming and connected to a down
leader are much greater than with a ball which will
resists streaming at those same potentials.
If you had a spike next to a ball, I would think the spike

would be struck most of the time. You need a good
streamer going to lure a down leader.
But a ball can still stream if the potential cranks up
high enough, and the resulting strike can often be a
a stout one if it can overcome the poor streaming
of the smooth ball.
Both masts should be well grounded.
It's not an accident that most lightning rods have
a sharp point, the same way as most flag poles
have a round ball on top.
One is designed to stream as well as possible in
order to become a more likely target than what it
protects, and the other is designed to stream poorly
to resist strikes compared to the other better streaming
objects near it.
No streamer, no cloud to ground lightning at that
point on the earth. BTW, I've got pictures of streamers.
You can see them at night, and they bend and point to
the down leader as it approaches the earth.
The first one it can connect to forms the final path to
ground, and I think this is in the last 150 yards or so
if I remember right. The leader traveling in appx 150
yard or so steps through the sky.

2797. Re: Ground antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-24 08:49:18 UTC
From: Szczepan Bialek <sz.bialek@wp.pl>
Message-ID: <hbuep3rae1@node1.news.atman.pl>
Source record: 12259

<nm5k@wt.net> wrote
news:912b5818-81d5-4023-bcca-197979c39d04@z3g2000prd.googlegroups.com...
On Oct 23, 2:48 pm, Ian Jackson
<ianREMOVETHISjack...@g3ohx.demon.co.uk> wrote:
> In message <nynEm.48361$Lw1.16...@newsfe03.iad>, Cecil Moore
> <nos...@w5dxp.com> writes
>
> >Szczepan Bia?ek wrote:
> >> It is a history: "In the early days of lightning conductors, I
> >>believe that the French
> >> didn't like the nasty pointy things which the British had installed.
> >> Instead, they decorated theirs with fancy balls at the top - with
> >> sometimes disastrous results.
>
> >I assume a certain biased reporting of anecdotal evidence.:-)
>
> >A ball at the top hat of a Tesla coil allows a greater
> >amplitude of voltage to build up before arcing than does
> >a point at the top. Therefore:
>
> >Points should result in more lightning strikes at lower
> >voltages.
>
> >Balls should result in fewer lightning strikes at lower
> >voltages.
>
> Did you mean 'higher'?
>
> >Can't think of any valid reason why either design
> >should be able to avoid the really big one.
>
> Surely, when lightning is about, points allow an essentially continuous
> discharge at a low current, while balls allow the voltage to build up
> and up, until there is a big 'splat'?
> --
> Ian

>In the end, that's about the way I see it, but I consider
any discharge by either to really be fairly irrelevant.
Trying to avoid strikes by discharge is like whizzing in
a whirlwind. :/
The sharp point streams much easier than the ball,
so the chances of streaming and connected to a down
leader

No down lider. Excess of electrons is in the stormcloud and they jumps if the difference of voltage exists. At first they jump inside cloud. Next they jump in the all directions outside cloud. But the all jumps are in form of oscillations. Lightnings produce LW.

>are much greater than with a ball which will
resists streaming at those same potentials.
If you had a spike next to a ball, I would think the spike
would be struck most of the time.

We need here the experimental data. Does anybody know?

> You need a good streamer going to lure a down leader.
But a ball can still stream if the potential cranks up
high enough, and the resulting strike can often be a
a stout one if it can overcome the poor streaming
of the smooth ball.

The only cause for spark jump is the voltage difference. Spikes decrease it.

>Both masts should be well grounded.
It's not an accident that most lightning rods have
a sharp point, the same way as most flag poles
have a round ball on top.

Is the ball grounded?

>One is designed to stream as well as possible in
order to become a more likely target than what it
protects, and the other is designed to stream poorly
to resist strikes compared to the other better streaming
objects near it.

Lightning (electrons) strike the Earth. Grounded ball has the voltage like the Earth. Nongrounded like the air. Such are neutral. Does not prevent and not catch. But may be attacked like all.

>No streamer, no cloud to ground lightning at that>
point on the earth. BTW, I've got pictures of streamers.
You can see them at night, and they bend and point to
the down leader as it approaches the earth.
The first one it can connect to forms the final path to
ground, and I think this is in the last 150 yards or so
if I remember right. The leader traveling in appx 150
yard or so steps through the sky.

The oscilations start from very short in all directions and the last steps are longest.
S*

2798. Re: Ground antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-24 09:30:38 UTC
From: Dave <k1ttt@arrl.net>
Message-ID: <65137396-56f6-45bf-8b9f-9d26daf97b29@m25g2000vbi.googlegroups.com>
Source record: 12260

On Oct 23, 6:23 pm, "Szczepan Bialek" <sz.bia...@wp.pl> wrote:
> "Dave" <k1...@arrl.net>wrotenews:3eb6696b-b1c9-485e-964d-a8c213c391a5@d34g2000vbm.googl
egroups.com...
> On Oct 23, 8:03 am, "Szczepan Bialek" <sz.bia...@wp.pl> wrote:
>
>
>
> >> The atmospheric electricity was described in XIX century. At that time
> > > Armstrong and Kelvin build the High Voltage Generators (steam and drop).
> > > Also the way how the spikes work.
> > > Have you the old books?
> > > S*
> > > - Show quoted text -
> > >I find that the new books have the good information that has been well
>
> proved over the last 100 years or so. There were lots of theories in
> those old books that have been proved false over the years. It also
> helps to work in the field, at the hv lab i work at we can run 3 phase
> 765kv, +/- 1Mv dc, and about 5Mv pulses. one of my personal jobs is
> writing software for lightning protection design on hv power lines, so
> i have been through this stuff many times.
>
> Tell us than what do you use: Plenty of spikes or balls?
> S*

tall towers, well grounded.

2799. Re: Ground antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-24 09:40:15 UTC
From: Dave <k1ttt@arrl.net>
Message-ID: <1fed7c9a-ebbf-43ca-8642-15816a93bf89@o36g2000vbl.googlegroups.com>
Source record: 12261

On Oct 24, 8:49 am, "Szczepan Bialek" <sz.bia...@wp.pl> wrote:
> <n...@wt.net>
wrotenews:912b5818-81d5-4023-bcca-197979c39d04@z3g2000prd.googlegroups.com...
> On Oct 23, 2:48 pm, Ian Jackson
>
>
>
>
>
> <ianREMOVETHISjack...@g3ohx.demon.co.uk> wrote:
> > In message <nynEm.48361$Lw1.16...@newsfe03.iad>, Cecil Moore
> > <nos...@w5dxp.com> writes
>
> > >Szczepan Bia³ek wrote:
> > >> It is a history: "In the early days of lightning conductors, I
> > >>believe that the French
> > >> didn't like the nasty pointy things which the British had installed.
> > >> Instead, they decorated theirs with fancy balls at the top - with
> > >> sometimes disastrous results.
>
> > >I assume a certain biased reporting of anecdotal evidence.:-)
>
> > >A ball at the top hat of a Tesla coil allows a greater
> > >amplitude of voltage to build up before arcing than does
> > >a point at the top. Therefore:
>
> > >Points should result in more lightning strikes at lower
> > >voltages.
>
> > >Balls should result in fewer lightning strikes at lower
> > >voltages.
>
> > Did you mean 'higher'?
>
> > >Can't think of any valid reason why either design
> > >should be able to avoid the really big one.
>
> > Surely, when lightning is about, points allow an essentially continuous
> > discharge at a low current, while balls allow the voltage to build up
> > and up, until there is a big 'splat'?
> > --
> > Ian
> >In the end, that's about the way I see it, but I consider
>

> any discharge by either to really be fairly irrelevant.
> Trying to avoid strikes by discharge is like whizzing in
> a whirlwind. :/
> The sharp point streams much easier than the ball,
> so the chances of streaming and connected to a down
> leader
>
> No down lider. Excess of electrons is in the stormcloud and they jumps if
> the difference of voltage exists. At first they jump inside cloud. Next they
> jump in the all directions outside cloud. But the all jumps are in form of
> oscillations. Lightnings produce LW.
>

yes, there are downward leaders. these can be tracked either by their
radio noise or by radar. the size and step process has been well
known for many years.

> >are much greater than with a ball which will
>
> resists streaming at those same potentials.
> If you had a spike next to a ball, I would think the spike
> would be struck most of the time.
>

and you think wrong.

> We need here the experimental data. Does anybody know?

yes, but not you.

>
> > You need a good streamer going to lure a down leader.
>
> But a ball can still stream if the potential cranks up
> high enough, and the resulting strike can often be a
> a stout one if it can overcome the poor streaming
> of the smooth ball.
>
> The only cause for spark jump is the voltage difference. Spikes decrease it.

no they don't. they provide a better place for streamers to start
because the sharp point increases the voltage gradient helping it to
stream sooner.

> >
> The oscilations start from very short in all directions and the last steps
> are longest.

there are no oscillation in the step process. and there is no
evidence that the steps change length in any report i have seen.

2800. Re: Ground antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-24 17:12:47 UTC
From: Szczepan Bialek <sz.bialek@wp.pl>
Message-ID: <hbvc90$3g4$1@node1.news.atman.pl>
Source record: 12262

"Dave" <k1ttt@arrl.net> napisal w wiadomosci
news:1fed7c9a-ebbf-43ca-8642-15816a93bf89@o36g2000vbl.googlegroups.com...
On Oct 24, 8:49 am, "Szczepan Bialek" <sz.bia...@wp.pl> wrote:
> <n...@wt.net>
> wrotenews:912b5818-81d5-4023-bcca-197979c39d04@z3g2000prd.googlegroups.com...
>
>
>>> The sharp point streams much easier than the ball,
> so the chances of streaming and connected to a down
> leader
>
>> No down lider. Excess of electrons is in the stormcloud and they jumps if
> the difference of voltage exists. At first they jump inside cloud. Next
> they
> jump in the all directions outside cloud. But the all jumps are in form of
> oscillations. Lightnings produce LW.
>

>yes, there are downward leaders. these can be tracked either by their
radio noise or by radar. the size and step process has been well
known for many years.

But the upwards liders are also possible. If downward lider oscillate close
the high metal tower the electrons in the metal also oscillate and can jump
out. But that are details.

>> >are much greater than with a ball which will
>
>>> resists streaming at those same potentials.
> If you had a spike next to a ball, I would think the spike
> would be struck most of the time.
>

and you think wrong.

> We need here the experimental data. Does anybody know?

yes, but not you.

But I agre with you. Nm5k wrote the above: : "I would think the spike would
be struck most of the time."

>
> > You need a good streamer going to lure a down leader.
>
>>> But a ball can still stream if the potential cranks up
> high enough, and the resulting strike can often be a

> a stout one if it can overcome the poor streaming
> of the smooth ball.
>
>> The only cause for spark jump is the voltage difference. Spikes decrease
>> it.

>no they don't. they provide a better place for streamers to start
because the sharp point increases the voltage gradient helping it to
stream sooner.

One sharp point provide a better place for streamers to start, but the
plenty of them decrease the voltage.
> >
>> The oscilations start from very short in all directions and the last
>> steps
> are longest.

>there are no oscillation in the step process. and there is no
evidence that the steps change length in any report i have seen.

But it is obvious. Each spark is in form of oscillations. No matter if the
"electrods" are steady or the distance is increasing.
It was discovered by observing the tissue punched by the spark (XIX
century).
In nowadays reports no obvious thinks.
S*

2801. Re: Ground antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-24 18:18:52 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <TyHEm.44333$4E.16459@newsfe08.iad>
Source record: 12263

Szczepan Bialek wrote:
> Excess of electrons is in the stormcloud and they jumps if
> the difference of voltage exists.

http://www.sleepingearthed.com/pdf/EFX_science_Chevalier_EarthElecSurface.pdf
--
73, Cecil, IEEE, OOTC, http://www.w5dxp.com

2802. Disconne Question

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-24 20:51:48 UTC
From: Robert11 <rgsros@xnotme.invalid>
Message-ID: <hbvpd2$h99$1@news.eternal-september.org>
Source record: 12264

Hello,

For a Disconne in the attic (for vhf/uhf), receiving only, do you think a
wet roof from rain would make
a "meaningful" difference in reception ?

Bob

2803. Re: Disconne Question

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-24 22:27:40 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <fqv6e55qg63a0g3fpj1pr53aocrfun3ubg@4ax.com>
Source record: 12265

No.

73's
Richard Clark, KB7QHC

2804. sexy naked holly wood actress & all nude hot girls

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-25 08:02:12 UTC
From: aruna <aruna1234kumari@gmail.com>
Message-ID: <633881e8-dc2b-47b6-8e94-f0657f6aed55@u16g2000pru.googlegroups.com>
Source record: 12266

http://www.healthcarenhotgirls.blogspot.com/2009/10/hollywood-hot-actress.html

2805. Re: Ground antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-25 10:20:59 UTC
From: Dave <k1ttt@arrl.net>
Message-ID: <70f3f1ed-903e-41ee-827e-f69691a8e33c@33g2000vbe.googlegroups.com>
Source record: 12267

On Oct 24, 5:12 pm, "Szczepan Bialek" <sz.bia...@wp.pl> wrote:
> "Dave" <k1...@arrl.net> napisal w
wiadomoscinews:1fed7c9a-ebbf-43ca-8642-15816a93bf89@o36g2000vbl.googlegroups.com...
> On Oct 24, 8:49 am, "Szczepan Bialek" <sz.bia...@wp.pl> wrote:
>
> > <n...@wt.net>
> > wrotenews:912b5818-81d5-4023-bcca-197979c39d04@z3g2000prd.googlegroups.com...
>
> >>> The sharp point streams much easier than the ball,
> > so the chances of streaming and connected to a down
> > leader
>
> >> No down lider. Excess of electrons is in the stormcloud and they jumps if
> > the difference of voltage exists. At first they jump inside cloud. Next
> > they
> > jump in the all directions outside cloud. But the all jumps are in form of
> > oscillations. Lightnings produce LW.
>
> >yes, there are downward leaders. these can be tracked either by their
>
> radio noise or by radar. the size and step process has been well
> known for many years.
>
> But the upwards liders are also possible. If downward lider oscillate close
> the high metal tower the electrons in the metal also oscillate and can jump
> out. But that are details.
>
> >> >are much greater than with a ball which will
>
> >>> resists streaming at those same potentials.
> > If you had a spike next to a ball, I would think the spike
> > would be struck most of the time.
>
> and you think wrong.
>
> > We need here the experimental data. Does anybody know?
>
> yes, but not you.
>
> But I agre with you. Nm5k wrote the above: : "I would think the spike would
> be struck most of the time."
>
>
>

> > > You need a good streamer going to lure a down leader.
>
> >>> But a ball can still stream if the potential cranks up
> > high enough, and the resulting strike can often be a
> > a stout one if it can overcome the poor streaming
> > of the smooth ball.
>
> >> The only cause for spark jump is the voltage difference. Spikes decrease
> >> it.
> >no they don't. they provide a better place for streamers to start
>
> because the sharp point increases the voltage gradient helping it to
> stream sooner.
>
> One sharp point provide a better place for streamers to start, but the
> plenty of them decrease the voltage.
>
>
>
> >> The oscilations start from very short in all directions and the last
> >> steps
> > are longest.
> >there are no oscillation in the step process. and there is no
>
> evidence that the steps change length in any report i have seen.
>
> But it is obvious. Each spark is in form of oscillations. No matter if the
> "electrods" are steady or the distance is increasing.
> It was discovered by observing the tissue punched by the spark (XIX
> century).
> In nowadays reports no obvious thinks.
> S*

it may be obvious to you, but that doesn't make it true. a spark is
not a form of oscillation. and leaders are not sparks. sparks are a
very specific phenomenon that is a very short lived breakdown over a
short distance. leaders and streamers are long term conductive
channels caused by a channel of charge accumulated in them and are
progressive breakdowns over long distances. The physics are very
different, but in neither are there oscillations. again you go back
to ancient history, it is time you updated your reading list.

2806. Re: Ground antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-25 10:53:15 UTC
From: Szczepan Bialek <sz.bialek@wp.pl>
Message-ID: <hc1acspos1@node1.news.atman.pl>
Source record: 12268

"Cecil Moore" <nospam@w5dxp.com> napisal w wiadomosci
news:TyHEm.44333$4E.16459@newsfe08.iad...
> Szczepan Bialek wrote:
>> Excess of electrons is in the stormcloud and they jumps if the difference
>> of voltage exists.
>
> http://www.sleepingearthed.com/pdf/EFX_science_Chevalier_EarthElecSurface.pdf

This is with the full agreement with me (in fundamentals).
It is not easy to read, with the understanding, the electric schemes
(diagrams).

Look at the page 3. The arrows represent the currents. So the electrons flow
in opposite direction. So in sunny day they migrate up. Very up (18 km at
equator).
The next symbols are the "+" and "-". What they means on this scheme.
Electrons migrate very up, but always on the droplets of water (heavy ions),
so in the air is the excess of electrons if there are the heavy ions. But
what the voltage is there?
You remember: small drops - smal voltage (Kelvin's drops generator). Next
cooling and condensation take place and larger droplets fall down. But on
the larger drops the voltage is higher.
The "+" and "-" on electric schemes are use to indicate the direction of the
current flow. Electrons flow from "-" to "+". No matter how many electrons
is.
But that everywhere in the atmosphere is excess of electrons should be
obvious for you now. You know that on the surface of the Earth is also
always the excess of electrons. But the current flow " if the difference of
voltage exists".

Not elecricians think that "-" indicate the excess of electrons and "+" the
deficit. Such is in physics.
The scheme on the page 3 was drawn by electricians.
Do you agree? (Richard asks: get it?)
S*

2807. Re: Ground antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-25 11:15:01 UTC
From: Szczepan Bialek <sz.bialek@wp.pl>
Message-ID: <hc1blm$q6f$1@node1.news.atman.pl>
Source record: 12269

"Dave" <k1ttt@arrl.net> wrote
news:70f3f1ed-903e-41ee-827e-f69691a8e33c@33g2000vbe.googlegroups.com...
On Oct 24, 5:12 pm, "Szczepan Bialek" <sz.bia...@wp.pl> wrote:

>>> Lightnings produce LW.
>
> >yes, there are downward leaders. these can be tracked either by their
> radio noise or by radar. the size and step process has been well
> known for many years.
>
> >> The oscilations start from very short in all directions and the last
> >> steps
> > are longest.
> >there are no oscillation in the step process. and there is no
>
>>> evidence that the steps change length in any report i have seen.
>
>> But it is obvious. Each spark is in form of oscillations. No matter if
>> the
> "electrods" are steady or the distance is increasing.
> It was discovered by observing the tissue punched by the spark (XIX
> century).
> In nowadays reports no obvious thinks.
> S*

>it may be obvious to you, but that doesn't make it true. a spark is
not a form of oscillation. and leaders are not sparks. sparks are a
very specific phenomenon that is a very short lived breakdown over a
short distance. leaders and streamers are long term conductive
channels caused by a channel of charge accumulated in them and are
progressive breakdowns over long distances. The physics are very
different, but in neither are there oscillations. again you go back
to ancient history, it is time you updated your reading list.

All breakdown are made by oscillating electrons. They work like the
pneumatic hammer. When electron oscillate (like in the Kundt's tube) at the
end the voltage is doubled and the next distance is progressed.

">>> Lightnings produce LW.
>
> >yes, there are downward leaders. these can be tracked either by their
> radio noise or by radar. the size and step process has been well
> known for many years"

In ECM such initial oscillations are detected and the power is shut down
before full breakdown.

The electrons have mass and charge - they like oscyllate. They oscillate before the full breakdown and after to dissipate the full energy. In the channel are better conditions to oscillations than in the conductor.
S*

2808. Re: Ground antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-25 11:32:55 UTC
From: Dave <k1ttt@arrl.net>
Message-ID: <e9c8d193-afbb-4a8a-ac67-3e62520ad8a9@a6g2000vbp.googlegroups.com>
Source record: 12270

On Oct 25, 11:15 am, "Szczepan Bialek" <sz.bia...@wp.pl> wrote:
> "Dave" <k1...@arrl.net>
wrotenews:70f3f1ed-903e-41ee-827e-f69691a8e33c@33g2000vbe.googlegroups.com...
> On Oct 24, 5:12 pm, "Szczepan Bialek" <sz.bia...@wp.pl> wrote:
>
>
>
>
>
> >>> Lightnings produce LW.
>
> > >yes, there are downward leaders. these can be tracked either by their
> > radio noise or by radar. the size and step process has been well
> > known for many years.
>
> > > >> The oscilations start from very short in all directions and the last
> > > >> steps
> > > > are longest.
> > >there are no oscillation in the step process. and there is no
>
> >>> evidence that the steps change length in any report i have seen.
>
> >> But it is obvious. Each spark is in form of oscillations. No matter if
> >> the
> > "electrods" are steady or the distance is increasing.
> > It was discovered by observing the tissue punched by the spark (XIX
> > century).
> > In nowadays reports no obvious thinks.
> > S*
> >it may be obvious to you, but that doesn't make it true. a spark is
>
> not a form of oscillation. and leaders are not sparks. sparks are a
> very specific phenomenon that is a very short lived breakdown over a
> short distance. leaders and streamers are long term conductive
> channels caused by a channel of charge accumulated in them and are
> progressive breakdowns over long distances. The physics are very
> different, but in neither are there oscillations. again you go back
> to ancient history, it is time you updated your reading list.
>
> All breakdown are made by oscillating electrons. They work like the
> pneumatic hammer. When electron oscillate (like in the Kundt's tube) at the
> end the voltage is doubled and the next distance is progressed.
>
> ">>> Lightnings produce LW.

>
>
>
> > >yes, there are downward leaders. these can be tracked either by their
> > radio noise or by radar. the size and step process has been well
> > known for many years"
>
> In ECM such initial oscillations are detected and the power is shut down
> before full breakdown.
> The electrons have mass and charge - they like oscyllate. They oscillate
> before the full breakdown and after to dissipate the full energy. In the
> channel are better conditions to oscillations than in the conductor.
> S*- Hide quoted text -
>
> - Show quoted text -

you make assertions that are simply not true. i am sorry, but there
is no use continuing this discussion as you do not understand the
basic physics and insist on quoting outdated and incorrect theories.
when you have taken some modern physics courses and are up to speed on
the state of the art today, or even yesterday, but at least better
than last century maybe we can continue, but this is a waste of time
for all now.

2809. remember it

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-25 14:33:35 UTC
From: savy <saving11@live.com>
Message-ID: <a94b82b7-4e22-4cad-aaff-a08f7523909e@g23g2000vbr.googlegroups.com>
Source record: 12271

I saw this site and I like it so much, I'd like to see it to learn a
lot of things
http://zzrz.com/english.htm

2810. Re: Disconne Question

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-25 14:53:36 UTC
From: Ralph E Lindberg <n7bsn@callsign.net>
Message-ID: <n7bsn-5FABE1.07533025102009@individual.net>
Source record: 12272

In article <fqv6e55qg63a0g3fpj1pr53aocrfun3ubg@4ax.com>,
Richard Clark <kb7qhc@comcast.net> wrote:

> No.
>
> 73's
> Richard Clark, KB7QHC

Agreed... a wet coax might be different (inside)

--

Personal e-mail is the n7bsn but at amsat.org
This posting address is a spam-trap and seldom read
RV and Camping FAQ can be found at
http://www.ralphandellen.us/rv

2811. Re: remember it

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-25 19:30:31 UTC
From: JIMMIE <JIMMIEDEE123@YAHOO.COM>
Message-ID: <a0ced9f9-b98b-4af5-92af-f8dcd2957425@f10g2000vbl.googlegroups.com>
Source record: 12273

On Oct 25, 10:33 am, savy <savin...@live.com> wrote:
> I saw this site and I like it so much, I'd like to see it to learn a
> lot of things
> http://zzrz.com/english.htm

DO NO OPEN

2812. Re: Disconne Question

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-25 22:18:41 UTC
From: PH5E <callsign.ph5e-nospam-@gmail.com>
Message-ID: <4ae4cebf$0$19742$703f8584@news.kpn.nl>
Source record: 12274

Robert11 wrote:
> Hello,
>
> For a Disconne in the attic (for vhf/uhf), receiving only, do you think a
> wet roof from rain would make
> a "meaningful" difference in reception ?
>
> Bob
>
>

Depends on the type of roof and frequency you're working. If the roof
absorbs (small amounts of) water, or if water can stand on the roof,
then I'd say: Yes. Wet trees can also absorb radio waves better then dry
ones. Don't see why roofs are any different.
HF will suffer most, VHF and UHF will probably not be affected as much.
But I've spoken to a local 2m amateur with indoor antenna who claimed to
notice the difference between wet and dry.

--
RigReference.com - Reference guide for ham radio equipment
http://rigreference.com/

2813. Ping Martin, k7mem

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-26 08:02:42 UTC
From: Ian Wade G3NRW <g3nrw@yahoo.co.uk>
Message-ID: <rKy1AEFieV5KFwOl@ntlworld.com>
Source record: 12275

Hi Martin,

I've sent you an email, to k7mem@myrealbox.com

--
73
Ian, G3NRW

2814. Re: Disconne Question

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-26 12:19:10 UTC
From: tom <news4792@taring.org>
Message-ID: <4ae59421$0$42840$8046368a@newsreader.iphouse.net>
Source record: 12276

Bill wrote:
>> . Wet trees can also absorb radio waves better then dry
>> ones.
>
> Trees have vascular systems so are "wet" all the time. Dry trees are
> dead trees,
>
> http://www.biology4kids.com/files/plants_xylemphloem.html

You must live where it never freezes. The difference between summer and winter on 2m and up is certainly noticeable and measurable here in Minnesota.

tom
K0TAR

2815. Re: Disconne Question

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-26 12:35:03 UTC
From: tom <news4792@taring.org>
Message-ID: <4ae59765$0$28114$8046368a@newsreader.iphouse.net>
Source record: 12277

Bill wrote:
>> . Wet trees can also absorb radio waves better then dry
>> ones.
>
> Trees have vascular systems so are "wet" all the time. Dry trees are
> dead trees,
>
> http://www.biology4kids.com/files/plants_xylemphloem.html

Oops, forgot to say that water, even with the contaminants of life in
it, doesn't conduct very well when frozen.

tom
K0TAR

2816. Re: Disconne Question

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-27 02:34:11 UTC
From: Bill <k4wge@arrl.net>
Message-ID: <1b58d81e-9a51-45e9-a0e9-8488f56d2b96@v30g2000yqm.googlegroups.com>
Source record: 12278

On Oct 26, 8:35 am, tom <news4...@taring.org> wrote:
> Bill wrote:
> >> . Wet trees can also absorb radio waves better then dry
> >> ones.
>
> > Trees have vascular systems so are "wet" all the time. Dry trees are
> > dead trees,
>
> >http://www.biology4kids.com/files/plants_xylemphloem.html
>
> Oops, forgot to say that water, even with the contaminants of life in
> it, doesn't conduct very well when frozen.
>
> tom
> K0TAR

The original question had to do with interference with radio
reception, not with conduction.

2817. Re: Disconne Question

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-27 02:40:17 UTC
From: tom <news4792@taring.org>
Message-ID: <4ae65dec$0$42845$8046368a@newsreader.iphouse.net>
Source record: 12279

Bill wrote:
> On Oct 26, 8:19 am, tom <news4...@taring.org> wrote:
>> Bill wrote:
>>>> . Wet trees can also absorb radio waves better then dry
>>>> ones.
>>> Trees have vascular systems so are "wet" all the time. Dry trees are
>>> dead trees,
>>> http://www.biology4kids.com/files/plants_xylemphloem.html
>> You must live where it never freezes.
>
> The original question had to do with rain, did it not? Not ice.

I was responding to "wet" versus "dead".

>
>> The difference between summer
>> and winter on 2m and up is certainly noticeable and measurable here in
>> Minnesota.

>
> And the difference is attributed to what?

Very very simple physics.

tom
K0TAR

2818. Re: Disconne Question

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-27 02:43:08 UTC
From: tom <news4792@taring.org>
Message-ID: <4ae65e97$0$42845$8046368a@newsreader.iphouse.net>
Source record: 12280

Bill wrote:
> On Oct 26, 8:35 am, tom <news4...@taring.org> wrote:
>> Bill wrote:
>>>> . Wet trees can also absorb radio waves better then dry
>>>> ones.
>>> Trees have vascular systems so are "wet" all the time. Dry trees are
>>> dead trees,
>>> http://www.biology4kids.com/files/plants_xylemphloem.html
>> Oops, forgot to say that water, even with the contaminants of life in
>> it, doesn't conduct very well when frozen.
>>
>> tom
>> K0TAR
>
> The original question had to do with interference with radio
> reception, not with conduction.

What planet do you live on?

Interference had nothing to do with the discussion.

Conduction of objects in the local environment has everything to do with
reception.

tom
K0TAR

2819. Re: Disconne Question

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-27 02:56:24 UTC
From: tom <news4792@taring.org>
Message-ID: <4ae66144$0$28121$8046368a@newsreader.iphouse.net>
Source record: 12281

tom wrote:

>
> Conduction of objects in the local environment has everything to do with
> reception.
>

Should have said conductivity.

tom
K0TAR

2820. Re: Disconne Question

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-27 03:11:23 UTC
From: tom <news4792@taring.org>
Message-ID: <4ae66537$0$42850$8046368a@newsreader.iphouse.net>
Source record: 12282

Bill wrote:
> On Oct 26, 8:35 am, tom <news4...@taring.org> wrote:
>> Bill wrote:
>>>> . Wet trees can also absorb radio waves better then dry
>>>> ones.
>>> Trees have vascular systems so are "wet" all the time. Dry trees are
>>> dead trees,
>>> http://www.biology4kids.com/files/plants_xylemphloem.html
>> Oops, forgot to say that water, even with the contaminants of life in
>> it, doesn't conduct very well when frozen.
>>
>> tom
>> K0TAR
>
> The original question had to do with interference with radio
> reception, not with conduction.
>

Your license is new in August this year. And tied to a canceled
callsign in 1999. Odd history.

tom
K0TAR

2821. hot pics and videos

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-27 08:26:42 UTC
From: rani <12c4rani@gmail.com>
Message-ID: <09fc79df-e785-47de-8a23-27a2bececc04@v37g2000prg.googlegroups.com>
Source record: 12283

hot kiss1
http://a2zclub.blogspot.com/2009/10/hot-kiss1.html
hot bikini 1
http://a2zclub.blogspot.com/2009/10/hot-bikini-1.html
sexy pics 1
http://a2zclub.blogspot.com/2009/10/sexy-pics-1.html
hot navel 1
http://a2zclub.blogspot.com/2009/10/hot-navel-1.html
hot 1
http://a2zclub.blogspot.com/2009/10/hot-1.html
hot boobs 1
http://a2zclub.blogspot.com/2009/10/hot-boobs-1.html
spicy 1
http://a2zclub.blogspot.com/2009/10/spicy-1.html
funny pics 1
http://a2zclub.blogspot.com/2009/10/funny-pics-1.html
7 wonders
http://a2zclub.blogspot.com/2009/10/7-wonders.html

more hot videos and pics see this link

http://a2zclub.blogspot.com

2822. Re: Disconne Question

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-27 08:37:03 UTC
From: Marc Heusser <marc.heusser@byeheusser.commercialspammers.invalid>
Message-ID: <marc.heusser-E04457.09363327102009@news.uzh.ch>
Source record: 12284

In article <4ae66537$0$42850$8046368a@newsreader.iphouse.net>,
tom <news4792@taring.org> wrote:

...
> Your license is new in August this year. And tied to a canceled
> callsign in 1999. Odd history.
...

Odd comment?
What is wrong with a new license?

Marc

--
remove bye and from mercial to get valid e-mail
<http://www.heusser.com>

2823. Re: an ontopic post about code

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-27 09:57:18 UTC
From: Frank Müller <DW2FM@hotmail.com>
Message-ID: <hc6g6h$70t$00$1@news.t-online.com>
Source record: 12285
Cross-posted to: alt.ham-radio.vhf-uhf,rec.radio.amateur.policy,rec.radio.amateur.antenna

dw2fm
<kb9rqz@yahoooo.com> schrieb im Newsbeitrag
news:s51fd5h8d8ikrpnvu3va66anugo82i4hnq@4ax.com...
> On Fri, 01 Dec 2006 09:36:47 -0800, John Smith
> <assemblywizard@gmail.com> wrote:
>
> >K4YZ wrote:
> >> Nope.
> >>
> >> The IP Address and servers are complete proof that I do NOT share
> >> any annonymous character's "address".
> >>
> >> Sounds like Lennie, to me....
> >>
> >> Steve, K4YZ
> >>
> >
> >To anyone with even an elementary understanding of anonymous proxies,
> >anonymous remailers, zombie backdoors, etc., the ability to change ones
> >IP address and header details is simplistic, indeed, with little time
> >spent anyone can appear to be "coming" from anywhere in the world.
> >
> >You waste my time. Worse, you think us all idiots here. You remind me
> >of the "street smart" prosecutors and defense attorneys who stack jurys
> >with members of little or no technical knowledge and then call in
> >"expert witnesses" and propose arguments of technical details to boggle
> >their minds.
> >
> >You have only proven that you, yourself are either ignorant to such
> >technical details, or else you are indeed street smart, I favor the
> >latter in this case (however, if you in the dark about such things, 15
> >minutes on google will enlighten you.)
> >
> >JS
>
> "one useless man is disgrace 2 become a law firm 3 or more become a congress"
> adams
>
> woger you are a Congress all in your own head
> "http://www.3ix.org/sys/aff.php?aff=7439" target="_blank"
>
> altopia is never used by KB9RQZ
> http://kb9rqz.cc.cc

> http://kd8ctl.com
> nor is Konstans@hotmail.com ever
> btw i can be found at
> 17366 N River Rd
> Chassel Mi
>
> but the cowards asking lack the gut to act

Deutsch?._..?l?.e???

2824. Re: Disconne Question

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-27 10:45:55 UTC
From: Bill <k4wge@arrl.net>
Message-ID: <f84be75f-750d-40f4-b9ef-1061cbf73e78@j24g2000yqa.googlegroups.com>
Source record: 12286

On Oct 26, 10:40 pm, tom <news4...@taring.org> wrote:
> Bill wrote:
> > On Oct 26, 8:19 am, tom <news4...@taring.org> wrote:
> >> Bill wrote:
> >>>> . Wet trees can also absorb radio waves better then dry
> >>>> ones.
> >>> Trees have vascular systems so are "wet" all the time. Dry trees are
> >>> dead trees,
> >>> http://www.biology4kids.com/files/plants_xylemphloem.html
> >> You must live where it never freezes.
>
> > The original question had to do with rain, did it not? Not ice.
>
> I was responding to "wet" versus "dead".
>
>
>
> >> The difference between summer
> >> and winter on 2m and up is certainly noticeable and measurable here in
> >> Minnesota.
>
> > And the difference is attributed to what?
>
> Very very simple physics.
>
> tom
> K0TAR

I get it. You are Art today.

2825. Re: Disconne Question

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-27 10:48:20 UTC
From: Bill <k4wge@arrl.net>
Message-ID: <f213ee03-290c-4e0c-a700-3c7935b0a008@o10g2000yqa.googlegroups.com>
Source record: 12287

On Oct 27, 4:37 am, Marc Heusser
<marc.heus...@byeheusser.commercialspammers.invalid> wrote:
> In article <4ae66537$0$42850$80463...@newsreader.iphouse.net>,
>
> tom <news4...@taring.org> wrote:
>
> ...> Your license is new in August this year. And tied to a canceled
> > callsign in 1999. Odd history.
>
> ...
>
> Odd comment?
> What is wrong with a new license?
>
> Marc

And who did he look up?

2826. Re: Disconne Question

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-27 11:15:24 UTC
From: Bill <k4wge@arrl.net>
Message-ID: <0c3e9654-4b16-4e2b-ba08-a2e50ba78169@r5g2000yqb.googlegroups.com>
Source record: 12288

On Oct 27, 6:48 am, Bill <k4...@arrl.net> wrote:
> On Oct 27, 4:37 am, Marc Heusser
>
> <marc.heus...@byeheusser.commercialspammers.invalid> wrote:
> > In article <4ae66537$0$42850$80463...@newsreader.iphouse.net>,
>
> > tom <news4...@taring.org> wrote:
>
> > ...> Your license is new in August this year. And tied to a canceled
> > > callsign in 1999. Odd history.
>
> > ...
>
> > Odd comment?
> > What is wrong with a new license?
>
> > Marc
>
> And who did he look up?

Just to be clear, I was first licensed in 1991, never "cancelled",
upgraded in August 2009.

And why does Tom choose to spread disinformation as part of this
discussion?

2827. Re: K0TAR's history

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-27 15:20:07 UTC
From: Audio1 <Audio1@where.net>
Message-ID: <IcEFm.36180$cL1.23073@newsfe20.iad>
Source record: 12289

Frank wrote:
> ...
>
> Odd history? Tom, don't you remember your mother telling
> you that the porn film director swore to her that the baboon
> couldn't get her pregnant?

It's always interesting in a car-wreck kind of way when someone can't
come up with something better to say so they take out their credibility
and blow it to smithereens.

2828. Re: Disconne Question

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-27 21:13:10 UTC
From: tom <news4792@taring.org>
Message-ID: <4ae7624e$0$28126$8046368a@newsreader.iphouse.net>
Source record: 12290

Bill wrote:
> On Oct 27, 4:37 am, Marc Heusser
> <marc.heus...@byeheusser.commercialspammers.invalid> wrote:
>> In article <4ae66537$0$42850$80463...@newsreader.iphouse.net>,
>>
>> tom <news4...@taring.org> wrote:
>>
>> ...> Your license is new in August this year. And tied to a canceled
>>> callsign in 1999. Odd history.
>> ...
>>
>> Odd comment?
>> What is wrong with a new license?
>>
>> Marc
>
>
> And who did he look up?

My apologies. It was wrong.

And to compound the problem, it was the wrong call.

tom
K0TAR

2829. Re: K0TAR's history

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-28 01:46:59 UTC
From: tom <news4792@taring.org>
Message-ID: <4ae7a27a$0$28113$8046368a@newsreader.iphouse.net>
Source record: 12291

Frank wrote:
> On Oct 26, 11:11 pm, tom <news4...@taring.org> wrote:
>
>>> The original question had to do with interference with radio
>>> reception, not with conduction.
>> Your license is new in August this year. And tied to a canceled
>> callsign in 1999. Odd history.
>>
>> tom
>> K0TAR
>
> Odd history? Tom, don't you remember your mother telling
> you that the porn film director swore to her that the baboon
> couldn't get her pregnant?

Asshat? I think so.

PLONK!

tom
K0TAR

2830. Re: K0TAR's history

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-28 03:00:09 UTC
From: tom <news4792@taring.org>
Message-ID: <4ae7b40f$0$42842$8046368a@newsreader.iphouse.net>
Source record: 12292

Frank wrote:
> On Oct 26, 11:11 pm, tom <news4...@taring.org> wrote:
>
>>> The original question had to do with interference with radio
>>> reception, not with conduction.
>> Your license is new in August this year. And tied to a canceled
>> callsign in 1999. Odd history.
>>
>> tom
>> K0TAR
>
> Odd history? Tom, don't you remember your mother telling
> you that the porn film director swore to her that the baboon
> couldn't get her pregnant?

And unless you're faking your name here or to the FCC, you don't have a
federal license.

tom
K0TAR

2831. Re: K0TAR's history

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-28 03:04:47 UTC
From: tom <news4792@taring.org>
Message-ID: <4ae7b4b5$0$42842$8046368a@newsreader.iphouse.net>
Source record: 12293

Frank wrote:
> On Oct 26, 11:11 pm, tom <news4...@taring.org> wrote:
>
>>> The original question had to do with interference with radio
>>> reception, not with conduction.
>> Your license is new in August this year. And tied to a canceled
>> callsign in 1999. Odd history.
>>
>> tom
>> K0TAR
>
> Odd history? Tom, don't you remember your mother telling
> you that the porn film director swore to her that the baboon
> couldn't get her pregnant?

I have verified a few things about you though.

tom
K0TAR

2832. Re: K0TAR's history

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-28 03:15:52 UTC
From: tom <news4792@taring.org>
Message-ID: <4ae7b74e$0$42839$8046368a@newsreader.iphouse.net>
Source record: 12294

Frank wrote:
> On Oct 26, 11:11 pm, tom <news4...@taring.org> wrote:
>
>>> The original question had to do with interference with radio
>>> reception, not with conduction.
>> Your license is new in August this year. And tied to a canceled
>> callsign in 1999. Odd history.
>>
>> tom
>> K0TAR
>
> Odd history? Tom, don't you remember your mother telling
> you that the porn film director swore to her that the baboon
> couldn't get her pregnant?

Interesting history on google for his email address. He appears to be a
serial harasser.

http://www.google.com/#hl=en&q=fmerriman%40nycny.net&aq=&aqi=&oq=&fp=b8148470ea1f7ec2

Make your own judgment.

tom
K0TAR

2833. Re: K0TAR's history

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-28 11:37:53 UTC
From: Audio1 <Audio1@where.net>
Message-ID: <m2WFm.36661$cL1.27814@newsfe20.iad>
Source record: 12295

```
tom wrote:
> Frank wrote:
>> On Oct 26, 11:11 pm, tom <news4...@taring.org> wrote:
>>
>>>> The original question had to do with interference with radio
>>>> reception, not with conduction.
>>> Your license is new in August this year. And tied to a canceled
>>> callsign in 1999. Odd history.
>>>
>>> tom
>>> K0TAR
>>
>> Odd history? Tom, don't you remember your mother telling
>> you that the porn film director swore to her that the baboon
>> couldn't get her pregnant?
>
> Interesting history on google for his email address. He appears to be a
> serial harasser.
>
> http://www.google.com/#hl=en&q=fmerriman%40nycny.net&aq=&aqi=&oq=&fp=b8148470ea1f7ec2
>
>
> Make your own judgment.
>
> tom
> K0TAR

His 'baboon' response was plenty for me.
```

2834. FS: NEW Minicircuits ZKL-1R5 RF MICROWAVE AMPLIFIER(s) 10MHz-1.5GHz. $38.70 or $50 on Ebay [LOT of TEN, ZKL1R5]

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-28 20:48:59 UTC
From: Mark Licetti <StanStar@nyc.rr.com>
Message-ID: <0c9b2d26-cc45-44ab-899d-4c1ed885be22@x6g2000prc.googlegroups.com>
Source record: 12296
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew,rec.radio.amateur.equipment

LOT of TEN or Singles.
Minicircuits ZKL-1R5 [ZKL1R5] RF MICROWAVE AMPLIFIER(s), Wideband 10MHz-1.5GHz.
High-end Amps, MedPower +18.7dBm, LowNoise 3dB, Gain 39-40dB. NEW - in original Minicircuits/antistatic packaging (never used, USA origin & location, ships worldwide).
Either Singles or entire LOT (price shown for a Lot, but message us if you want single(s) - shipping is CHEAPER than shown ($5.20), etc. however on a quantity basis you save by dealing as a Lot, not Singles - message us if you just need a few, not all 10 units).

Posted on Ebay, item# 330371507322 - goto www.ebay.com & enter 330371507322 into search. "BuyNow" OPTION is AVAILABLE - NO need to wait for Auction ending.
Contact via Ebay (best) or Email. By Email, can hit "Reply" in Newsgroups but REMOVE "nospam" strings if appears in my address (edit address manually, but sometimes it’s already done) so I could respond from a real address/name. Do NOT reply on Newsgroups (I posted here, but will NOT read), and if I get much spam that address will be DISABLED, so you'll have to communicate via Ebay (which, incidentally, is more secure anyway). My Ebay feedback is 100% positive, not to mention 14 YEARS of Newsgroups trading without complains. Again, description is on Ebay but a few facts are copied here (for convenience):

** TECHNICAL SPECS:
A DATASHEET PDF is at manufacturer's site www.minicircuits.com-->enter "ZKL-1R5" into search--> datasheet (do not omit dash, ZKL1R5 instead of ZKL-1R5 will result in an error); so only a few specs are copied below. Finally, check the price Minicircuits is asking - $150/unit, we're asking $39 "auction start" & $56 "buynow" options - new/sealed units but @33% cost (reason to sell is explained below)
** PHOTOS are at EXTERNAL SERVER (as I CANNOT POST on EBAY for free beyond 1st free photo); at http://photos.starium.org ----> select Gallery named "Minicircuits ZKL-1R5"..
• Wideband, 10MHz to 1.500 GHz
• IP3 +31 dBm typ.
• LowNoise 3 dB typ. (not bad for a MedPower amp, rather than dedicated LNA)
• Gain 40 dB typ., Flatness 1.2dB
• VSWR IN 1.4, OUT 1.6
• P1dB Compression Point +15dB min, however charts indicate 17.6 to 18.7dBm

• Connectors - SMA (50 Ohm impedance), gold-plated.
• DCpower +12V nom @115mA max, but will take a range of 9-13V or wider.
• More data, plots, etc. are in a datasheet (PDF) downloadable from manufacturer's website.
Example of applications: communication systems e.g. cellular, satellite distribution, GSM/ISM; Radars, we're using them in a Middle-Stage Amplifier block in an MRI (magnetic) scientific instrument.

** REASON to SELL::
Our RF Engineer has changed Product design in which this amplifier was previously used (a scientific instrument); so not all purchased lots of ZKL-1R5 could be finished before new design "kicked in". In the new design, ZKL1R5 overloads the newly designed next amplifying stage (which became more sensitive) & we don't know a clean way to attenuate ZKL1R5's gain (38-40dB!, lowering powersupply is not a solution & not enough). So instead we switched to using ZFL-500 amps with lower gain & narrower bandwidth (0.5Ghz, in fact all we need is 0.2GHz, not even 0.5GHz). Minicircuit's policy is not to take them back & it's laborious to try to retrofit these into a new system - it's better if we simply sell, at a loss or not, but it's easier. We're already stocked on 60 ZFL-500's, so design change is permanent/verified.

I, in fact, come from a competing RF company (not to be mentioned) so not interested in promoting Minicircuits, but this is one of Minicircuits better models; as far as I know it's using Gallium/Indium PHEMT/etc. FET’s or something to that effect, not surprising but $150 price is already difficult to attain, yet we ask even 3-4x times less or to exchange for ZFL500 (Minicircuits said ‘no”). It's a pity at the new company where I moved in 2008, which is using RF Amps (not designing them), we cannot use ZKL1R5 due to gain excessive for a new design (was normal in an older design), also we decided don't need 1.5GHz expensive amps considering our signals are under 200MHz.

P.S. Again, more photos are at that http://photos.starium.org site - pictures are better than a lengthy verbal description.

2835. Wholesale COOGI jeans www.brandtrade08.cn

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-29 10:45:36 UTC
From: "www.brandtrade08.cn" <nashirt1@163.com>
Message-ID: <ab058741-75bc-4386-af1d-6797569b40d9@v37g2000prg.googlegroups.com>
Source record: 12298
Cross-posted to: rec.radio.amateur.antenna,rec.birds

Wholesale Ed Hardy hoody, A&F hoody www.brandtrade08.cn
hoody www.brandtrade08.cn
Wholesale 10 DEEP hoody www.brandtrade08.cn
Wholesale A&F hoody www.brandtrade08.cn
Wholesale Abercrombie&Fitch hoody www.brandtrade08.cn
Wholesale Abercrombie & Fitch hoody www.brandtrade08.cn
Wholesale ADICOLOR hoody www.brandtrade08.cn
Wholesale ADIDAS hoody www.brandtrade08.cn
Wholesale AK hoody www.brandtrade08.cn
Wholesale ARMANI hoody www.brandtrade08.cn
Wholesale ARMANI Sweater www.brandtrade08.cn
Wholesale polo Sweater www.brandtrade08.cn
Wholesale Artful dodger hoody www.brandtrade08.cn
Wholesale BAPE hoody www.brandtrade08.cn
Wholesale BBC hoody www.brandtrade08.cn
Wholesale CLH hoody www.brandtrade08.cn
Wholesale COOGI hoody www.brandtrade08.cn
Wholesale D&G hoody www.brandtrade08.cn
Wholesale DSQUARED hoody www.brandtrade08.cn
Wholesale ED hoody www.brandtrade08.cn
Wholesale HARDY hoody www.brandtrade08.cn
Wholesale EVISU hoody www.brandtrade08.cn
Wholesale EVS hoody www.brandtrade08.cn
Wholesale GGG hoody www.brandtrade08.cn
Wholesale G-STAR hoody www.brandtrade08.cn
Wholesale LACOSTE hoody hoody www.brandtrade08.cn
Wholesale Lacoste Sweater www.brandtrade08.cn
Wholesale LRG hoody www.brandtrade08.cn
Wholesale NY hoody www.brandtrade08.cn
Wholesale O&L hoody www.brandtrade08.cn
Wholesale POLO hoody 3 4 5 www.brandtrade08.cn
Wholesale POLO hoody hoody www.brandtrade08.cn
Wholesale Byrberry hoody www.brandtrade08.cn
UGG hoody www.brandtrade08.cn
Byrberry hoody www.brandtrade08.cn
NFL Jersey www.brandtrade08.cn
scarf scarves www.brandtrade08.cn
jeans www.brandtrade08.cn
Wholesale AFTFUL DODGER jeans www.brandtrade08.cn
Wholesale AKA STASH HOUSE jeans www.brandtrade08.cn
Wholesale APE jeans www.brandtrade08.cn
Wholesale BBC jeans www.brandtrade08.cn
Wholesale COOGI jeans www.brandtrade08.cn

Wholesale D&G jeans www.brandtrade08.cn
Wholesale DIESEL jeans www.brandtrade08.cn
Wholesale ED jeans www.brandtrade08.cn
Wholesale EVISU jeans www.brandtrade08.cn
Wholesale Gino jeans www.brandtrade08.cn
Wholesale G-Star jeans www.brandtrade08.cn
Wholesale LRG jeans www.brandtrade08.cn
Wholesale RMC jeans www.brandtrade08.cn
Wholesale ROCK jeans www.brandtrade08.cn
Wholesale SHMACK jeans www.brandtrade08.cn
Wholesale TR jeans www.brandtrade08.cn
Wholesale ugg jeans www.brandtrade08.cn

2836. nike air MAX 180 sports shoes(www.brandtrade08.cn)

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-29 10:46:16 UTC
From: "www.brandtrade08.cn" <nashirt1@163.com>
Message-ID: <90f65601-6361-4a5e-a5d6-bc49f9703cbc@y32g2000prd.googlegroups.com>
Source record: 12297
Cross-posted to: rec.radio.amateur.antenna,rec.birds

Hello,
Welcome to our website: www.brandtrade08.cn
We are supply all kinds brand goods:
Shoes: Jordan, Nike, Prada, Puma, Gucci, LV, UGG, Timberland, Pual
Smith, D&G, Supra, Adidas, Yeezy, ATO, CR etc.
Clothing: Hoody, Coat, Jacket, T-shirt, Suit, Sweater, Jeans, Bikini,
Jersey etc.
Handbags: Coach, Gucci, Berberry, Balenciaga, Juicy, LV, ED-Hardy,
MIUMIU, Chanel, Chole etc.
Accessories: Belts, Sunglasses, Hats, Necktie, Scarf, Jewelry etc.
Electronic: Iphone, Nokia, DV, Camera, DVD, P90X, GHD, Ipod touch,
Ipod Nano, GPS, Sotfware, Power Book, USB, Wii etc.
As the commodities we supply are of excellent quality and low price,
we have won a very good reputation from our clients all over the
world. If you are interested in any of our products, please don't
hesitate to contact with me by email.
I trust that through our cooperation we shall be able to conclude some
transactions with you in the near future.
company website:www.brandtrade08.cn
contact person:Lily
Tel:0594-7550936
MSN:lucyying2009@hotmail.com

2837. Hello Everyone

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-29 12:39:59 UTC
From: Mike <stlmiket@gmail.com>
Message-ID: <6112cc2f-b2c8-45c6-9274-8cd37d89947b@s31g2000yqs.googlegroups.com>
Source record: 12299

Hello Everyone! I just joined this group and wanted to introduce
myself.

I look forward to some great conversations.

KC0VNF

2838. Are you interested?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-29 14:09:03 UTC
From: Number0nE <baiacristian@yahoo.com>
Message-ID: <1e8f57c4-7dd2-4849-ba56-c0d9a307ec94@v30g2000yqm.googlegroups.com>
Source record: 12300

Watch free tv online... 320 channels in 32 country

http://www.mwk-g.info

2839. Re: Hello Everyone

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-29 18:06:01 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <30mje5hmdapq6jmb6c8sdugmvoadqgulmn@4ax.com>
Source record: 12301

On Thu, 29 Oct 2009 05:39:59 -0700 (PDT), Mike <stlmiket@gmail.com>
wrote:

>Hello Everyone! I just joined this group and wanted to introduce
>myself.
>
>I look forward to some great conversations.
>
>KC0VNF

Hi Mike

Welcome. By "great conversations" you are sure to read unusual ones,
interesting ones, some that are downright odd, some that are venal,
political too (if that wasn't already covered under the other
categories).

And you might read something about antennas. There are any number of
topics that are sure-fire. Usually the more elemental that topic is,
the longer the discussion (like the loss in a transmission line under
various loads) will be.

73's
Richard Clark, KB7QHC

2840. www.world2015.org(u can c all pages)

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-30 00:38:30 UTC
From: "www.world2015.org" <h1n1world1999@gmail.com>
Message-ID: <3a94abba-e0e1-4f59-a471-beb6cc7902a9@k13g2000prh.googlegroups.com>
Source record: 12302

Human Race Creation,
Primeval Persons,
Civilizations, Aristocracy &
Democracy
What Next?...
WORLD2015.
World2015:No money, No Power, No Politics, No Castes, No Religions,
Human Beings are one. Whole world is One. God is one. Free world.
Everything is free etc.., New Society . Equivalent Society.
Let us establish free world. Please co-operate.
FREE REGISTRATION
FREE MEMBERSHIP
In
www.world2015.org

2841. L Networks & EZNEC+ 5.0

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-31 20:08:12 UTC
From: John Ferrell <jferrell13@triad.rr.com>
Message-ID: <or5pe5lkt6h17mr1lnuq3hts7it0ii9ln2@4ax.com>
Source record: 12303

I am at a loss to understand the L Network function in EZNEC + 5.0.
Should one be able to model an L match to a short (or long) vertical
with this resource?

If so, how about an example please?

John Ferrell W8CCW

2842. Re: L Networks & EZNEC+ 5.0

Newsgroup: rec.radio.amateur.antenna
Date: 2009-10-31 21:12:09 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <89ydnT-m6M22NXHXnZ2dnUVZ_hidnZ2d@giganews.com>
Source record: 12304

John Ferrell wrote:
> I am at a loss to understand the L Network function in EZNEC + 5.0.
> Should one be able to model an L match to a short (or long) vertical
> with this resource?
>
> If so, how about an example please?
>
> John Ferrell W8CCW

In the main window, click Help, then Contents. This is the EZNEC manual. In the manual, locate the Test Drive chapter, which is a tutorial for using EZNEC. The Test Drive section A Lap Around Track 5 covers L networks and other features new to v. 5.0. For additional information about L networks, open the L Network Window by clicking the L Networks line in the main program window, then press the F1 (context sensitive help) key.

Roy Lewallen, W7EL

2843. Crossposting Permitted to rec.radio.amateur.moderated

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-01 07:00:03 UTC
From: rram@panix.com
Message-ID: <radio/ham-radio/moderated/crossposting-1-1257058800@panix.com>
Source record: 12305
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.dx,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.policy,rec.radio.amateur.space,rec.radio.info

```
Posted-By: auto-faq 3.3.2 beta (PGPMoose V2.0, Perl 5.005)
Archive-name: radio/ham-radio/moderated/crossposting
Revision: 1.1 2009/04/12 19:42:04
Posting-Frequency: posted monthly
URL: http://www.panix.com/~rram/usenet/rram/index.html

Changes followed by "|".

After a 30-day public discussion and feedback period to gauge reader
opinions in March of 2009:

http://groups.google.com/group/rec.radio.amateur.moderated/browse_thread/thread/d7d337db35
f23326

the rec.radio.amateur.moderated Moderation Team has decided to consider
amending its charter, and permit limited simultaneous crossposting to
rec.radio.amateur.moderated and one other unmoderated
amateur-radio-related discussion newsgroup. We are currently trying
this on a temporary basis (90 days, through early July 2009), and adopt
it permanently if successful.

Approved rec.radio.amateur.* newsgroups are those that are currently
listed in the latest version of the "List of Big Eight Newsgroups" which
is crossposted monthly to news.announce.newgroups, news.groups, and
news.lists.misc.

Approved alt.radio.amateur.* and alt.ham-radio.* newsgroups are those
that have been created consistent with the suggestions in "So You Want
to Create an Alt Newsgroup" at:

http://www.faqs.org/faqs/alt-creation-guide/

Approved regional hierarchy newsgroups are those that contain either
"radio.amateur" or "ham-radio" in their names, including
uk.radio.amateur and aus.radio.amateur.misc.

We will make every reasonable effort to keep our list of approved
newsgroups up-to-date. In case we have overlooked any, and a submission
is rejected in error as a result, the rejected submitter can E-mail us
at our administrative contact address (in the signature at the bottom of
this article, and the default Reply-To for the rejection message)
requesting that it be added, and that the article be approved. We may
still choose to reject articles crossposted to any alt.* newsgroup with
an inappropriate name, including obscene language, embedded
name-calling, or encouragement of unlawful conduct.
```

Please direct any comments, questions, or criticisms to
rec-radio-amateur-moderated-request@panix.com.

2844. Looking for sine wave clip art

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-01 13:29:10 UTC
From: Ian Wade G3NRW <g3nrw@yahoo.co.uk>
Message-ID: <fExYz8Im0Y7KFwII@ntlworld.com>
Source record: 12306
Cross-posted to: uk.radio.amateur,rec.radio.amateur.antenna

I'm preparing a PowerPoint presentation, and need to plot a sine wave. I can't do this by hand, so I need clip art of a simple sine wave. Nothing fancy, just one or two complete cycles. Source anyone?

--
73
Ian, G3NRW

2845. Re: Looking for sine wave clip art

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-01 13:44:12 UTC
From: Ian Jackson <ianREMOVETHISjackson@g3ohx.demon.co.uk>
Message-ID: <8NnEyRCsCZ7KFwcc@g3ohx.demon.co.uk>
Source record: 12307
Cross-posted to: uk.radio.amateur,rec.radio.amateur.antenna

In message <fExYz8Im0Y7KFwIl@ntlworld.com>, Ian Wade G3NRW
<g3nrw@yahoo.co.uk> writes
>I'm preparing a PowerPoint presentation, and need to plot a sine wave.
>I can't do this by hand, so I need clip art of a simple sine wave.
>Nothing fancy, just one or two complete cycles. Source anyone?
>
Try a Google on something like 'sinewave voltage current waveform' etc.
It's surprisingly difficult to get good examples of waveforms, but some
are here:
http://www.allaboutcircuits.com/vol_2/chpt_1/2.html
http://www.pcguide.com/ref/power/ext/ups/funcOutput-c.html
http://www.tpub.com/neets/book2/1g.htm
Just steal the image!
--
Ian

2846. Re: Looking for sine wave clip art

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-01 13:53:29 UTC
From: Richard G3CWI <g3cwi@tesco.net>
Message-ID: <S7GdnRQLT6FFD3DXnZ2dnUVZ7rmdnZ2d@bt.com>
Source record: 12308
Cross-posted to: uk.radio.amateur,rec.radio.amateur.antenna

Ian Jackson wrote:

> Try a Google on something like 'sinewave voltage current waveform' etc.

Just Googling Sine wave gave lots of examples.

Google is clearly a closely guarded secret. Lots of people in groups
that I subscribe to have clearly never heard of it. The odd thing is
that it must take them longer to type their question than it would take
them to find the answer.

--
Visit the Amazing Online Fleamarket at http://www.fleamarket.org.uk

Always lots of amateur radio gear!

2847. Re: Looking for sine wave clip art

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-01 13:58:29 UTC
From: Brian Reay <see@website.invalid>
Message-ID: <9ugHm.9648$k31.8150@newsfe04.ams2>
Source record: 12309
Cross-posted to: uk.radio.amateur,rec.radio.amateur.antenna

"Ian Wade G3NRW" <g3nrw@yahoo.co.uk> wrote in message
news:fExYz8Im0Y7KFwIl@ntlworld.com...
> I'm preparing a PowerPoint presentation, and need to plot a sine wave. I
> can't do this by hand, so I need clip art of a simple sine wave. Nothing
> fancy, just one or two complete cycles. Source anyone?
>

I've a package which will generate these. What exactly do you want.

--
73
Brian G8OSN/W8OSN
www.g8osn.net

2848. Re: Looking for sine wave clip art

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-01 14:06:40 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <qCgHm.1927$%U3.1292@newsfe21.iad>
Source record: 12310
Cross-posted to: uk.radio.amateur,rec.radio.amateur.antenna

Ian Wade G3NRW wrote:
> I'm preparing a PowerPoint presentation, and need to plot a sine wave. I
> can't do this by hand, so I need clip art of a simple sine wave. Nothing
> fancy, just one or two complete cycles. Source anyone?

Takes about 5 minutes in EXCEL.
--
73, Cecil, IEEE, OOTC, http://www.w5dxp.com

2849. Re: Looking for sine wave clip art

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-01 14:37:09 UTC
From: EM87 <blastfromthepast@gmx.com>
Message-ID: <hck6egafk1@news.albasani.net>
Source record: 12311
Cross-posted to: uk.radio.amateur,rec.radio.amateur.antenna

Ian Wade G3NRW wrote:
> I'm preparing a PowerPoint presentation, and need to plot a sine wave. I
> can't do this by hand, so I need clip art of a simple sine wave. Nothing
> fancy, just one or two complete cycles. Source anyone?
>
http://images.google.co.uk/images?hl=en&safe=off&client=firefox-a&rls=org.mozilla%3Aen-GB%3Aofficial&um=1&sa=1&q=sine+wave+&btnG=Search+images&aq=f&oq=&start=0

Plenty there to choose from.

EM87

2850. Re: Looking for sine wave clip art

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-01 15:13:01 UTC
From: Ian Wade G3NRW <g3nrw@yahoo.co.uk>
Message-ID: <40HRflA9Va7KFwOq@ntlworld.com>
Source record: 12312
Cross-posted to: uk.radio.amateur,rec.radio.amateur.antenna

From: Cecil Moore <nospam@w5dxp.com>
Date: Sun, 1 Nov 2009 Time: 08:06:40

>Ian Wade G3NRW wrote:
>> I'm preparing a PowerPoint presentation, and need to plot a sine
>>wave. I can't do this by hand, so I need clip art of a simple sine
>>wave. Nothing fancy, just one or two complete cycles. Source anyone?
>
>Takes about 5 minutes in EXCEL.

Best suggestion yet. Why didn't I think of that. Thanks Cecil.

--
73
Ian, G3NRW

2851. Re: Looking for sine wave clip art

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-01 15:14:20 UTC
From: Ian Wade G3NRW <g3nrw@yahoo.co.uk>
Message-ID: <gkLXbOBMXa7KFwM0@ntlworld.com>
Source record: 12313
Cross-posted to: uk.radio.amateur,rec.radio.amateur.antenna

From: Richard G3CWI <g3cwi@tesco.net>
Date: Sun, 1 Nov 2009 Time: 13:53:29

>Google is clearly a closely guarded secret. Lots of people in groups
>that I subscribe to have clearly never heard of it. The odd thing is
>that it must take them longer to type their question than it would take
>them to find the answer.
>

Google? Well, I searched Google and Bing! for nearly an hour, and found
dozens and dozens and dozens of sine waves. Unfortunately most of them
had superfluous embellishments and/or were of poor graphics quality,
making them totally unsuitable for my purposes.

I promise to try harder in future .....

Plonk!

--
73
Ian, G3NRW

2852. Re: L Networks & EZNEC+ 5.0

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-01 15:23:17 UTC
From: John Ferrell <jferrell13@triad.rr.com>
Message-ID: <il9re5pmeoptk7ra59nua8jr4cl98hl2r7@4ax.com>
Source record: 12314

On Sat, 31 Oct 2009 14:12:09 -0700, Roy Lewallen <w7el@eznec.com>
wrote:

>John Ferrell wrote:
>> I am at a loss to understand the L Network function in EZNEC + 5.0.
>> Should one be able to model an L match to a short (or long) vertical
>> with this resource?
>>
>> If so, how about an example please?
>>
>> John Ferrell W8CCW
>
>In the main window, click Help, then Contents. This is the EZNEC manual.
>In the manual, locate the Test Drive chapter, which is a tutorial for
>using EZNEC. The Test Drive section A Lap Around Track 5 covers L
>networks and other features new to v. 5.0. For additional information
>about L networks, open the L Network Window by clicking the L Networks
>line in the main program window, then press the F1 (context sensitive
>help) key.
>
>Roy Lewallen, W7EL
I will take another run at it.
Understanding the program is the goal, I can solve the problem by
taking the output of EZNEC to TLW.

Thanks again for the EZNEC program!

John Ferrell W8CCW

2853. Re: Looking for sine wave clip art

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-01 16:09:05 UTC
From: Jeff Liebermann <jeffl@cruzio.com>
Message-ID: <dicre51f4tt4jpoftbq3ate8gbahp52br1@4ax.com>
Source record: 12315
Cross-posted to: uk.radio.amateur,rec.radio.amateur.antenna

On Sun, 1 Nov 2009 13:29:10 +0000, Ian Wade G3NRW <g3nrw@yahoo.co.uk>
wrote:

>I'm preparing a PowerPoint presentation, and need to plot a sine wave. I
>can't do this by hand, so I need clip art of a simple sine wave. Nothing
>fancy, just one or two complete cycles. Source anyone?

"How to draw a sine wave in PowerPoint using Bezier Curves"
<http://help.wugnet.com/office/draw-sine-wave-Powerpoint-ftopict1097848.html>

--
Jeff Liebermann jeffl@cruzio.com
150 Felker St #D http://www.LearnByDestroying.com
Santa Cruz CA 95060 http://802.11junk.com
Skype: JeffLiebermann AE6KS 831-336-2558

2854. Re: Looking for sine wave clip art

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-01 17:35:16 UTC
From: Phartarse <phartarse@uk.radio.amateur>
Message-ID: <sFjHm.33026$%%3.8192@newsfe23.ams2>
Source record: 12316
Cross-posted to: uk.radio.amateur,rec.radio.amateur.antenna

"Brian Reay" <see@website.invalid> wrote in message
news:9ugHm.9648$k31.8150@newsfe04.ams2...
> "Ian Wade G3NRW" <g3nrw@yahoo.co.uk> wrote in message
> news:fExYz8Im0Y7KFwIl@ntlworld.com...
>> I'm preparing a PowerPoint presentation, and need to plot a sine wave. I
>> can't do this by hand, so I need clip art of a simple sine wave. Nothing
>> fancy, just one or two complete cycles. Source anyone?
>>
>
> I've a package which will generate these, its called Senokot.
It promotes the generation of low frequency bursts of sine waves in
raspberry fashion.

2855. Re: Looking for sine wave clip art

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-01 18:04:21 UTC
From: Ian Wade G3NRW <g3nrw@yahoo.co.uk>
Message-ID: <iyh3+ADl2c7KFwMY@ntlworld.com>
Source record: 12317
Cross-posted to: uk.radio.amateur,rec.radio.amateur.antenna

From: Ian Wade G3NRW <g3nrw@yahoo.co.uk>
Date: Sun, 1 Nov 2009 Time: 13:29:10

>I'm preparing a PowerPoint presentation, and need to plot a sine wave.
>I can't do this by hand, so I need clip art of a simple sine wave.
>Nothing fancy, just one or two complete cycles. Source anyone?
>

Thanks everyone for the inputs.

And the winner is: Cecil, W5DXP, for suggesting I use Excel. This let me plot superimposed sine waves with various phase differences, exactly what I wanted.

--
73
Ian, G3NRW

2856. Re: Looking for sine wave clip art

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-01 18:18:43 UTC
From: Richard G3CWI <g3cwi@tesco.net>
Message-ID: <ismdnRQD8MmdTHDXnZ2dnUVZ7rZi4p2d@bt.com>
Source record: 12318
Cross-posted to: uk.radio.amateur,rec.radio.amateur.antenna

Ian Wade G3NRW wrote:
>This let me
> plot superimposed sine waves with various phase differences, exactly
> what I wanted.
>

Ian

That may have been what you wanted but it certainly was not what you
asked for!

--
Visit the Amazing Online Fleamarket at http://www.fleamarket.org.uk

Always lots of amateur radio gear!

2857. Re: Looking for sine wave clip art

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-01 18:37:04 UTC
From: Brian Howie <brian@nospam.demon.co.uk>
Message-ID: <ukQW1SCQVd7KFw9e@b-howie.demon.co.uk>
Source record: 12319
Cross-posted to: uk.radio.amateur,rec.radio.amateur.antenna

In message <gkLXbOBMXa7KFwM0@ntlworld.com>, Ian Wade G3NRW
<g3nrw@yahoo.co.uk> writes
>From: Richard G3CWI <g3cwi@tesco.net>
>Date: Sun, 1 Nov 2009 Time: 13:53:29
>
>>Google is clearly a closely guarded secret. Lots of people in groups
>>that I subscribe to have clearly never heard of it. The odd thing is
>>that it must take them longer to type their question than it would
>>take them to find the answer.
>>
>
>Google? Well, I searched Google and Bing! for nearly an hour, and found
>dozens and dozens and dozens of sine waves. Unfortunately most of them
>had superfluous embellishments and/or were of poor graphics quality,
>making them totally unsuitable for my purposes.
>
>I promise to try harder in future .....

OK it's overkill, but LTSpice will generate almost any waveform you want
and you can capture as a bitmap.

Http://www.linear.com/designtools/software/ltspice.jsp

e.g.:-

Http://www.b-howie.demon.co.uk/sinwave.bmp

Brian
--
Brian Howie

2858. SW Schedules: put all links together

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-01 20:18:47 UTC
From: user <dag@allemaale.be>
Message-ID: <hckqf7$76m$1@news.eternal-september.org>
Source record: 12320
Cross-posted to: rec.radio.shortwave,rec.radio.amateur.antenna

Hello,

I put all links together here:

http://users.fulladsl.be/spb13810/radio/

(http://users.fulladsl.be/spb13810/ is the same file)

recently added sites:

So you can select an hour and see which broadcasts start then...

Choose an hour and see transmissions that start in that hour.
GMT Time. 00 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21
22 23
Not yet a "What's On Shortwave Now Guide", but will come!
http://users.fulladsl.be/spb13810/radio/timelistaoki/

Now with TX Power and location, from other source. Shortwave listings of
300+ languages: English, Deutsch, Francais, Nederlands, Chinese, Russian,
Persian, Swahili, Esperanto, Latin, ...
http://users.fulladsl.be/~spb13810/radio/swlistaoki/

Now with TX Power and location, from other source. Listings of 700+
International Radio stations (mostly on Shortwave)
http://users.fulladsl.be/~spb13810/radio/txlistaoki/

--
--
700+ Radio Stations on SW http://swstations.tk/
Shortwave transmissions in English, Francais, Nederlands, Deutsch,
Suid-Afrikaans, Chinese, Dansk, Urdu, Cantonese, Greek, Spanish,
Portuguese, ...
http://radiolanguages.tk Updated every month or so ....

2859. Re: Looking for sine wave clip art

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-01 21:03:56 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <DJmHm.5003$CK3.1820@newsfe12.iad>
Source record: 12321
Cross-posted to: uk.radio.amateur,rec.radio.amateur.antenna

Richard G3CWI wrote:
> Ian Wade G3NRW wrote:
>> This let me
>> plot superimposed sine waves with various phase differences, exactly
>> what I wanted.

> That may have been what you wanted but it certainly was not what you
> asked for!

I'm telepathic. :-)
--
73, Cecil, IEEE, OOTC, http://www.w5dxp.com

2860. Re: Looking for sine wave clip art

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-02 08:35:48 UTC
From: Ian Jackson <ianREMOVETHISjackson@g3ohx.demon.co.uk>
Message-ID: <S8Ffe9Gknp7KFw7i@g3ohx.demon.co.uk>
Source record: 12322
Cross-posted to: uk.radio.amateur,rec.radio.amateur.antenna

In message <ukQW1SCQVd7KFw9e@b-howie.demon.co.uk>, Brian Howie
<brian@nospam.demon.co.uk> writes
>In message <gkLXbOBMXa7KFwM0@ntlworld.com>, Ian Wade G3NRW
><g3nrw@yahoo.co.uk> writes
>>From: Richard G3CWI <g3cwi@tesco.net>
>>Date: Sun, 1 Nov 2009 Time: 13:53:29
>>
>>>Google is clearly a closely guarded secret. Lots of people in groups
>>>that I subscribe to have clearly never heard of it. The odd thing is
>>>that it must take them longer to type their question than it would
>>>take them to find the answer.
>>>
>>
>>Google? Well, I searched Google and Bing! for nearly an hour, and
>>found dozens and dozens and dozens of sine waves. Unfortunately most
>>of them had superfluous embellishments and/or were of poor graphics
>>quality, making them totally unsuitable for my purposes.
>>
>>I promise to try harder in future .....
>
>OK it's overkill, but LTSpice will generate almost any waveform you
>want and you can capture as a bitmap.
>
>Http://www.linear.com/designtools/software/ltspice.jsp
>
>e.g.:-
>
>Http://www.b-howie.demon.co.uk/sinwave.bmp
>
Somewhere out there on the internet, there's a site where you can build
(or, more accurately, 'synthesise') your own waveform from its
individual components. It's great fun and very instructive.
Unfortunately, I can't find it at the moment (but I'm looking).
--
Ian

2861. Re: Looking for sine wave clip art

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-02 12:20:36 UTC
From: EA1/G1LVN <gareth.paley@gmail.com>
Message-ID: <195dd65c-edaf-4ea1-89ea-1a054a87cfea@a32g2000yqm.googlegroups.com>
Source record: 12323
Cross-posted to: uk.radio.amateur,rec.radio.amateur.antenna

On 1 Nov, 14:06, Cecil Moore <nos...@w5dxp.com> wrote:
> Ian Wade G3NRW wrote:
> > I'm preparing a PowerPoint presentation, and need to plot a sine wave. I
> > can't do this by hand, so I need clip art of a simple sine wave. Nothing
> > fancy, just one or two complete cycles. Source anyone?
>
> Takes about 5 minutes in EXCEL.

5 mins? you've either got a very slow PC or you've set the frequency
too low :-)

2862. Re: Looking for sine wave clip art

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-02 12:29:45 UTC
From: EA1/G1LVN <gareth.paley@gmail.com>
Message-ID: <36ba93fa-e7e0-4d36-887d-33a0e97c2061@37g2000yqm.googlegroups.com>
Source record: 12324
Cross-posted to: uk.radio.amateur,rec.radio.amateur.antenna
Body handling: HTML body converted to readable text

On 2 Nov, 08:35, Ian Jackson
wrote:
> In message , Brian Howie
> writes
>
>
>
> >In message , Ian Wade G3NRW
> > writes
> >>From: Richard G3CWI
> >>Date: Sun, 1 Nov 2009 Time: 13:53:29
>
> >>>Google is clearly a closely guarded secret. Lots of people in groups
> >>>that I subscribe to have clearly never heard of it. The odd thing is
> >>>that it must take them longer to type their question than it would
> >>>take them to find the answer.
>
> >>Google? Well, I searched Google and Bing! for nearly an hour, and
> >>found dozens and dozens and dozens of sine waves. Unfortunately most
> >>of them had superfluous embellishments and/or were of poor graphics
> >>quality, making them totally unsuitable for my purposes.
>
> >>I promise to try harder in future .....
>
> >OK it's overkill, but LTSpice will generate almost any waveform you
> >want and you can capture as a bitmap.
>
> >Http://www.linear.com/designtools/software/ltspice.jsp
>
> >e.g.:-
>
> >Http://www.b-howie.demon.co.uk/sinwave.bmp
>
> Somewhere out there on the internet, there's a site where you can build
> (or, more accurately, 'synthesise') your own waveform from its
> individual components. It's great fun and very instructive.
> Unfortunately, I can't find it at the moment (but I'm looking).
> --
> Ian- Hide quoted text -
>
> - Show quoted text -

http://flexmonkey.co.uk/flexmonkeysynth/flexmonkeysynth.html ??

2863. Re: Looking for sine wave clip art

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-02 12:30:31 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <iiAHm.3356$Ce1.921@newsfe06.iad>
Source record: 12325
Cross-posted to: uk.radio.amateur,rec.radio.amateur.antenna

EA1/G1LVN wrote:
> On 1 Nov, 14:06, Cecil Moore <nos...@w5dxp.com> wrote:
>> Takes about 5 minutes in EXCEL.

> 5 mins? you've either got a very slow PC or you've set the frequency
> too low :-)

Well, I had to make a fresh pot of coffee
while I was booting EXCEL. :-)
--
73, Cecil, IEEE, OOTC, http://www.w5dxp.com

2864. Re: Looking for sine wave clip art

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-02 13:24:48 UTC
From: Ian Jackson <ianREMOVETHISjackson@g3ohx.demon.co.uk>
Message-ID: <35UGPtBg2t7KFwfZ@g3ohx.demon.co.uk>
Source record: 12326
Cross-posted to: uk.radio.amateur,rec.radio.amateur.antenna
Body handling: HTML body converted to readable text

In message
<36ba93fa-e7e0-4d36-887d-33a0e97c2061@37g2000yqm.googlegroups.com>,
EA1/G1LVN writes
>On 2 Nov, 08:35, Ian Jackson
>wrote:
>> In message , Brian Howie
>> writes
>>
>>
>>
>> >In message , Ian Wade G3NRW
>> > writes
>> >>From: Richard G3CWI
>> >>Date: Sun, 1 Nov 2009 ï¿½ Time: 13:53:29
>>
>> >>>Google is clearly a closely guarded secret. Lots of people in groups
>> >>>that I subscribe to have clearly never heard of it. The odd thing is
>> >>>that it must take them longer to type their question than it would
>> >>>take them to find the answer.
>>
>> >>Google? Well, I searched Google and Bing! for nearly an hour, and
>> >>found dozens and dozens and dozens of sine waves. Unfortunately most
>> >>of them had superfluous embellishments and/or were of poor graphics
>> >>quality, making them totally unsuitable for my purposes.
>>
>> >>I promise to try harder in future .....
>>
>> >OK it's overkill, but LTSpice will generate almost any waveform you
>> >want and you can capture as a bitmap.
>>
>> >Http://www.linear.com/designtools/software/ltspice.jsp
>>
>> >e.g.:-
>>
>> >Http://www.b-howie.demon.co.uk/sinwave.bmp
>>
>> Somewhere out there on the internet, there's a site where you can build
>> (or, more accurately, 'synthesise') your own waveform from its
>> individual components. It's great fun and very instructive.
>> Unfortunately, I can't find it at the moment (but I'm looking).
>> --
>> Ian- Hide quoted text -

>>
>> - Show quoted text -
>
>http://flexmonkey.co.uk/flexmonkeysynth/flexmonkeysynth.html ??

Thanks.

But what a bloody awful website! It's more or less unreadable (at least in OE8). If I try Safari, all I get is a light blue screen, and a message saying that I need Abobe Player 10 (and I've already got V10.0.32.18) installed.

Nothing seems to do very much, but I'll have another look at it later on.

But no, It's definitely not the website I was thinking about. I'm sure I have a link to it. Will look later (after I've swept a load of leaves up!).
--
Ian

2865. Re: Looking for sine wave clip art

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-02 16:00:19 UTC
From: Jeff Liebermann <jeffl@cruzio.com>
Message-ID: <550ue5peh5ute4o46ine6hidnfj2e12963@4ax.com>
Source record: 12327
Cross-posted to: uk.radio.amateur,rec.radio.amateur.antenna

On Mon, 2 Nov 2009 08:35:48 +0000, Ian Jackson
<ianREMOVETHISjackson@g3ohx.demon.co.uk> wrote:

>Somewhere out there on the internet, there's a site where you can build
>(or, more accurately, 'synthesise') your own waveform from its
>individual components. It's great fun and very instructive.
>Unfortunately, I can't find it at the moment (but I'm looking).

Perhaps?
<http://www.fourier-series.com/fourierseries2/fourier_series_tutorial.html>

--
Jeff Liebermann jeffl@cruzio.com
150 Felker St #D http://www.LearnByDestroying.com
Santa Cruz CA 95060 http://802.11junk.com
Skype: JeffLiebermann AE6KS 831-336-2558

2866. www.sm0vpo.com - at last!!

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-03 15:53:11 UTC
From: Kenry Hissinger <kenry.hissinger@hotmail.com>
Message-ID: <HIYHm.12599$U5.186092@newsb.telia.net>
Source record: 12328

Hi all,
I was given a fantastic birthday present, my own domain :-)

So if you had trouble trying to remember http://web.telia.com/~u85920178/
then fear not for www.sm0vpo.com is the new URL.

Bery best regards from Harry - SM0VPO

2867. Matching impedance with coax

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-04 01:45:39 UTC
From: amdx <amdx@knology.net>
Message-ID: <8fb2d$4af0dcbd$18ec6dd7$28165@KNOLOGY.NET>
Source record: 12329
Cross-posted to: alt.internet.wireless,rec.radio.amateur.antenna

Hi all,
I'm trying to get an understanding of the MFJ-1800 wifi antenna.
The antenna has a folded loop as the active element.
Is this considered to have a 300 ohm output impedance?
The folded loop is connected to 2.11 inches of 50 ohm coax
that goes to an N connector. The coax has 4 torroids on it.
It looks like a polyethylene core material. So I used .66 as a VF.
With that I get a .66 wavelength of at 2.437 Ghz for the 2.11" coax.
(yes same .66, that's just the way it worked out)
So I think I'm matching 300 ohms to 50 ohms, but I don't
see how .66 wavelength of 50 ohm coax does that.
Fill in the details please.
Here's a picture of the MFJ.
http://www.gigaparts.com/parts/gpcpa/original/nw0054.jpg

Thanks, Mike

2868. Re: Matching impedance with coax

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-04 02:24:19 UTC
From: dplatt@radagast.org
Message-ID: <j757s6-hfr.ln1@radagast.org>
Source record: 12330
Cross-posted to: alt.internet.wireless,rec.radio.amateur.antenna

In article <8fb2d$4af0dcbd$18ec6dd7$28165@KNOLOGY.NET>,
amdx <amdx@knology.net> wrote:

> I'm trying to get an understanding of the MFJ-1800 wifi antenna.
>The antenna has a folded loop as the active element.
>Is this considered to have a 300 ohm output impedance?

Not necessarily.

A folded dipole will have a 300-ohm impedance only under certain conditions of design and use. The feedpoint impedance depends on several factors, including:

- The ratio of the diameters of the two elements (usually 1:1 in common folded dipoles, but not always the case), and

- The ratio between the element diameter(s), and the spacing between the two elements, and

- The surrounding environment

The commonest case (of which you're thinking) is a 1:1 ratio of element diameters, a relatively small spacing, and a free-space environment (i.e. no other conductors nearby). In this case, the folded dipole will have a feedpoint impedance of roughly 300 ohms.

However, in the case of the MFJ antenna, the third of these conditions is very different. The FD is not in free space - there's a reflector on one side of it, and a set of directors on the other.

The presence of these "parasitic" elements will greatly change the feedpoint impedance of the FD... typically, to a lower value. Close enough spacing of the parasitics can reduce the feedpoint impedance by quite a lot.

I suspect that the design of the MFJ antenna was done in a way which places the parasitic elements close enough to reduce the folded dipole's impedance to somewhere in the neighborhood of 50 ohms. All that would be necessary, then, to allow a direct feed from a 50-ohm coax, would be a choke balun (to convert the unbalanced coax feed to a balanced drive to the folded dipole, without altering the impedance).

The 4 toroids on the coax stub will serve as a tolerable (less than perfect, but probably usable) choke balun.

The FD's impedance probably isn't supremely close to 50 ohms... there could be some mismatch and thus an SWR of greater than 1:1. However,

the losses in the coax stub, and in the main coaxial feedline, are going to be high enough to reduce the *effective* SWR (as seen by the radio) to a lower value... close enough to 1:1 that the transmitter won't be unhappy.

To sum it up: the matching is being performed by the antenna design rather than by the coaxial stub or by any separate matching network.

You might want to search for info on the WA5VJB "Cheap Yagi" design. Kent Britain figure out a way to make a very simple, effective Yagi antenna (out of scrap parts, in effect) with a 50-ohm feedpoint impedance and no separate matching network or gamma match. It's done by the combination of a "half-folded dipole" driven element, and proper choice of the spacing for the reflector and first director.

--
Dave Platt <dplatt@radagast.org> AE6EO
Friends of Jade Warrior home page: http://www.radagast.org/jade-warrior
I do _not_ wish to receive unsolicited commercial email, and I will boycott any company which has the gall to send me such ads!

2869. Tuning 4 square elements

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-04 03:16:15 UTC
From: Peter Taggart <radiostationwwrb@gmail.com>
Message-ID: <968aacca-69a8-47e9-80a7-eb54f25c7c60@k19g2000yqc.googlegroups.com>
Source record: 12331

Greetings:

Building a 4 square antenna system: How should I tune each
element? should I place a 50 ohm load on three elements then tune
up one using my MFJ 259 after that element is tuned place the 50 ohm
load on it then tune up the next element repeat till all have been
tuned?

OR should I short the other three elements to the counterpoise tune
the element them repeat till all have been tuned?

Or should the three be left floating then tune the one then
repeat till all have been tuned?

2870. Entertainment

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-04 04:09:06 UTC
From: kami <kamashkhan4@gmail.com>
Message-ID: <7b75f423-7fd3-4c50-b342-46e11ac82b7a@12g2000pri.googlegroups.com>
Source record: 12332

This site is full of entertainment updates.It has gossips,genuine
news,live exclusive TV channels and all about online games.
Please visit.http://yourstuffs.com/movies/

2871. Re: Matching impedance with coax

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-04 08:10:58 UTC
From: "Helmut Wabnig"
Message-ID: <8md2f59ettu430tuhbbusulgg28vtmc17h@4ax.com>
Source record: 12333
Cross-posted to: alt.internet.wireless,rec.radio.amateur.antenna

On Tue, 3 Nov 2009 18:24:19 -0800, dplatt@radagast.org (Dave Platt)
wrote:

>In article <8fb2d$4af0dcbd$18ec6dd7$28165@KNOLOGY.NET>,
>amdx <amdx@knology.net> wrote:
>
>> I'm trying to get an understanding of the MFJ-1800 wifi antenna.
>>The antenna has a folded loop as the active element.
>>Is this considered to have a 300 ohm output impedance?
>
>Not necessarily.
>
>A folded dipole will have a 300-ohm impedance only under certain
>conditions of design and use. The feedpoint impedance depends on
>several factors, including:
>
>- The ratio of the diameters of the two elements (usually 1:1 in
> common folded dipoles, but not always the case), and
>
>- The ratio between the element diameter(s), and the spacing between
> the two elements, and
>
>- The surrounding environment
>
>The commonest case (of which you're thinking) is a 1:1 ratio of
>element diameters, a relatively small spacing, and a free-space
>environment (i.e. no other conductors nearby). In this case, the
>folded dipole will have a feedpoint impedance of roughly 300 ohms.
>
>However, in the case of the MFJ antenna, the third of these conditions
>is very different. The FD is not in free space - there's a reflector
>on one side of it, and a set of directors on the other.
>
>The presence of these "parasitic" elements will greatly change the
>feedpoint impedance of the FD... typically, to a lower value. Close
>enough spacing of the parasitics can reduce the feedpoint impedance by
>quite a lot.
>
>I suspect that the design of the MFJ antenna was done in a way which
>places the parasitic elements close enough to reduce the folded
>dipole's impedance to somewhere in the neighborhood of 50 ohms. All
>that would be necessary, then, to allow a direct feed from a 50-ohm
>coax, would be a choke balun (to convert the unbalanced coax feed to a

>balanced drive to the folded dipole, without altering the impedance).
>

As you said:

The matching is performed by the cable losses.

Well, its MFJ, isn't it?

w.

>The 4 toroids on the coax stub will serve as a tolerable (less than
>perfect, but probably usable) choke balun.
>
>The FD's impedance probably isn't supremely close to 50 ohms... there
>could be some mismatch and thus an SWR of greater than 1:1. However,
>the losses in the coax stub, and in the main coaxial feedline, are
>going to be high enough to reduce the *effective* SWR (as seen by the
>radio) to a lower value... close enough to 1:1 that the transmitter
>won't be unhappy.
>
>To sum it up: the matching is being performed by the antenna design
>rather than by the coaxial stub or by any separate matching network.
>
>You might want to search for info on the WA5VJB "Cheap Yagi" design.
>Kent Britain figure out a way to make a very simple, effective Yagi
>antenna (out of scrap parts, in effect) with a 50-ohm feedpoint
>impedance and no separate matching network or gamma match. It's done
>by the combination of a "half-folded dipole" driven element, and
>proper choice of the spacing for the reflector and first director.

2872. Re: Matching impedance with coax

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-04 17:17:07 UTC
From: amdx <amdx@knology.net>
Message-ID: <24452$4af1b718$d8baf3ed$5161@KNOLOGY.NET>
Source record: 12334
Cross-posted to: alt.internet.wireless,rec.radio.amateur.antenna

"Helmut Wabnig" <hwabnig@ .- --- -. dotat> wrote in message
news:8md2f59ettu430tuhbbusulgg28vtmc17h@4ax.com...
> On Tue, 3 Nov 2009 18:24:19 -0800, dplatt@radagast.org (Dave Platt)
> wrote:
>
>>In article <8fb2d$4af0dcbd$18ec6dd7$28165@KNOLOGY.NET>,
>>amdx <amdx@knology.net> wrote:
>>
>>> I'm trying to get an understanding of the MFJ-1800 wifi antenna.
>>>The antenna has a folded loop as the active element.
>>>Is this considered to have a 300 ohm output impedance?
>>
>>Not necessarily.
>>
>>A folded dipole will have a 300-ohm impedance only under certain
>>conditions of design and use. The feedpoint impedance depends on
>>several factors, including:
>>
>>- The ratio of the diameters of the two elements (usually 1:1 in
>> common folded dipoles, but not always the case), and
>>
>>- The ratio between the element diameter(s), and the spacing between
>> the two elements, and
>>
>>- The surrounding environment
>>
>>The commonest case (of which you're thinking) is a 1:1 ratio of
>>element diameters, a relatively small spacing, and a free-space
>>environment (i.e. no other conductors nearby). In this case, the
>>folded dipole will have a feedpoint impedance of roughly 300 ohms.
>>
>>However, in the case of the MFJ antenna, the third of these conditions
>>is very different. The FD is not in free space - there's a reflector
>>on one side of it, and a set of directors on the other.
>>
>>The presence of these "parasitic" elements will greatly change the
>>feedpoint impedance of the FD... typically, to a lower value. Close
>>enough spacing of the parasitics can reduce the feedpoint impedance by
>>quite a lot.
>>
>>I suspect that the design of the MFJ antenna was done in a way which
>>places the parasitic elements close enough to reduce the folded
>>dipole's impedance to somewhere in the neighborhood of 50 ohms. All

>>that would be necessary, then, to allow a direct feed from a 50-ohm
>>coax, would be a choke balun (to convert the unbalanced coax feed to a
>>balanced drive to the folded dipole, without altering the impedance).
>>
>
>
> As you said:
>
> The matching is performed by the cable losses.
>
> Well, its MFJ, isn't it?
>
> w.

How much loss does 2-1/8 inches of rg-58 have at 2.4Ghz?
I calculate it as 0.036db, how does that contribute to cable matching?
Inquiring minds want to know.
Mike

2873. Re: an ontopic post about code

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-04 22:53:04 UTC
From: kb9rqz@yahoooo.com
Message-ID: <ee14f5t0vnmr8mrqmspc91lgtg668h4qqp@4ax.com>
Source record: 12335
Cross-posted to: alt.ham-radio.vhf-uhf,rec.radio.amateur.policy,rec.radio.amateur.antenna

On Fri, 01 Dec 2006 09:36:47 -0800, John Smith
<assemblywizard@gmail.com> wrote:

>K4YZ wrote:
>> Nope.
>>
>> The IP Address and servers are complete proof that I do NOT share
>> any annonymous character's "address".
>>
>> Sounds like Lennie, to me....
>>
>> Steve, K4YZ
>>
>
>To anyone with even an elementary understanding of anonymous proxies,
>anonymous remailers, zombie backdoors, etc., the ability to change ones
>IP address and header details is simplistic, indeed, with little time
>spent anyone can appear to be "coming" from anywhere in the world.
>
>You waste my time. Worse, you think us all idiots here. You remind me
>of the "street smart" prosecutors and defense attorneys who stack jurys
>with members of little or no technical knowledge and then call in
>"expert witnesses" and propose arguments of technical details to boggle
>their minds.
>
>You have only proven that you, yourself are either ignorant to such
>technical details, or else you are indeed street smart, I favor the
>latter in this case (however, if you in the dark about such things, 15
>minutes on google will enlighten you.)
>
>JS

"one useless man is disgrace 2 become a law firm 3 or more become a congress"
adams

woger you are a Congress all in your own head
"http://www.3ix.org/sys/aff.php?aff=7439" target="_blank"

altopia is never used by KB9RQZ
http://kb9rqz.cc.cc
http://kd8ctl.com
nor is Konstans@hotmail.com ever
btw i can be found at
17366 N River Rd

Chassel Mi

but the cowards asking lack the gut to act

2874. Re: Matching impedance with coax

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-05 00:06:30 UTC
From: who where <noone@home.net>
Message-ID: <7854f51kcnfgqblce6te11gr1k7655oj76@4ax.com>
Source record: 12336
Cross-posted to: alt.internet.wireless,rec.radio.amateur.antenna

On Tue, 3 Nov 2009 18:24:19 -0800, dplatt@radagast.org (Dave Platt)
wrote:

>In article <8fb2d$4af0dcbd$18ec6dd7$28165@KNOLOGY.NET>,
>amdx <amdx@knology.net> wrote:
>
>> I'm trying to get an understanding of the MFJ-1800 wifi antenna.
>>The antenna has a folded loop as the active element.
>>Is this considered to have a 300 ohm output impedance?
>
>Not necessarily.
(snip)

>The presence of these "parasitic" elements will greatly change the
>feedpoint impedance of the FD... typically, to a lower value. Close
>enough spacing of the parasitics can reduce the feedpoint impedance by
>quite a lot.
>
>I suspect that the design of the MFJ antenna was done in a way which
>places the parasitic elements close enough to reduce the folded
>dipole's impedance to somewhere in the neighborhood of 50 ohms. All
>that would be necessary, then, to allow a direct feed from a 50-ohm
>coax, would be a choke balun (to convert the unbalanced coax feed to a
>balanced drive to the folded dipole, without altering the impedance).

The presense and spacing of the parasitic elements isn't going to
change the feedpoint impedance that much.

Mike needs to check out - and understand - how a side-mount folded
dipole is matched to a 50 ohm line. I'm sure this yagi will simply
use a similar series coax balun.

2875. Re: Entertainment

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-05 00:07:08 UTC
From: n9zas <n9zas.5381458@radiobanter.com>
Message-ID: <n9zas.5381458@radiobanter.com>
Source record: 12344

If it doesn't have anything to do with radio then WHY are you here???
YOU are LOST!!!!

--
n9zas

2876. SMS?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-05 00:28:15 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <9%oIm.590$Wd1.583@newsfe15.iad>
Source record: 12337

Has anyone else noticed that the Prudential commercial
on TV is sending SMS instead of SOS?
--
73, Cecil, IEEE, OOTC, http://www.w5dxp.com

2877. Re: SMS?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-05 00:48:55 UTC
From: Bert Hyman <bert@iphouse.com>
Message-ID: <Xns9CB9BF667E9B5VeebleFetzer@216.250.184.7>
Source record: 12338

In news:9%oIm.590$Wd1.583@newsfe15.iad Cecil Moore <nospam@w5dxp.com>
wrote:

> Has anyone else noticed that the Prudential commercial
> on TV is sending SMS instead of SOS?

No, but I understand that some cellphones use "SMS" in morse to signal
an incoming text message (Short Message Service); maybe that's what
you're hearing.

I guess I've never seen that commercial, so I don't know if that makes
any sense in its context.

--
Bert Hyman St. Paul, MN bert@iphouse.com

2878. Re: SMS?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-05 01:49:36 UTC
From: Jeff Liebermann <jeffl@cruzio.com>
Message-ID: <tmb4f5tfskkseb30jfnsase8t87kbjj770@4ax.com>
Source record: 12339

On Wed, 04 Nov 2009 18:28:15 -0600, Cecil Moore <nospam@w5dxp.com>
wrote:

>Has anyone else noticed that the Prudential commercial
>on TV is sending SMS instead of SOS?

Which commercial? There's quite a collection of Prudential TV
commercials on YouTube, but I can't tell which one.

--
Jeff Liebermann jeffl@cruzio.com
150 Felker St #D http://www.LearnByDestroying.com
Santa Cruz CA 95060 http://802.11junk.com
Skype: JeffLiebermann AE6KS 831-336-2558

2879. Re: SMS?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-05 02:00:00 UTC
From: dplatt@radagast.org
Message-ID: <06o9s6-l2a.ln1@radagast.org>
Source record: 12340

In article <9%oIm.590$Wd1.583@newsfe15.iad>,
Cecil Moore <nospam@w5dxp.com> wrote:

>Has anyone else noticed that the Prudential commercial
>on TV is sending SMS instead of SOS?

I recall that decades ago, there was an FCC prohibition against the inclusion of the SOS pro-signal in commercial radio and television broadcasts. You weren't supposed to ever transmit this signal unless you were actually in distress.

TV shows would either just *refer* to their being an SOS in progress, or would transit some other Morse code signal as a substitute, or both. I remember one Star Trek episode in which the substitute signal was actually a very-low-speed FSK signal (high and low tones, about an octave apart).

I don't know whether the legal prohibition against transmitting SOS on commercial radio/TV still exists today, or whether it was dropped during the big deregulation.

--
Dave Platt <dplatt@radagast.org> AE6EO
Friends of Jade Warrior home page: http://www.radagast.org/jade-warrior
I do _not_ wish to receive unsolicited commercial email, and I will boycott any company which has the gall to send me such ads!

2880. Re: Matching impedance with coax

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-05 02:10:53 UTC
From: tom <news4792@taring.org>
Message-ID: <4af233ee$0$42841$8046368a@newsreader.iphouse.net>
Source record: 12341
Cross-posted to: alt.internet.wireless,rec.radio.amateur.antenna

who where wrote:
>> I suspect that the design of the MFJ antenna was done in a way which
>> places the parasitic elements close enough to reduce the folded
>> dipole's impedance to somewhere in the neighborhood of 50 ohms. All
>> that would be necessary, then, to allow a direct feed from a 50-ohm
>> coax, would be a choke balun (to convert the unbalanced coax feed to a
>> balanced drive to the folded dipole, without altering the impedance).
>
> The presense and spacing of the parasitic elements isn't going to
> change the feedpoint impedance that much.

Wrong. It can change it a lot. It can take a 50 ohm DE and move it to
10 ohms or less. And then there's the reactive part.

tom
K0TAR

2881. Re: radials vs radialless @ 144/430 MHz - "stealth" antennae

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-05 03:24:00 UTC
From: pierce <pierceday@comcast.net>
Message-ID: <525c912a-6ff3-4583-8ca5-81c2f2cbe039@k17g2000yqh.googlegroups.com>
Source record: 12342

On Oct 20, 6:31 pm, dpl...@radagast.org (Dave Platt) wrote:
> In article <marc.heusser-0EF060.01020321102...@news.uzh.ch>,
> Marc Heusser <marc.heus...@byeheusser.commercialspammers.invalid> wrote:
>
> >Because of an antenna unfriendly neighborhood and limited space I am
> >considering using a Diamond antenna either with or without radials,
> >specifically X-50 vs SE-100.
> >They are the same length, but the SE-100 is a "marine" antenna without
> >radials. Nominally they both sport the same gain etc.
>
> >What are the tradeoffs?
> >Without radials it would certainly look less conspicious.
>
> In an antenna of this sort, I believe that the primary function
> of the radials is to act as a sort of feedline choke... they minimize
> any tendency of RF coming up the inside of the feedline shield to flow
> back down along the outside of the feedline. Such RF on the feedline
> can cause radiation which will disturb the pattern of the antenna to
> some extent.
>
> A radial-less version of the antenna has no such choking, and there
> might be some RF flow on the feedline as a result. This might cause a
> slight reduction in gain in some directions, due to changes in the
> antenna pattern.
>
> If there's a *lot* of RF current flow on the outside of the feedline,
> it might tend to couple into nearby conductors, and might (in some
> installations) be the cause of QRM (e.g. TVI).
>
> Is this likely to present a problem? In most installations I'd tend
> to doubt it. If it is, you might be able to correct it by (1)
> insulating the antenna from its mast, and (2) adding some sort of
> choke to the feedline, just below the antenna feedpoint... either wind
> a foot or two of the coax into a coil, or clamp a ferrite or two
> around the coax.
>
> --
> Dave Platt <dpl...@radagast.org>   AE6EO
> Friends of Jade Warrior home page: http://www.radagast.org/jade-warrior
>   I do _not_ wish to receive unsolicited commercial email, and I will
>   boycott any company which has the gall to send me such ads!

I suppose this guy is trying to be funny when he talks about radials
choking the current flowing on the outside of the coax. that's the

job for Baluns.

Radials are installed on vertical antennas to supply return RF current flow back up to the other half (the vertical) of the antenna. Without radials, you only have half an antenna. The placement, length, and number of radials have a very definite effect not only on the resonant frequency, but also on the SWR attainable.

2882. Re: SMS?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-05 04:44:04 UTC
From: "Geoffrey S. Mendelson" <gsm@mendelson.com>
Message-ID: <slrnhf4lrr.3uh.gsm@cable.mendelson.com>
Source record: 12343

Dave Platt wrote:

> I don't know whether the legal prohibition against transmitting SOS on
> commercial radio/TV still exists today, or whether it was dropped
> during the big deregulation.

Yes, it was dropped a long time ago.

To answer another posting at the same time, the brand of cell phones is Nokia.
The default SMS alert is the morse code SMS.

BTW, it was never SOS as three seperate letters, the official distress call
---
was SOS (written with a line over it) the three letters run together such as
we do for SK.

It was in marine use preceded with a long dash (I'm not a marine operator
so I don't know how long) to trigger automated monitoring equipment,
but that was a relatively modern invention. (1950's??)

That way words like Sosnow (the name of my high school auto shop teacher)
would not cause a problem.

Geoff.

--
Geoffrey S. Mendelson, Jerusalem, Israel gsm@mendelson.com N3OWJ/4X1GM

2883. Re: SMS?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-05 13:52:18 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <ZMAIm.2984$gi1.1711@newsfe19.iad>
Source record: 12345

Bert Hyman wrote:
> Cecil Moore <nospam@w5dxp.com> wrote:
>> Has anyone else noticed that the Prudential commercial
>> on TV is sending SMS instead of SOS?
>
> I guess I've never seen that commercial, so I don't know if that makes
> any sense in its context.

On the screen is a dot-dot-dot, dash-dash-dash, dot-dot-dot.

But the sound is di-di-dit, dah-dah, di-di-dit.
--
73, Cecil, IEEE, OOTC, http://www.w5dxp.com

2884. Re: SMS?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-05 14:07:46 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <s%AIm.245$dc2.187@newsfe20.iad>
Source record: 12346

Jeff Liebermann wrote:
> Cecil Moore <nospam@w5dxp.com> wrote:
>
>> Has anyone else noticed that the Prudential commercial
>> on TV is sending SMS instead of SOS?
>
> Which commercial? There's quite a collection of Prudential TV
> commercials on YouTube, but I can't tell which one.

http://www.smartbrief.com/news/aaaa/industryBW-detail.jsp?id=592E982E-169D-47E3-9D42-6B6C4495A79A
--
73, Cecil, IEEE, OOTC, http://www.w5dxp.com

2885. Re: SMS?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-05 14:25:15 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <RfBIm.2098$Wd1.2071@newsfe15.iad>
Source record: 12347

Jeff Liebermann wrote:
> Which commercial? There's quite a collection of Prudential TV
> commercials on YouTube, but I can't tell which one.

Referenced on the commercial:

http://www.prudential.com/b2b
--
73, Cecil, IEEE, OOTC, http://www.w5dxp.com

2886. Re: L Networks & EZNEC+ 5.0

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-05 15:19:03 UTC
From: John Ferrell <jferrell13@triad.rr.com>
Message-ID: <chq5f55mpoadotqcamheb0mjq8d944ushi@4ax.com>
Source record: 12348

On Sun, 01 Nov 2009 10:23:17 -0500, John Ferrell
<jferrell13@triad.rr.com> wrote:

>On Sat, 31 Oct 2009 14:12:09 -0700, Roy Lewallen <w7el@eznec.com>
>wrote:
>
>>John Ferrell wrote:
>>> I am at a loss to understand the L Network function in EZNEC + 5.0.
>>> Should one be able to model an L match to a short (or long) vertical
>>> with this resource?
>>>
>>> If so, how about an example please?
>>>
>>> John Ferrell W8CCW
>>
>>In the main window, click Help, then Contents. This is the EZNEC manual.
>>In the manual, locate the Test Drive chapter, which is a tutorial for
>>using EZNEC. The Test Drive section A Lap Around Track 5 covers L
>>networks and other features new to v. 5.0. For additional information
>>about L networks, open the L Network Window by clicking the L Networks
>>line in the main program window, then press the F1 (context sensitive
>>help) key.
>>
>>Roy Lewallen, W7EL
>I will take another run at it.
>Understanding the program is the goal, I can solve the problem by
>taking the output of EZNEC to TLW.
>
>Thanks again for the EZNEC program!
>
>John Ferrell W8CCW
At this time I am unable to produce a meaningful model of an L-Matched
vertical antenna with EZNEC 5+. In the absence of an example I am
putting this puzzle on indefinite hold.

John Ferrell W8CCW

2887. Re: new kb9rqz products

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-05 17:56:01 UTC
From: an old kosher ham friend <anoldfriend@puncegotcharadio.com>
Message-ID: <4af311b5@x-privat.org>
Source record: 12349
Cross-posted to: alt.ham-radio.vhf-uhf,rec.radio.amateur.policy,rec.radio.amateur.antenna

> kb9rqz@yahoooo.com> wrote in message
> http://tinypic.com/print.php?pic=t80ops&s=3
>
>
LOL is it Morgan or Manson???

2888. Re: an ontopic post about code

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-05 18:07:33 UTC
From: kb9rqz@yahoooo.com
Message-ID: <3356f5ho8h29vktq9s17ucl8nn76bglk45@4ax.com>
Source record: 12350
Cross-posted to: alt.ham-radio.vhf-uhf,rec.radio.amateur.policy,rec.radio.amateur.antenna

On Fri, 01 Dec 2006 09:36:47 -0800, John Smith
<assemblywizard@gmail.com> wrote:

>K4YZ wrote:
>> Nope.
>>
>> The IP Address and servers are complete proof that I do NOT share
>> any annonymous character's "address".
>>
>> Sounds like Lennie, to me....
>>
>> Steve, K4YZ
>>
>
>To anyone with even an elementary understanding of anonymous proxies,
>anonymous remailers, zombie backdoors, etc., the ability to change ones
>IP address and header details is simplistic, indeed, with little time
>spent anyone can appear to be "coming" from anywhere in the world.
>
>You waste my time. Worse, you think us all idiots here. You remind me
>of the "street smart" prosecutors and defense attorneys who stack jurys
>with members of little or no technical knowledge and then call in
>"expert witnesses" and propose arguments of technical details to boggle
>their minds.
>
>You have only proven that you, yourself are either ignorant to such
>technical details, or else you are indeed street smart, I favor the
>latter in this case (however, if you in the dark about such things, 15
>minutes on google will enlighten you.)
>
>JS

"one useless man is disgrace 2 become a law firm 3 or more become a congress"
adams

woger you are a Congress all in your own head
"http://www.3ix.org/sys/aff.php?aff=7439" target="_blank"

altopia is never used by KB9RQZ
http://kb9rqz.cc.cc
http://kd8ctl.com
nor is Konstans@hotmail.com ever
btw i can be found at
17366 N River Rd

Chassel Mi

but the cowards asking lack the gut to act

2889. Re: L Networks & EZNEC+ 5.0

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-05 23:17:29 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <YMednVPrEYWXwG7XnZ2dnUVZ_jOdnZ2d@giganews.com>
Source record: 12201

John Ferrell wrote:

> At this time I am unable to produce a meaningful model of an L-Matched
> vertical antenna with EZNEC 5+. In the absence of an example I am
> putting this puzzle on indefinite hold.
>
> John Ferrell W8CCW

I've just emailed you an example. Be sure and read the associated
Antenna Notes file, and let me know if you still have trouble with it.

Roy Lewallen, W7EL

2890. Re: Tuning 4 square elements

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-05 23:45:46 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <zsydnQBS854x_m7XnZ2dnUVZ_oGdnZ2d@giganews.com>
Source record: 12202

Peter Taggart wrote:
> Greetings:
>
> Building a 4 square antenna system: How should I tune each
> element? should I place a 50 ohm load on three elements then tune
> up one using my MFJ 259 after that element is tuned place the 50 ohm
> load on it then tune up the next element repeat till all have been
> tuned?
>
> OR should I short the other three elements to the counterpoise tune
> the element them repeat till all have been tuned?
>
> Or should the three be left floating then tune the one then
> repeat till all have been tuned?

It sounds like you're wanting to adjust their impedances. Why? You realize, of course, that as soon as they're all excited, the element impedances will change dramatically. One element in a typical 4 square array will actually have a negative radiation resistance.

There's a lot of information about feeding phased arrays including 4 square arrays in Chapter 8 of the ARRL Antenna Book. It was completely re-written for the latest (21st) edition. ON4UN's _Low-Band DXing_ contains some good information also.

Roy Lewallen, W7EL

2891. Angry WHY is it spammers and assorted other trash are posted in the WRONG forums??

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-06 00:26:14 UTC
From: n9zas <n9zas.53965f5@radiobanter.com>
Message-ID: <n9zas.53965f5@radiobanter.com>
Source record: 12213

Angry WHY is it spammers and assorted other trash are posted in the
WRONG forums??
If EVERYONE would pay attention to what the hell they're posting,then
this site would be more enjoyable for everybody here!!! Politics crap
does NOT belong in the shortwave forum!!!! Garbage from you tube does
NOT belong in the antenna forum!!! Etc,etc!!! Get a clue people,or get
lost!!!
Why is it that no one reads what they post... BEFORE they post it??
IS everyone really that stupid? As for SPAMMERS???? ...Death is the
only answer for those that have nothing intelligent to add!!!
Wise up already!

--
n9zas

2892. Re: Tuning 4 square elements

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-06 00:26:45 UTC
From: Dave <k1ttt@arrl.net>
Message-ID: <6d7daf00-f5e1-4d41-8305-5c124277d595@k17g2000yqh.googlegroups.com>
Source record: 12203

On Nov 4, 3:16 am, Peter Taggart <radiostationw...@gmail.com> wrote:
> Greetings:
>
> Building a 4 square antenna system: How should I tune each
> element? should I place a 50 ohm load on three elements   then tune
> up one using my MFJ 259 after that element is tuned place the 50 ohm
> load on it then tune up the next element repeat till all have been
> tuned?
>
> OR should I short the other three elements to the counterpoise   tune
> the element them repeat till all have been tuned?
>
> Or should   the three be left floating   then tune the one then
> repeat till all have been tuned?

If you are using one of the commercial hybrid phasing networks or one
designed from the 4u1un book proceedure then the normal method is
this:
1. erect ONLY one vertical with its intended ground system.
2. feed it with 50 ohm line and adjust length for resonance at the
center frequency you want
3. replace 50 ohm line with 1/4 wave 75 ohm foam coax (must be foam or
1/4 wave won't reach corners of standard 1/4 wave spaced elements)
4. build other 3 elements identical to the first one.

2893. Re: Matching impedance with coax

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-06 00:48:18 UTC
From: who where <noone@home.net>
Message-ID: <1is6f5hipvueibjircdejhjhnl2mkts949@4ax.com>
Source record: 12204
Cross-posted to: alt.internet.wireless,rec.radio.amateur.antenna

On Wed, 04 Nov 2009 20:10:53 -0600, tom <news4792@taring.org> wrote:

>who where wrote:
>>> I suspect that the design of the MFJ antenna was done in a way which
>>> places the parasitic elements close enough to reduce the folded
>>> dipole's impedance to somewhere in the neighborhood of 50 ohms. All
>>> that would be necessary, then, to allow a direct feed from a 50-ohm
>>> coax, would be a choke balun (to convert the unbalanced coax feed to a
>>> balanced drive to the folded dipole, without altering the impedance).
>>
>> The presense and spacing of the parasitic elements isn't going to
>> change the feedpoint impedance that much.
>
>Wrong. It can change it a lot. It can take a 50 ohm DE and move it to
>10 ohms or less. And then there's the reactive part.

Well you can believe what you like.

2894. Multi polarization antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-06 01:50:18 UTC
From: Art Unwin <arthurunwin@gmail.com>
Message-ID: <a5724a49-639e-4289-8890-ec6329ad316b@d10g2000yqh.googlegroups.com>
Source record: 12205

What is the best antenna for use with all circular, horizontal,
vertical and other polarizations without drastic fall of in gain, and
without changes in angular position and feed point via switches e.t.c
at the tower top?

2895. Re: SMS?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-06 02:46:33 UTC
From: Mike Kaliski <michael.kaliski@tesco.net>
Message-ID: <8uudneps-pqNE27XnZ2dnUVZ8t2dnZ2d@bt.com>
Source record: 12206

"Geoffrey S. Mendelson" <gsm@mendelson.com> wrote in message
news:slrnhf4lrr.3uh.gsm@cable.mendelson.com...
> Dave Platt wrote:
>
>> I don't know whether the legal prohibition against transmitting SOS on
>> commercial radio/TV still exists today, or whether it was dropped
>> during the big deregulation.
>
> Yes, it was dropped a long time ago.
>
> To answer another posting at the same time, the brand of cell phones is
> Nokia.
> The default SMS alert is the morse code SMS.
>
> BTW, it was never SOS as three seperate letters, the official distress
> call
> ___
> was SOS (written with a line over it) the three letters run together such
> as
> we do for SK.
>
> It was in marine use preceded with a long dash (I'm not a marine operator
> so I don't know how long) to trigger automated monitoring equipment,
> but that was a relatively modern invention. (1950's??)
>
> That way words like Sosnow (the name of my high school auto shop teacher)
> would not cause a problem.
>
> Geoff.
>
>
> --
> Geoffrey S. Mendelson, Jerusalem, Israel gsm@mendelson.com N3OWJ/4X1GM

Geoff,

A series of twelve four-second dashes, spaced one second apart, was sent by an automatic keyer on 500 kHz. Any automatic distress receiver in the vicinity would be triggered to operate an alarm after picking up four dashes. The extra dashes were to overcome atmospheric noise and increase the chance of the signals being picked up. Four consecutive dashes meant that the automatic alarm wasn't triggered too often in the tropics.

The Radio Officer would be woken in his cabin by a bell and had 2 minutes to get to the radio room and switch the main receiver on to receive the

distress message. Sometimes the alarm would go off half a dozen times in a night during storms around the European coast in winter. Didn't get a lot of sleep for several days sometimes.

Regards

Mike G0ULI

2896. Re: Matching impedance with coax

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-06 03:52:18 UTC
From: tom <news4792@taring.org>
Message-ID: <4af39d33$0$28113$8046368a@newsreader.iphouse.net>
Source record: 12207
Cross-posted to: alt.internet.wireless,rec.radio.amateur.antenna

who where wrote:
> On Wed, 04 Nov 2009 20:10:53 -0600, tom <news4792@taring.org> wrote:
>
>> who where wrote:
>>>> I suspect that the design of the MFJ antenna was done in a way which
>>>> places the parasitic elements close enough to reduce the folded
>>>> dipole's impedance to somewhere in the neighborhood of 50 ohms. All
>>>> that would be necessary, then, to allow a direct feed from a 50-ohm
>>>> coax, would be a choke balun (to convert the unbalanced coax feed to a
>>>> balanced drive to the folded dipole, without altering the impedance).
>>> The presense and spacing of the parasitic elements isn't going to
>>> change the feedpoint impedance that much.
>> Wrong. It can change it a lot. It can take a 50 ohm DE and move it to
>> 10 ohms or less. And then there's the reactive part.
>
> Well you can believe what you like.

I believe what occurs and is measurable.

tom
K0TAR

2897. Re: SMS?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-06 04:05:06 UTC
From: tom <news4792@taring.org>
Message-ID: <4af3a033$0$28113$8046368a@newsreader.iphouse.net>
Source record: 12208

Cecil Moore wrote:
> Bert Hyman wrote:
>> Cecil Moore <nospam@w5dxp.com> wrote:
>>> Has anyone else noticed that the Prudential commercial
>>> on TV is sending SMS instead of SOS?
>>
>> I guess I've never seen that commercial, so I don't know if that makes
>> any sense in its context.
>
> On the screen is a dot-dot-dot, dash-dash-dash, dot-dot-dot.
>
> But the sound is di-di-dit, dah-dah, di-di-dit.

Saw it tonight for the first time and it is as you say.

tom
K0TAR

2898. Re: SMS?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-06 04:08:07 UTC
From: Wayne <mygarbagecan@verizon.net>
Message-ID: <hd07fc$iu9$1@news.eternal-september.org>
Source record: 12209

"Cecil Moore" <nospam@w5dxp.com> wrote in message
news:9%oIm.590$Wd1.583@newsfe15.iad...
> Has anyone else noticed that the Prudential commercial
> on TV is sending SMS instead of SOS?
> --
> 73, Cecil, IEEE, OOTC, http://www.w5dxp.com
-
Yep. But it is so poorly sent that is seems like "VTTS" to me.
--Wayne
W5GIE

2899. Re: Multi polarization antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-06 04:11:37 UTC
From: tom <news4792@taring.org>
Message-ID: <4af3a1ba$0$28114$8046368a@newsreader.iphouse.net>
Source record: 12210

Art Unwin wrote:
> What is the best antenna for use with all circular, horizontal,
> vertical and other polarizations without drastic fall of in gain, and
> without changes in angular position and feed point via switches e.t.c
> at the tower top?

Maybe the quadrifilar helix.

tom
K0TAR

2900. Re: Matching impedance with coax

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-06 04:14:42 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <ti87f5hmv50p1fd5ugoo11qs040ii4p6c5@4ax.com>
Source record: 12211
Cross-posted to: alt.internet.wireless,rec.radio.amateur.antenna

On Thu, 05 Nov 2009 21:52:18 -0600, tom <news4792@taring.org> wrote:

>> Well you can believe what you like.
>
>I believe what occurs and is measurable.

Hi Tom,

It's amazing how after a period of silence, BOTH Art and Jaro pop up
at the same time.

Does Art have an antipodes sock-puppet?

73's
Richard Clark, KB7QHC

2901. Re: Matching impedance with coax

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-06 04:20:32 UTC
From: tom <news4792@taring.org>
Message-ID: <4af3a3d1$0$42840$8046368a@newsreader.iphouse.net>
Source record: 12212
Cross-posted to: alt.internet.wireless,rec.radio.amateur.antenna

Richard Clark wrote:
> On Thu, 05 Nov 2009 21:52:18 -0600, tom <news4792@taring.org> wrote:
>
>>> Well you can believe what you like.
>> I believe what occurs and is measurable.
>
> Hi Tom,
>
> It's amazing how after a period of silence, BOTH Art and Jaro pop up
> at the same time.
>
> Does Art have an antipodes sock-puppet?
>
> 73's
> Richard Clark, KB7QHC

Well, I've been silent also. And for almost the same time period. I
could be both of them. I do have 2 feet.

tom
K0TAR

2902. Re: Matching impedance with coax

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-06 06:24:44 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <d8g7f5psjtmscmtth05cnt3pqoelfnr7k4@4ax.com>
Source record: 12214
Cross-posted to: alt.internet.wireless,rec.radio.amateur.antenna

On Thu, 05 Nov 2009 22:20:32 -0600, tom <news4792@taring.org> wrote:

> I do have 2 feet.

But not one of them in Perth.

2903. Re: Matching impedance with coax

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-06 07:49:46 UTC
From: who where <noone@home.net>
Message-ID: <u2l7f5douqkqj1evg5ie440c6lvl3s1s1p@4ax.com>
Source record: 12215
Cross-posted to: alt.internet.wireless,rec.radio.amateur.antenna

On Thu, 05 Nov 2009 22:24:44 -0800, Richard Clark <kb7qhc@comcast.net>
wrote:

>On Thu, 05 Nov 2009 22:20:32 -0600, tom <news4792@taring.org> wrote:
>
>> I do have 2 feet.
>
>But not one of them in Perth.

No relation to anyone you are thinking_of/describing/etc, sorry to
ruin your conspiracy theory.

If you want to try and achieve a match to 50 ohms by moving the
adjacent parasitic elements seriously close to the driven folded
dipole, go for it. (I could dust off trusty Elnec and get a result.)
But I'd be surprised if anyone who gives a rats about the consistency
of the result would go down that path.

I am very familair with how the commercial side-mounted dipoles and
yagis are manufactured here in Australia, and I doubt that the rest of
the world is dramatically different. In three simple words - series
coax transformer. Let's agree that with an SMD you don't have
parasitics to play around with - except for tower spacing (which has
an impact on pattern, and variations are used for that end.) The
Aussie manufacturers use eaxactly the same method on the FD on their
yagis. That is why I suggested the O/P look into that approach.

2904. Re: Multi polarization antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-06 10:23:30 UTC
From: "Helmut Wabnig"
Message-ID: <g8u7f5h01nl3ks4a122eg8ko3bu0uhekk8@4ax.com>
Source record: 12216

On Thu, 5 Nov 2009 17:50:18 -0800 (PST), Art Unwin
<arthurunwin@gmail.com> wrote:

>What is the best antenna for use with all circular, horizontal,
>vertical and other polarizations without drastic fall of in gain, and
>without changes in angular position and feed point via switches e.t.c
>at the tower top?

Frequency range?

w.

2905. Re: Angry WHY is it spammers and assorted other trash are posted in the WRONG forums??

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-06 12:13:04 UTC
From: Mike Coombes <emce@iinet.net.au>
Message-ID: <7L-dndrjYPFLj2nXnZ2dnUVZ_tWdnZ2d@westnet.com.au>
Source record: 12217

"n9zas" <n9zas.53965f5@radiobanter.com> wrote in message
news:n9zas.53965f5@radiobanter.com...
>
> Angry WHY is it spammers and assorted other trash are posted in the
> WRONG forums??
> If EVERYONE would pay attention to what the hell they're posting,then
> this site would be more enjoyable for everybody here!!! Politics crap
> does NOT belong in the shortwave forum!!!! Garbage from you tube does
> NOT belong in the antenna forum!!! Etc,etc!!! Get a clue people,or get
> lost!!!
> Why is it that no one reads what they post... BEFORE they post it??
> IS everyone really that stupid? As for SPAMMERS???? ...Death is the
> only answer for those that have nothing intelligent to add!!!
> Wise up already!
>
>
>
>
> --
> n9zas
I Guess he's really pissed.

2906. Re: SMS?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-06 12:24:08 UTC
From: Registered User <n4jvp@ix.netcom.com>
Message-ID: <6858f5hr1ob8en3eb0ggs446j2u9pkf1qq@4ax.com>
Source record: 12218

On Thu, 5 Nov 2009 20:08:07 -0800, "Wayne" <mygarbagecan@verizon.net>
wrote:

>
>"Cecil Moore" <nospam@w5dxp.com> wrote in message
>news:9%oIm.590$Wd1.583@newsfe15.iad...
>> Has anyone else noticed that the Prudential commercial
>> on TV is sending SMS instead of SOS?
>> --
>> 73, Cecil, IEEE, OOTC, http://www.w5dxp.com
>-
>Yep. But it is so poorly sent that is seems like "VTTS" to me.
>
I've been coping VMS.

>--Wayne
>W5GIE
>

2907. Re: Multi polarization antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-06 13:40:21 UTC
From: Art Unwin <arthurunwin@gmail.com>
Message-ID: <97239021-f452-4f3d-95fe-2e54821f6559@a21g2000yqc.googlegroups.com>
Source record: 12219

On Nov 6, 4:23 am, Helmut Wabnig <hwabnig@ .- --- -. dotat> wrote:
> On Thu, 5 Nov 2009 17:50:18 -0800 (PST), Art Unwin
>
> <arthurun...@gmail.com> wrote:
> >What is the best antenna for use with all circular, horizontal,
> >vertical and other polarizations without drastic fall of in gain, and
> >without changes in angular position and feed point via switches e.t.c
> >at the tower top?
>
> Frequency range?
>
> w.

10 thru 160 metres amateur bands!

2908. Re: Angry WHY is it spammers and assorted other trash are posted in the WRONG forums??

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-06 14:14:07 UTC
From: Bert Hyman <bert@iphouse.com>
Message-ID: <Xns9CBB53C69F778VeebleFetzer@216.250.184.7>
Source record: 12220

In news:n9zas.53965f5@radiobanter.com n9zas <n9zas.53965f5@radiobanter.com>
wrote:

> Angry WHY is it spammers and assorted other trash are posted in the
> WRONG forums??

What's the right "forum" [this is a newsgroup] for spam and assorted other
trash?

--
Bert Hyman St. Paul, MN bert@iphouse.com

2909. Re: Angry WHY is it spammers and assorted other trash are posted in the WRONG forums??

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-06 14:19:04 UTC
From: Michael Coslo <mjc5@psu.edu>
Message-ID: <hd1b8o$b01i$1@tr22n12.aset.psu.edu>
Source record: 12221

n9zas wrote:
> Angry WHY is it spammers and assorted other trash are posted in the
> WRONG forums??
> If EVERYONE would pay attention to what the hell they're posting,then
> this site would be more enjoyable for everybody here!!! Politics crap
> does NOT belong in the shortwave forum!!!! Garbage from you tube does
> NOT belong in the antenna forum!!! Etc,etc!!! Get a clue people,or get
> lost!!!
> Why is it that no one reads what they post... BEFORE they post it??
> IS everyone really that stupid? As for SPAMMERS???? ...Death is the
> only answer for those that have nothing intelligent to add!!!
> Wise up already!

They looked for the spammers and assorted other trash forum and
couldn't find it. (grin)

Okay, let's fix this problem. First take a really deep breath or ten.
Then maybe a glass of your favorite adult beverage if you like. Just one
or two though. More than that can make the problem worse.

Now, this really isn't a forum, it's a newsgroup. There is just no way
you are king to stop the crazies from posting here. If you're adamant
about not seeing anything you don't like, and you want to fight them,
you'll lose.

Hope is here though. Your newsreader has a method of not seeing the
offensive posts. It's a filter. Also known as a killfile, bozo bin, etc.
Ease of use varies between newsreaders. But they do work pretty well.

So there ya go. You can calm down now and enjoy the non-crazy parts of
the newsgroups. This is a pretty good one - even our eccentrics are a
good read!

- 73 de Mike N3LI -

2910. Re: Multi polarization antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-06 16:05:17 UTC
From: Art Unwin <arthurunwin@gmail.com>
Message-ID: <c8d53478-2354-495b-a129-0ff300d37113@a21g2000yqc.googlegroups.com>
Source record: 12222

On Nov 5, 10:11 pm, tom <news4...@taring.org> wrote:
> Art Unwin wrote:
> > What is the best antenna for use with all circular, horizontal,
> > vertical and other polarizations without drastic fall of in gain, and
> > without changes in angular position and feed point via switches e.t.c
> > at the tower top?
>
> Maybe the quadrifilar helix.
>
> tom
> K0TAR

That is made for a single circulation signal only.

2911. Re: Matching impedance with coax

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-06 16:18:49 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <5ci8f55ebphsr2bifubohrj80a3nqhe28t@4ax.com>
Source record: 12223
Cross-posted to: alt.internet.wireless,rec.radio.amateur.antenna

On Fri, 06 Nov 2009 15:49:46 +0800, who where <noone@home.net> wrote:

>>But not one of them in Perth.
>
>No relation to anyone you are thinking_of/describing/etc, sorry to
>ruin your conspiracy theory.

Your confirmation here doesn't ruin anything. Art would hug you no matter how you sign. Those he does have a remarkable need for retaining anonymity. He would have us believe it's because his supporters are easily bruised in the jostle. The following comment would support that:

>...gives a rats about the consistency
>of the result would go down that path.

which is another but perhaps left-handed confirmation.

73's
Richard Clark, KB7QHC

2912. Re: Multi polarization antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-06 16:54:17 UTC
From: "Helmut Wabnig"
Message-ID: <q4l8f5lvd8vnimfutlo0tp8p3vn4anr5s4@4ax.com>
Source record: 12224

On Fri, 6 Nov 2009 05:40:21 -0800 (PST), Art Unwin
<arthurunwin@gmail.com> wrote:

>On Nov 6, 4:23ï¿½am, Helmut Wabnig <hwabnig@ .- --- -. dotat> wrote:
>> On Thu, 5 Nov 2009 17:50:18 -0800 (PST), Art Unwin
>>
>> <arthurun...@gmail.com> wrote:
>> >What is the best antenna for use with all circular, horizontal,
>> >vertical and other polarizations without drastic fall of in gain, and
>> >without changes in angular position and feed point via switches e.t.c
>> >at the tower top?
>>
>> Frequency range?
>>
>> w.
>
>10 thru 160 metres amateur bands!

OK, here is my answer:

A SHORT PIECE OF WIRE.

greets,
w.

2913. Re: Multi polarization antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-06 16:55:05 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <61l8f55umfvc1kk9ggshi1dddf8csnnt98@4ax.com>
Source record: 12225

On Fri, 06 Nov 2009 11:23:30 +0100, Helmut Wabnig <hwabnig@ .- --- -.
dotat> wrote:

>On Thu, 5 Nov 2009 17:50:18 -0800 (PST), Art Unwin
><arthurunwin@gmail.com> wrote:
>
>>What is the best antenna for use with all circular, horizontal,
>>vertical and other polarizations without drastic fall of in gain, and
>>without changes in angular position and feed point via switches e.t.c
>>at the tower top?
>
>
>Frequency range?
>
>w.

The eyes: 430 THz - 750 THz

73's
Richard Clark, KB7QHC

2914. Re: an ontopic post about code

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-06 17:25:23 UTC
From: kb9rqz@yahoooo.com
Message-ID: <20n8f59brpe2qeuvl4539mthghq075llca@4ax.com>
Source record: 12226
Cross-posted to: alt.ham-radio.vhf-uhf,rec.radio.amateur.policy,rec.radio.amateur.antenna

On Fri, 01 Dec 2006 09:36:47 -0800, John Smith
<assemblywizard@gmail.com> wrote:

>K4YZ wrote:
>> Nope.
>>
>> The IP Address and servers are complete proof that I do NOT share
>> any annonymous character's "address".
>>
>> Sounds like Lennie, to me....
>>
>> Steve, K4YZ
>>
>
>To anyone with even an elementary understanding of anonymous proxies,
>anonymous remailers, zombie backdoors, etc., the ability to change ones
>IP address and header details is simplistic, indeed, with little time
>spent anyone can appear to be "coming" from anywhere in the world.
>
>You waste my time. Worse, you think us all idiots here. You remind me
>of the "street smart" prosecutors and defense attorneys who stack jurys
>with members of little or no technical knowledge and then call in
>"expert witnesses" and propose arguments of technical details to boggle
>their minds.
>
>You have only proven that you, yourself are either ignorant to such
>technical details, or else you are indeed street smart, I favor the
>latter in this case (however, if you in the dark about such things, 15
>minutes on google will enlighten you.)
>
>JS

"one useless man is disgrace 2 become a law firm 3 or more become a congress"
adams

woger you are a Congress all in your own head
"http://www.3ix.org/sys/aff.php?aff=7439" target="_blank"

altopia is never used by KB9RQZ
http://kb9rqz.cc.cc
http://kd8ctl.com
nor is Konstans@hotmail.com ever
btw i can be found at
17366 N River Rd

Chassel Mi

but the cowards asking lack the gut to act

2915. Re: Angry WHY is it spammers and assorted other trash are posted in the WRONG forums??

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-06 18:17:01 UTC
From: n9zas <n9zas.53a62f6@radiobanter.com>
Message-ID: <n9zas.53a62f6@radiobanter.com>
Source record: 12230

Michael Coslo;692748 Wrote:
> n9zas wrote:-
> Angry WHY is it spammers and assorted other trash are posted in the
> WRONG forums??
> If EVERYONE would pay attention to what the hell they're posting,then
> this site would be more enjoyable for everybody here!!! Politics crap
> does NOT belong in the shortwave forum!!!! Garbage from you tube does
> NOT belong in the antenna forum!!! Etc,etc!!! Get a clue people,or
> get
> lost!!!
> Why is it that no one reads what they post... BEFORE they post it??
> IS everyone really that stupid? As for SPAMMERS???? ...Death is the
> only answer for those that have nothing intelligent to add!!!
> Wise up already!-
>
> They looked for the spammers and assorted other trash forum and
> couldn't find it. (grin)
>
> Okay, let's fix this problem. First take a really deep breath or ten.
>
> Then maybe a glass of your favorite adult beverage if you like. Just
> one
> or two though. More than that can make the problem worse.
>
> Now, this really isn't a forum, it's a newsgroup. There is just no way
>
> you are king to stop the crazies from posting here. If you're adamant
> about not seeing anything you don't like, and you want to fight them,
> you'll lose.
>
>
> Hope is here though. Your newsreader has a method of not seeing the
> offensive posts. It's a filter. Also known as a killfile, bozo bin,
> etc.
> Ease of use varies between newsreaders. But they do work pretty
> well.
>
> So there ya go. You can calm down now and enjoy the non-crazy parts of
>
> the newsgroups. This is a pretty good one - even our eccentrics are a
> good read!
>
> - 73 de Mike N3LI -

This is RADIOBANTER.COM not politics.com or obama.com which is where everyone makes their first mistake! That TRASH doesn't BELONG here. This a site for RADIO oriented articles,so why are people so dense they can't figure this out until someone has to break out the crayons and draw them a picture?? Post that crap on cnn.com or some OTHER political website!
Wanna talk about RADIO then stay here,otherwise scroll to ANOTHER site!
This sh*t is getting old! I feel like I'm explaining this to a bunch of damn 3rd graders!!!!
Ok,rant mode off. F*CK IT!

--
n9zas

2916. Re: Angry WHY is it spammers and assorted other trash are posted in the WRONG forums??

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-06 18:19:24 UTC
From: Dave <k1ttt@arrl.net>
Message-ID: <c4e104a9-24ac-4738-8ddc-ee950eacc40f@s31g2000yqs.googlegroups.com>
Source record: 12227

On Nov 6, 12:26 am, n9zas <n9zas.5396...@radiobanter.com> wrote:
> Angry WHY is it spammers and assorted other trash are posted in the
> WRONG forums??
> If EVERYONE would pay attention to what the hell they're posting,then
> this site would be more enjoyable for everybody here!!! Politics crap
> does NOT belong in the shortwave forum!!!! Garbage from you tube does
> NOT belong in the antenna forum!!! Etc,etc!!! Get a clue people,or get
> lost!!!
> Why is it that no one reads what they post... BEFORE they post it??
> IS everyone really that stupid? As for SPAMMERS???? ...Death is the
> only answer for those that have nothing intelligent to add!!!
> Wise up already!
>
> --
> n9zas

is this really the right group to post to for complaining about
posting to the wrong group?

2917. Re: Matching impedance with coax

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-06 22:32:25 UTC
From: who where <noone@home.net>
Message-ID: <9489f59uiqvfsfdbphjlmf04ets72e4bc5@4ax.com>
Source record: 12228
Cross-posted to: alt.internet.wireless,rec.radio.amateur.antenna

On Fri, 06 Nov 2009 08:18:49 -0800, Richard Clark <kb7qhc@comcast.net>
wrote:

>On Fri, 06 Nov 2009 15:49:46 +0800, who where <noone@home.net> wrote:
>
>>>But not one of them in Perth.
>>
>>No relation to anyone you are thinking_of/describing/etc, sorry to
>>ruin your conspiracy theory.
>
>Your confirmation here doesn't ruin anything. Art would hug you no
>matter how you sign. Those he does have a remarkable need for
>retaining anonymity. He would have us believe it's because his
>supporters are easily bruised in the jostle. The following comment
>would support that:
>
>>...gives a rats about the consistency
>>of the result would go down that path.
>
>which is another but perhaps left-handed confirmation.
>
>73's
>Richard Clark, KB7QHC

Whatever - and whoever Art is. I wonder why people like you carry on
at a personal level towards posters whose views you don't share. And
you seem to need the limelight, posting a name and callsign.

I'm describing how the matching IS done commercially. You can crap on
forever if you wish about how you might do it. Fini.

2918. Re: Matching impedance with coax

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-06 23:12:12 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <e699f5124j4bguhqenjbuvi136i20sgbo9@4ax.com>
Source record: 12229
Cross-posted to: alt.internet.wireless,rec.radio.amateur.antenna

On Sat, 07 Nov 2009 06:32:25 +0800, who where <noone@home.net> wrote:

>you seem to need the limelight, posting a name and callsign.

Yeah, as a longstanding convention for thousands of posters here, it
is a strange thing about being public and open in this world isn't it?

If you can't put your name to it, then any posting is only vacant
spam. "No one at home" informs us all about quality.

On the other hand, you choosing to be anonymous means you could have
us believe you are writing from a cave on the Afghan/Pakistan border
while waiting for your dialysis treatment to finish. Only Ossama and
vampires avoid the limelight - as you call it.

>I'm describing how the matching IS done commercially.

Your painted-into-the-corner explanation has nothing to do with the
correlation between exhibited low feedpoint R and the proximity of
passive elements to what would have ordinarily been a very HiZ folded
element.

>Fini.

We shall await your next post as elevator@onefloorshortofthetop.org

73's
Richard Clark, KB7QHC

2919. Re: Angry WHY is it spammers and assorted other trash are posted in the WRONG forums??

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-07 00:19:30 UTC
From: Bert Hyman <bert@iphouse.com>
Message-ID: <Xns9CBBBA69E837EVeebleFetzer@216.250.184.7>
Source record: 12231

In news:n9zas.53a62f6@radiobanter.com n9zas
<n9zas.53a62f6@radiobanter.com> wrote:

> This is RADIOBANTER.COM

No.

It's rec.radio.amateur.antenna, a USENET newsgroup.

--
Bert Hyman St. Paul, MN bert@iphouse.com

2920. Re: Angry WHY is it spammers and assorted other trash are posted in the WRONG forums??

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-07 00:22:59 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <b9f9f5taksq1vs917eqpdidj7g014rsuct@4ax.com>
Source record: 12232

On Fri, 6 Nov 2009 18:17:01 +0000, n9zas
<n9zas.53a62f6@radiobanter.com> wrote:

>This is RADIOBANTER.COM

Actually, this is rec.radio.amateur.antenna you are posting to and
Radiobanter is scraping this newsgroup for content and, it appears,
crossposting your rant to us.

Take your beef to radiobanter.

73's
Richard Clark, KB7QHC

2921. Re: Matching impedance with coax

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-07 02:55:19 UTC
From: tom <news4792@taring.org>
Message-ID: <4af4e154$0$28112$8046368a@newsreader.iphouse.net>
Source record: 12233
Cross-posted to: alt.internet.wireless,rec.radio.amateur.antenna

who where wrote:
>
> Whatever - and whoever Art is. I wonder why people like you carry on
> at a personal level towards posters whose views you don't share. And
> you seem to need the limelight, posting a name and callsign.
>
> I'm describing how the matching IS done commercially. You can crap on
> forever if you wish about how you might do it. Fini.

The "ways it's done commercially" depends a lot on the desired result.

A choked line into a 50 ohm DE is an easy to do but not optimal method.

It doesn't give best gain or BW or best F/B or best noise temperature
and never ever gives the best combination of them for weak signal work.

But it IS easy.

And it's not always what the commercial antenna builders use. It's what
you have noticed that they sell. Or you might be pushing how much it's
used just a bit.

tom
K0TAR

2922. Re: Multi polarization antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-07 03:10:22 UTC
From: tom <news4792@taring.org>
Message-ID: <4af4e4db$0$42839$8046368a@newsreader.iphouse.net>
Source record: 12234

Art Unwin wrote:
> On Nov 5, 10:11 pm, tom <news4...@taring.org> wrote:
>> Art Unwin wrote:
>>> What is the best antenna for use with all circular, horizontal,
>>> vertical and other polarizations without drastic fall of in gain, and
>>> without changes in angular position and feed point via switches e.t.c
>>> at the tower top?
>> Maybe the quadrifilar helix.
>>
>> tom
>> K0TAR
>
> That is made for a single circulation signal only.

Then it's a point driven against ground that you need. Or a 2 point dipole. Either one with a lossless transmission line would work.

That's the only thing that will do all you want and do both RHC and LHC polarizations and do it at all frequencies. I have to assume you want all frequencies since you haven't responded on that question.

And it will have a very unusable impedance at all frequencies. But if you can do the lossless line, you are probably covered on the lossless tuner, too.

Good luck. You want everything, and you can't have it.

And "single circulation" is not the proper terminology (as usual), although I am somewhat sure about what you meant.

tom
K0TAR

2923. Re: Multi polarization antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-07 03:11:14 UTC
From: tom <news4792@taring.org>
Message-ID: <4af4e50e$0$42839$8046368a@newsreader.iphouse.net>
Source record: 12235

Richard Clark wrote:
> On Fri, 06 Nov 2009 11:23:30 +0100, Helmut Wabnig <hwabnig@ .- --- -.
> dotat> wrote:
>
>> On Thu, 5 Nov 2009 17:50:18 -0800 (PST), Art Unwin
>> <arthurunwin@gmail.com> wrote:
>>
>>> What is the best antenna for use with all circular, horizontal,
>>> vertical and other polarizations without drastic fall of in gain, and
>>> without changes in angular position and feed point via switches e.t.c
>>> at the tower top?
>>
>> Frequency range?
>>
>> w.
>
> The eyes: 430 THz - 750 THz
>
> 73's
> Richard Clark, KB7QHC

Not bad.

tom
K0TAR

2924. Re: Matching impedance with coax

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-07 05:40:58 UTC
From: Jeff Liebermann <jeffl@cruzio.com>
Message-ID: <ug0af516dijec4oekif2n3ele6h5co407v@4ax.com>
Source record: 12236
Cross-posted to: alt.internet.wireless,rec.radio.amateur.antenna

On Thu, 05 Nov 2009 08:06:30 +0800, who where <noone@home.net> wrote:

>The presense and spacing of the parasitic elements isn't going to
>change the feedpoint impedance that much.

Ummm... try again. If you simplify the antenna, the feed point
impedance of a 2 element yagi (just driven element and reflector) is
roughly the same as a dipole over a perfect ground. There are plenty
of graphs online to show how the impedance varies:
<http://extranosjacal.blogspot.com/2009/06/antenna-z-and-height-above-ground.html>
Note that the impedance of a simple dipole varies from nearly zero for
very close to the ground, to a max of about 100 ohms at about 0.35
wavelengths. A folded dipole will behave similarly, with a nominal
impedance of about 277 ohms, but varying over roughly zero to perhaps
450 ohms impedance. Add a director (or more director elements) and
available range of impedances changes even more.

>Mike needs to check out - and understand - how a side-mount folded
>dipole is matched to a 50 ohm line.

Assuming the folded dipole is the traditional 300 ohms, I usually
match it with a 1/2 wavelength 4:1 balun. At 2.4 GHz, it would look
something like:
<http://pe2er.nl/wifisector/>
Scroll down to the diagram and photo of the coax balun. I use
semi-rigid 0.141 coax, not RG-316.

>I'm sure this yagi will simply
>use a similar series coax balun.

I'm not so sure. The photos on the MFJ web pile seem to be
intentionally tiny and obscure. Looks like considerable effort was
made to hide the method of construction. This is the best photo I
could find:
<http://www.permo.no/MFJ/MFJ-1800.jpg>
I can't really see what's going on, much less have enough info to
create an NEC2 model. In addition, I'm more than a little suspicious
of what looks like about 1/2" of exposed coax center conductor at the
center pin of the "N"(?) connector. That's an inductor and radiator,
which are not very clever design or construction.

--
Jeff Liebermann 150 Felker St #D Santa Cruz CA 95060
831-336-2558
http://802.11junk.com jeffl@cruzio.com

http://www.LearnByDestroying.com AE6KS

2925. Seeking New FAQ/Intro Maintainers for rec.radio.amateur.*

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-07 07:05:00 UTC
From: rram@panix.com
Message-ID: <radio/ham-radio/recruitment-1-1257577500@panix.com>
Source record: 12237
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.dx,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.policy,rec.radio.info

```
Posted-By: auto-faq 3.3.2 beta (PGPMoose V2.0, Perl 5.005)
Archive-name: radio/ham-radio/recruitment
Revision: 1.1 2007/09/29 18:42:47
Posting-Frequency: posted monthly
URL: http://www.faqs.org/faqs/radio/personal-intro/

Changes followed by "|".

The rec.radio.info newsgroup, first established in 1993, has been
recently revived by an active moderation team. We are currently seeking
suitable information, FAQ, and bulletin articles from the entire
rec.radio.* newsgroup hierarchy for simultaneous cross-posting to our
newsgroup.

We are seeking a replacement maintainer for the following information
bulletin formerly posted to rec.radio.amateur.* (and currently archived
at http://www.faqs.org/faqs/radio/personal-intro/ ):

radio/personal-intro
Subject: Guide to the rec.radio Newsgroups
Maintainer: jeffreyh@Hawaii.Edu (Jeffrey Herman)
Last Posted: 9 Nov 2001 06:18:17 GMT
Posting-Frequency: 15th of each month

We are willing to provide any technical support necessary to get this
article updated and automatically posted again at a regular interval.
This would include establishing contact with the original maintainer for
any necessary permissions. We would prefer to seek a new, dedicated
maintainer at this time, rather than start auto-posting the original
article ourselves.

For more information about our newsgroup, see:

http://www.panix.com/~rram/usenet/rri/index.html

Please direct any comments, questions, or criticisms to
rec-radio-info-request@panix.com.
```

2926. Re: Matching impedance with coax

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-07 14:20:12 UTC
From: who where <noone@home.net>
Message-ID: <ha0bf5pcpl0es3d6381rbgqbc5ortc93c6@4ax.com>
Source record: 12238
Cross-posted to: alt.internet.wireless,rec.radio.amateur.antenna

On Fri, 06 Nov 2009 20:55:19 -0600, tom <news4792@taring.org> wrote:

>who where wrote:
>>
>> Whatever - and whoever Art is. I wonder why people like you carry on
>> at a personal level towards posters whose views you don't share. And
>> you seem to need the limelight, posting a name and callsign.
>>
>> I'm describing how the matching IS done commercially. You can crap on
>> forever if you wish about how you might do it. Fini.
>
>The "ways it's done commercially" depends a lot on the desired result.
>
>A choked line into a 50 ohm DE is an easy to do but not optimal method.
>
>It doesn't give best gain or BW or best F/B or best noise temperature
>and never ever gives the best combination of them for weak signal work.
>
>But it IS easy.
>
>And it's not always what the commercial antenna builders use. It's what
>you have noticed that they sell. Or you might be pushing how much it's
>used just a bit.

If you re-read what I posted, you will notice I stated "series coax transformer". An in-line impedance transforming section is totally different to simply stuffing RF choking on the line.

It is the method the three major manufacturers here in Australia employ on their SMD's and the driven FD's on their yagis.

2927. Re: Multi polarization antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-07 15:28:41 UTC
From: Art Unwin <arthurunwin@gmail.com>
Message-ID: <4b99cfcc-7bb9-406b-bd34-9ffa967152dd@o10g2000yqa.googlegroups.com>
Source record: 12239

On Nov 6, 9:10 pm, tom <news4...@taring.org> wrote:
> Art Unwin wrote:
> > On Nov 5, 10:11 pm, tom <news4...@taring.org> wrote:
> >> Art Unwin wrote:
> >>> What is the best antenna for use with all circular, horizontal,
> >>> vertical and other polarizations without drastic fall of in gain, and
> >>> without changes in angular position and feed point via switches e.t.c
> >>> at the tower top?
> >> Maybe the quadrifilar helix.
>
> >> tom
> >> K0TAR
>
> > That is made for a single circulation signal only.
>
> Then it's a point driven against ground that you need. Or a 2 point
> dipole. Either one with a lossless transmission line would work.
>
> That's the only thing that will do all you want and do both RHC and LHC
> polarizations and do it at all frequencies. I have to assume you want
> all frequencies since you haven't responded on that question.
>
> And it will have a very unusable impedance at all frequencies. But if
> you can do the lossless line, you are probably covered on the lossless
> tuner, too.
>
> Good luck. You want everything, and you can't have it.
>
> And "single circulation" is not the proper terminology (as usual),
> although I am somewhat sure about what you meant.
>
> tom
> K0TAR

I wanted to know if there was such a radiator in the system that could
do such a thing and apparently there is not! I am working on one that
will do it but I wanted to be sure if I was
not reinventing the wheel.
My antenna is based on using something like a ladder line only with
the wires closer together to provide a lower impedance. If you close
both ends of such a line and wind a helix with it you can get a
radiator beam that will do all the things I suggested except the "all
frequency" part which requires further additions .
If you have two open wires in parallel and slide a cross connector up

and down the two wires the resonant frequency changes dependent on the length where the jumper is.
Thus, if you literally make the ladder line into a true ladder by fixing a lot of conductive cross rungs on the ladder, the applied current will cross over at the point that the circuit is resonant.
This way the radiator will get the "all frequency" attributes.
Such a radiator becomes a much physically smaller radiator than is being used today.
Why not try it.?... It is the proverbial free lunch!

2928. Re: Multi polarization antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-07 16:48:55 UTC
From: christofire <christofire@btinternet.com>
Message-ID: <c8-dnVV-mqOWOGjXnZ2dnUVZ8uSdnZ2d@bt.com>
Source record: 12240

"Art Unwin" <arthurunwin@gmail.com> wrote in message
news:4b99cfcc-7bb9-406b-bd34-9ffa967152dd@o10g2000yqa.googlegroups.com...
On Nov 6, 9:10 pm, tom <news4...@taring.org> wrote:
> Art Unwin wrote:
> > On Nov 5, 10:11 pm, tom <news4...@taring.org> wrote:
> >> Art Unwin wrote:
> >>> What is the best antenna for use with all circular, horizontal,
> >>> vertical and other polarizations without drastic fall of in gain, and
> >>> without changes in angular position and feed point via switches e.t.c
> >>> at the tower top?
> >> Maybe the quadrifilar helix.
>
> >> tom
> >> K0TAR
>
> > That is made for a single circulation signal only.
>
> Then it's a point driven against ground that you need. Or a 2 point
> dipole. Either one with a lossless transmission line would work.
>
> That's the only thing that will do all you want and do both RHC and LHC
> polarizations and do it at all frequencies. I have to assume you want
> all frequencies since you haven't responded on that question.
>
> And it will have a very unusable impedance at all frequencies. But if
> you can do the lossless line, you are probably covered on the lossless
> tuner, too.
>
> Good luck. You want everything, and you can't have it.
>
> And "single circulation" is not the proper terminology (as usual),
> although I am somewhat sure about what you meant.
>
> tom
> K0TAR

I wanted to know if there was such a radiator in the system that could
do such a thing and apparently there is not! I am working on one that
will do it but I wanted to be sure if I was
not reinventing the wheel.
My antenna is based on using something like a ladder line only with
the wires closer together to provide a lower impedance. If you close
both ends of such a line and wind a helix with it you can get a
radiator beam that will do all the things I suggested except the "all

frequency" part which requires further additions .
If you have two open wires in parallel and slide a cross connector up and down the two wires the resonant frequency changes dependent on the length where the jumper is.
Thus, if you literally make the ladder line into a true ladder by fixing a lot of conductive cross rungs on the ladder, the applied current will cross over at the point that the circuit is resonant.
This way the radiator will get the "all frequency" attributes.
Such a radiator becomes a much physically smaller radiator than is being used today.
Why not try it.?... It is the proverbial free lunch!

Are you saying a wave on a transmission line will continue to propagate beyond a short-circuit across the line? If so, you've missed something important.

Chris

2929. Re: an ontopic post about code

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-07 17:08:58 UTC
From: kb9rqz@yahoooo.com
Message-ID: <scabf5h2vk5m1bug2dfvljmbaffo25e7ue@4ax.com>
Source record: 12241
Cross-posted to: alt.ham-radio.vhf-uhf,rec.radio.amateur.policy,rec.radio.amateur.antenna

KB9RQZ has sent you a link to a blog:

tood maybe eye makeup by my cousin hlep you feel beter about youself.
think about it.

Blog: Shades Professional Makeup
Post: The Premier
Link: http://shadespromakeup.blogspot.com/2009/11/premier.html

--
Powered by Blogger
http://www.blogger.com/
On Fri, 01 Dec 2006 09:36:47 -0800, John Smith
<assemblywizard@gmail.com> wrote:

>K4YZ wrote:
>> Nope.
>>
>> The IP Address and servers are complete proof that I do NOT share
>> any annonymous character's "address".
>>
>> Sounds like Lennie, to me....
>>
>> Steve, K4YZ
>>
>
>To anyone with even an elementary understanding of anonymous proxies,
>anonymous remailers, zombie backdoors, etc., the ability to change ones
>IP address and header details is simplistic, indeed, with little time
>spent anyone can appear to be "coming" from anywhere in the world.
>
>You waste my time. Worse, you think us all idiots here. You remind me
>of the "street smart" prosecutors and defense attorneys who stack jurys
>with members of little or no technical knowledge and then call in
>"expert witnesses" and propose arguments of technical details to boggle
>their minds.
>
>You have only proven that you, yourself are either ignorant to such
>technical details, or else you are indeed street smart, I favor the
>latter in this case (however, if you in the dark about such things, 15
>minutes on google will enlighten you.)
>
>JS

"one useless man is disgrace 2 become a law firm 3 or more become a congress"
adams

woger you are a Congress all in your own head
"http://www.3ix.org/sys/aff.php?aff=7439" target="_blank"

altopia is never used by KB9RQZ
http://kb9rqz.cc.cc
http://kd8ctl.com
nor is Konstans@hotmail.com ever
btw i can be found at
17366 N River Rd
Chassel Mi

but the cowards asking lack the gut to act

2930. Re: Multi polarization antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-07 17:56:05 UTC
From: Art Unwin <arthurunwin@gmail.com>
Message-ID: <5f87fd68-dba0-44a3-9e78-4ab3701826ca@v30g2000yqm.googlegroups.com>
Source record: 12242

On Nov 7, 10:48 am, "christofire" <christof...@btinternet.com> wrote:
> "Art Unwin" <arthurun...@gmail.com> wrote in message
>
> news:4b99cfcc-7bb9-406b-bd34-9ffa967152dd@o10g2000yqa.googlegroups.com...
> On Nov 6, 9:10 pm, tom <news4...@taring.org> wrote:
>
>
>
> > Art Unwin wrote:
> > > On Nov 5, 10:11 pm, tom <news4...@taring.org> wrote:
> > >> Art Unwin wrote:
> > >>> What is the best antenna for use with all circular, horizontal,
> > >>> vertical and other polarizations without drastic fall of in gain, and
> > >>> without changes in angular position and feed point via switches e.t.c
> > >>> at the tower top?
> > >> Maybe the quadrifilar helix.
>
> > >> tom
> > >> K0TAR
>
> > > That is made for a single circulation signal only.
>
> > Then it's a point driven against ground that you need. Or a 2 point
> > dipole. Either one with a lossless transmission line would work.
>
> > That's the only thing that will do all you want and do both RHC and LHC
> > polarizations and do it at all frequencies. I have to assume you want
> > all frequencies since you haven't responded on that question.
>
> > And it will have a very unusable impedance at all frequencies. But if
> > you can do the lossless line, you are probably covered on the lossless
> > tuner, too.
>
> > Good luck. You want everything, and you can't have it.
>
> > And "single circulation" is not the proper terminology (as usual),
> > although I am somewhat sure about what you meant.
>
> > tom
> > K0TAR
>
> I wanted to know if there was such a radiator in the system that could
> do such a thing and apparently there is not! I am working on one that
> will do it but I wanted to be sure if I was

> not reinventing the wheel.
> My antenna is based on using something like a ladder line only with
> the wires closer together to provide a lower impedance. If you close
> both ends of such a line and wind a helix with it you can get a
> radiator beam that will do all the things I suggested except the "all
> frequency" part which requires further additions .
> If you have two open wires in parallel and slide a cross connector up
> and down the two wires the resonant frequency changes dependent on the
> length where the jumper is.
> Thus, if you literally make the ladder line into a true ladder by
> fixing a lot of conductive cross rungs on the ladder, the applied
> current will cross over at the point that the circuit is resonant.
> This way the radiator will get the "all frequency" attributes.
> Such a radiator becomes a much physically smaller radiator than is
> being used today.
> Why not try it.?... It is the proverbial free lunch!
>
> Are you saying a wave on a transmission line will continue to propagate
> beyond a short-circuit across the line? If so, you've missed something
> important.
>
> Chris

Not sure what you are getting at Chris.
The applied current will travel the 1/2 WL of the radiator/
transmission line and then turn so it will be at resonant impedance at
the input, at the impedance value of the line. The current will not
continue to travel any further than when the closed circuit that is
resonant is reached. In other words, a transmission line can be seen
as having the same impedance or load at each end at a given frequency.
If you close one end, is it not still resonant? If you want to dig
further look at my home page unwinantennas to see where I am coming
from.
This is the same principle used when matching a radiator with
transmission line sections as shown on a nearby current thread (at
least that is the way I see it but then I could still be a fraud by
any other name!) I have done this many times in practice BUT it may
well be the "why's) that I am misinterpreting.
On the other hand I cannot see how a AC circuit wil short across as
you have intimated.
Again I could be wrong as usual! When I model such an arrangement it
provides gain in the order of 10dbi +/- 1.5 db regardless of the type
of radiation that is directed at it. Well one type doesn't work out
well but I don't know where it is usedn in today's world

2931. Re: Multi polarization antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-07 18:09:09 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <mndbf59p0kpcrbnlso6pk0edkovrt70fer@4ax.com>
Source record: 12243

On Sat, 7 Nov 2009 16:48:55 -0000, "christofire"
<christofire@btinternet.com> wrote:

>My antenna is based on using something like a ladder line only with
>the wires closer together to provide a lower impedance.
...
>Thus, if you literally make the ladder line into a true ladder by
>fixing a lot of conductive cross rungs on the ladder, the applied
>current will cross over at the point that the circuit is resonant.

Hi Chris,

So, you want to turn a massively shorted thin transmission line into a
radiator?

How does the current get past the first short? It cannot, so that
string of shorts up the line are redundant and you can remove them.
This leaves you with a very small loop very close to the transmitter.
Almost every ham has tried working into a short and has never found it
productive. Have you tried it?

73's
Richard Clark, KB7QHC

2932. Re: Multi polarization antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-07 18:12:53 UTC
From: Jeff Liebermann <jeffl@cruzio.com>
Message-ID: <rudbf51eo0p8d4ritaf5d85l8anaeg7dkv@4ax.com>
Source record: 12244

On Thu, 5 Nov 2009 17:50:18 -0800 (PST), Art Unwin
<arthurunwin@gmail.com> wrote:

>What is the best antenna for use with all circular, horizontal,
>vertical and other polarizations without drastic fall of in gain, and
>without changes in angular position and feed point via switches e.t.c
>at the tower top?

A light bulb might work. It will pickup (or radiate) any polarization
type and direction. An unshielded dummy load might also work. It
won't have much gain, but it will meet your criteria for bandwidth and
polarization. It's also kinda cool looking.

--
Jeff Liebermann jeffl@cruzio.com
150 Felker St #D http://www.LearnByDestroying.com
Santa Cruz CA 95060 http://802.11junk.com
Skype: JeffLiebermann AE6KS 831-336-2558

2933. Re: Multi polarization antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-07 18:32:56 UTC
From: Jeff Liebermann <jeffl@cruzio.com>
Message-ID: <h6ebf5too6tjp5iv3of1lrp2q6alha40f2@4ax.com>
Source record: 12245

On Fri, 6 Nov 2009 08:05:17 -0800 (PST), Art Unwin
<arthurunwin@gmail.com> wrote:

>On Nov 5, 10:11ï¿½pm, tom <news4...@taring.org> wrote:
>> Art Unwin wrote:
>> > What is the best antenna for use with all circular, horizontal,
>> > vertical and other polarizations without drastic fall of in gain, and
>> > without changes in angular position and feed point via switches e.t.c
>> > at the tower top?
>>
>> Maybe the quadrifilar helix.
>>
>> tom
>> K0TAR
>
>That is made for a single circulation signal only.

It might be done with 4 quadrifilar antennas. Each antenna has a
hemispherical pattern and one sense (left or right hand). With 4
antennas and a suitable combiner, each antenna will cover one half of
the pattern, and one of the two available senses. The quadrifilar
antenna will work with linear polarization, but at reduced gain. The
usable bandwidth is probably insufficient to cover DC to light, but
multiple quadrifilar antennas can be attached to the surface of a
ball, resulting in a sperical pattern approximation and a construction
that looks like a puffer fish. It's also possible to conglomerate the
quadrifiler into a tapered helix, thus increasing the bandwidth at the
expense of gain. For VLF, shove a ferrite rod into the middle.

You can also do random polarizations by using leaky coax, tangled into
a Gordian Knot. Some part of the knot will undoubtably be parallel to
the random polarization, and thus provide some signal pickup. Gain
will be limited by the length of the lossy coax and size of the knot.
<http://www.afltele.com/products/fiber_optic_cable/coax_cable/leaky_coax/>
<http://en.wikipedia.org/wiki/Gordian_knot>

Marginally related drivel:
<http://www.wifi-plus.com>
<http://www.connectronics.com/wifi_plus/>
"The world's first MULTI-POLARIZED - MULTI-PATH Antenna with
GEO-Spatial capture".

--
Jeff Liebermann jeffl@cruzio.com
150 Felker St #D http://www.LearnByDestroying.com
Santa Cruz CA 95060 http://802.11junk.com

Skype: JeffLiebermann AE6KS 831-336-2558

2934. Re: Multi polarization antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-07 19:43:10 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <45jbf5ligckbmaeonnb0ueomssc8rdd3ar@4ax.com>
Source record: 12246

On Sat, 07 Nov 2009 10:32:56 -0800, Jeff Liebermann <jeffl@cruzio.com>
wrote:

>tangled into a Gordian Knot.

oooooooooooooh, I like that one. I bet Einstein (that ol'
refrigerator mechanic) never anticipated that when he was trying to
juggle leptons. What could he have been thinking?

73's
Richard Clark, KB7QHC

2935. Re: an ontopic post about code

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-07 21:23:50 UTC
From: kb9rqz@yahoooo.com
Message-ID: <5bpbf5h6bmeahvah94qevb45qep4us43f2@4ax.com>
Source record: 12247
Cross-posted to: alt.ham-radio.vhf-uhf,rec.radio.amateur.policy,rec.radio.amateur.antenna

On Fri, 01 Dec 2006 09:36:47 -0800, John Smith
<assemblywizard@gmail.com> wrote:

>K4YZ wrote:
>> Nope.
>>
>> The IP Address and servers are complete proof that I do NOT share
>> any annonymous character's "address".
>>
>> Sounds like Lennie, to me....
>>
>> Steve, K4YZ
>>
>
>To anyone with even an elementary understanding of anonymous proxies,
>anonymous remailers, zombie backdoors, etc., the ability to change ones
>IP address and header details is simplistic, indeed, with little time
>spent anyone can appear to be "coming" from anywhere in the world.
>
>You waste my time. Worse, you think us all idiots here. You remind me
>of the "street smart" prosecutors and defense attorneys who stack jurys
>with members of little or no technical knowledge and then call in
>"expert witnesses" and propose arguments of technical details to boggle
>their minds.
>
>You have only proven that you, yourself are either ignorant to such
>technical details, or else you are indeed street smart, I favor the
>latter in this case (however, if you in the dark about such things, 15
>minutes on google will enlighten you.)
>
>JS

"one useless man is disgrace 2 become a law firm 3 or more become a congress"
adams

woger you are a Congress all in your own head
"http://www.3ix.org/sys/aff.php?aff=7439" target="_blank"

altopia is never used by KB9RQZ
http://kb9rqz.cc.cc
http://kd8ctl.com
nor is Konstans@hotmail.com ever
btw i can be found at
17366 N River Rd

Chassel Mi

but the cowards asking lack the gut to act

2936. Re: Multi polarization antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-08 00:49:07 UTC
From: christofire <christofire@btinternet.com>
Message-ID: <sKWdnfPNLdcaiGvXnZ2dnUVZ8rSdnZ2d@bt.com>
Source record: 12248

"Richard Clark" <kb7qhc@comcast.net> wrote in message
news:mndbf59p0kpcrbnlso6pk0edkovrt70fer@4ax.com...
> On Sat, 7 Nov 2009 16:48:55 -0000, "christofire"
> <christofire@btinternet.com> wrote:
>
>>My antenna is based on using something like a ladder line only with
>>the wires closer together to provide a lower impedance.
> ...
>>Thus, if you literally make the ladder line into a true ladder by
>>fixing a lot of conductive cross rungs on the ladder, the applied
>>current will cross over at the point that the circuit is resonant.
>
> Hi Chris,
>
> So, you want to turn a massively shorted thin transmission line into a
> radiator?
>
> How does the current get past the first short? It cannot, so that
> string of shorts up the line are redundant and you can remove them.
> This leaves you with a very small loop very close to the transmitter.
> Almost every ham has tried working into a short and has never found it
> productive. Have you tried it?
>
> 73's
> Richard Clark, KB7QHC

Shouldn't you be addressing Art Unwin with that? ... it's he who's proposing
the idea, not me.

Perhaps the behaviour of Outlook Express has led to confusion (again?),
despite my leaving a double line space between the OP and my comment.

Chris

2937. Re: Multi polarization antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-08 02:21:34 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <s1acf5do54980mj65r56delgv48curh32f@4ax.com>
Source record: 12249

On Sun, 8 Nov 2009 00:49:07 -0000, "christofire"
<christofire@btinternet.com> wrote:

>
>"Richard Clark" <kb7qhc@comcast.net> wrote in message
>news:mndbf59p0kpcrbnlso6pk0edkovrt70fer@4ax.com...
>> On Sat, 7 Nov 2009 16:48:55 -0000, "christofire"
>> <christofire@btinternet.com> wrote:
>>
>>>My antenna is based on using something like a ladder line only with
>>>the wires closer together to provide a lower impedance.
>> ...
>>>Thus, if you literally make the ladder line into a true ladder by
>>>fixing a lot of conductive cross rungs on the ladder, the applied
>>>current will cross over at the point that the circuit is resonant.
>>
>> Hi Chris,
>>
>> So, you want to turn a massively shorted thin transmission line into a
>> radiator?
>>
>> How does the current get past the first short? It cannot, so that
>> string of shorts up the line are redundant and you can remove them.
>> This leaves you with a very small loop very close to the transmitter.
>> Almost every ham has tried working into a short and has never found it
>> productive. Have you tried it?
>>
>> 73's
>> Richard Clark, KB7QHC
>
>
>Shouldn't you be addressing Art Unwin with that? ... it's he who's proposing
>the idea, not me.

I've consigned Art's evacuations to the trashbin.

>Perhaps the behaviour of Outlook Express has led to confusion (again?),
>despite my leaving a double line space between the OP and my comment.
>
>Chris
>

Hi Chris,

I don't know about a double line being a convention for that, but as
you can see above, this time quoting is proceeding as natural.

So, this shorted transmission line is Art's? Has he ever, ever
reported a QSO outside of his zip code?

73's
Richard Clark, KB7QHC

2938. Re: Multi polarization antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-08 09:45:27 UTC
From: Szczepan Bialek <sz.bialek@wp.pl>
Message-ID: <hd63dq$8qt$1@node1.news.atman.pl>
Source record: 12250

"Helmut Wabnig" <hwabnig@ .- --- -. dotat> wrote
news:q4l8f5lvd8vnimfutlo0tp8p3vn4anr5s4@4ax.com...
> On Fri, 6 Nov 2009 05:40:21 -0800 (PST), Art Unwin
> <arthurunwin@gmail.com> wrote:
>
>>On Nov 6, 4:23 am, Helmut Wabnig <hwabnig@ .- --- -. dotat> wrote:
>>> On Thu, 5 Nov 2009 17:50:18 -0800 (PST), Art Unwin
>>>
>>> <arthurun...@gmail.com> wrote:
>>> >What is the best antenna for use with all circular, horizontal,
>>> >vertical and other polarizations without drastic fall of in gain, and
>>> >without changes in angular position and feed point via switches e.t.c
>>> >at the tower top?
>>>
>>> Frequency range?
>>>
>>> w.
>>
>>10 thru 160 metres amateur bands!
>
>
> OK, here is my answer:
>
> A SHORT PIECE OF WIRE.

Thin or thick?
S*

2939. Re: Matching impedance with coax

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-08 15:48:05 UTC
From: amdx <amdx@knology.net>
Message-ID: <60c03$4af6e83f$d8baf3ed$6761@KNOLOGY.NET>
Source record: 12151
Cross-posted to: alt.internet.wireless,rec.radio.amateur.antenna

"Jeff Liebermann" <jeffl@cruzio.com> wrote in message
news:ug0af516dijec4oekif2n3ele6h5co407v@4ax.com...
> On Thu, 05 Nov 2009 08:06:30 +0800, who where <noone@home.net> wrote:
>
>>The presense and spacing of the parasitic elements isn't going to
>>change the feedpoint impedance that much.
>
> Ummm... try again. If you simplify the antenna, the feed point
> impedance of a 2 element yagi (just driven element and reflector) is
> roughly the same as a dipole over a perfect ground. There are plenty
> of graphs online to show how the impedance varies:
> <http://extranosjacal.blogspot.com/2009/06/antenna-z-and-height-above-ground.html>
> Note that the impedance of a simple dipole varies from nearly zero for
> very close to the ground, to a max of about 100 ohms at about 0.35
> wavelengths. A folded dipole will behave similarly, with a nominal
> impedance of about 277 ohms, but varying over roughly zero to perhaps
> 450 ohms impedance. Add a director (or more director elements) and
> available range of impedances changes even more.
>
>>Mike needs to check out - and understand - how a side-mount folded
>>dipole is matched to a 50 ohm line.
>
> Assuming the folded dipole is the traditional 300 ohms, I usually
> match it with a 1/2 wavelength 4:1 balun. At 2.4 GHz, it would look
> something like:
> <http://pe2er.nl/wifisector/>
> Scroll down to the diagram and photo of the coax balun. I use
> semi-rigid 0.141 coax, not RG-316.
>
>>I'm sure this yagi will simply
>>use a similar series coax balun.
>
> I'm not so sure. The photos on the MFJ web pile seem to be
> intentionally tiny and obscure. Looks like considerable effort was
> made to hide the method of construction. This is the best photo I
> could find:
> <http://www.permo.no/MFJ/MFJ-1800.jpg>
> I can't really see what's going on, much less have enough info to
> create an NEC2 model. In addition, I'm more than a little suspicious
> of what looks like about 1/2" of exposed coax center conductor at the
> center pin of the "N"(?) connector. That's an inductor and radiator,
> which are not very clever design or construction.
>

I'll try to get a better picture of the feedpoint for you.
Is there a way to work the .66 wavelength of 50 ohm cable backwards ie.
What impedance would be transformed to 50 ohms with .66 wavelength of
50 ohm coax?
(this assumes the little knowledge I have about impedance transformation
using
coax is correct.)
Mike

2940. Rebellion on NEC programs

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-08 16:24:50 UTC
From: Art Unwin <arthurunwin@gmail.com>
Message-ID: <398ea4aa-25ea-4244-9228-dd4cb11dd0d7@w19g2000yqk.googlegroups.com>
Source record: 12152

In the days before NEC amateurs did antenna testing in the field. This
was
a very fruitfull area for the naysayers to argue because the attack on
the method of testing could never have closure and the naysayers with
the loudest voices continued to rein as the true experts with respect
to antennas and amateurs.
Then we had the onset of Mininec and Nec computer programs that
initially
was welcomed with open arms until program discrepancies began to show
up and the naysayers began to rein supreme again. We now have the
instance that programs are downright wrong when they cannot forecast
the shorting actions of electricity with respect to antennas! Since
amateurs are of different backgrounds those not knowlegable of science
will follow the naysayer with the loudest voice who believes as with
pornography new radio science when seen can obviously be recognised as
a bogus technology.
Thus hams who desire smaller and better antennas to use in the
hobby to compete with the bigger and better have no where to go in the
pursuit of the truth other than self satisfaction with their own
antenna set ups in silence, while those with the loudest voices
continue with the mantra that all is known about antennas because the
naysayers volume of denials of the new because of their ability to
recognise fraud when they see it. Now we are at the point where
naysayers have presented the arguement that antennas made of mesh
cannot be used at radiators
while on the other side we have a report that some hams use shopping
carts as radiators while waiting in spacious parking lots.
Now, after trashing the usefulnes of NEC programs by those who
"know" are taking on those whose experience of mesh radiators as being
feaseable who have decided to remain meek and silent rather than face
the wrath of those led by the loudest voice. Now the trend is to roll
back the science teachings of Einstein, Planck and others by verbal
agression so that a new antenna technology can emerge and slaughter
the sciences that some profess to know as "false just by visuallizing"
without the need for thought.
So what does the future hold for those here with an interest in
antennas as the title of this forum implies?

2941. Re: Rebellion on NEC programs

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-08 16:37:38 UTC
From: nm5k@wt.net
Message-ID: <bd2816c8-b8d6-4f3b-94e3-798bd82880b6@t2g2000yqn.googlegroups.com>
Source record: 12153

On Nov 8, 10:24 am, Art Unwin <arthurun...@gmail.com> wrote:

> So what does the future hold for those here with an interest in
> antennas as the title of this forum implies?

I'm afraid an NEC program would only arouse my appetite without
fully bedding it down. Gopher anyone?

2942. Re: Matching impedance with coax

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-08 17:25:01 UTC
From: amdx <amdx@knology.net>
Message-ID: <2ed71$4af6fee7$18ec6dd7$16435@KNOLOGY.NET>
Source record: 12154
Cross-posted to: alt.internet.wireless,rec.radio.amateur.antenna

"amdx" <amdx@knology.net> wrote in message
news:60c03$4af6e83f$d8baf3ed$6761@KNOLOGY.NET...
>
> "Jeff Liebermann" <jeffl@cruzio.com> wrote in message
> news:ug0af516dijec4oekif2n3ele6h5co407v@4ax.com...
>> On Thu, 05 Nov 2009 08:06:30 +0800, who where <noone@home.net> wrote:
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>>>The presense and spacing of the parasitic elements isn't going to
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>> Ummm... try again. If you simplify the antenna, the feed point
>> impedance of a 2 element yagi (just driven element and reflector) is
>> roughly the same as a dipole over a perfect ground. There are plenty
>> of graphs online to show how the impedance varies:
>> <http://extranosjacal.blogspot.com/2009/06/antenna-z-and-height-above-ground.html>
>> Note that the impedance of a simple dipole varies from nearly zero for
>> very close to the ground, to a max of about 100 ohms at about 0.35
>> wavelengths. A folded dipole will behave similarly, with a nominal
>> impedance of about 277 ohms, but varying over roughly zero to perhaps
>> 450 ohms impedance. Add a director (or more director elements) and
>> available range of impedances changes even more.
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>>>Mike needs to check out - and understand - how a side-mount folded
>>>dipole is matched to a 50 ohm line.
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>> Assuming the folded dipole is the traditional 300 ohms, I usually
>> match it with a 1/2 wavelength 4:1 balun. At 2.4 GHz, it would look
>> something like:
>> <http://pe2er.nl/wifisector/>
>> Scroll down to the diagram and photo of the coax balun. I use
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>> I'm not so sure. The photos on the MFJ web pile seem to be
>> intentionally tiny and obscure. Looks like considerable effort was
>> made to hide the method of construction. This is the best photo I
>> could find:
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>> I can't really see what's going on, much less have enough info to
>> create an NEC2 model. In addition, I'm more than a little suspicious
>> of what looks like about 1/2" of exposed coax center conductor at the

>> center pin of the "N"(?) connector. That's an inductor and radiator,
>> which are not very clever design or construction.
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>
> I'll try to get a better picture of the feedpoint for you.
> Is there a way to work the .66 wavelength of 50 ohm cable backwards ie.
> What impedance would be transformed to 50 ohms with .66 wavelength of
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> (this assumes the little knowledge I have about impedance transformation
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> coax is correct.)
> Mike
>
> Here's a link to a picture.
http://i395.photobucket.com/albums/pp37/Qmavam/MFJCollage.jpg
Mike

2943. Re: Multi polarization antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-08 17:39:40 UTC
From: Szczepan Bialek <sz.bialek@wp.pl>
Message-ID: <hd6v6qcbm1@node1.news.atman.pl>
Source record: 12155

Uzytkownik "Jeff Liebermann" <jeffl@cruzio.com> napisal w wiadomosci
news:rudbf51eo0p8d4ritaf5d85l8anaeg7dkv@4ax.com...
> On Thu, 5 Nov 2009 17:50:18 -0800 (PST), Art Unwin
> <arthurunwin@gmail.com> wrote:
>
>>What is the best antenna for use with all circular, horizontal,
>>vertical and other polarizations without drastic fall of in gain, and
>>without changes in angular position and feed point via switches e.t.c
>>at the tower top?
>
> A light bulb might work. It will pickup (or radiate) any polarization
> type and direction. An unshielded dummy load might also work. It
> won't have much gain, but it will meet your criteria for bandwidth and
> polarization. It's also kinda cool looking.

"An unshielded dummy load might also work". So the cool looking ladder also.
S*

2944. Re: Rebellion on NEC programs

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-08 18:41:10 UTC
From: Jeff Liebermann <jeffl@cruzio.com>
Message-ID: <t13ef59stpi7tpiiahe9g6q6aditgf8tad@4ax.com>
Source record: 12156

On Sun, 8 Nov 2009 08:24:50 -0800 (PST), Art Unwin
<arthurunwin@gmail.com> wrote:

>So what does the future hold for those here with an interest in
>antennas as the title of this forum implies?

Without calculations, math, engineering, and modeling, you can return
to the days of trial by combat, proof by assertion, cut-n-try, claims
of amazing performance, irreproducible results, witchcraft, magic,
etc.

Granted, there are limitations to NEC2 modeling software.
<http://en.wikipedia.org/wiki/Numerical_Electromagnetics_Code#Limitations>
Rather than abandon years of work simply because you have invented an
antenna that cannot be visualized, optimized, modeled, seen or
demonstrated, a more productive solution to your problem would be to
find (or write) a suitable modeling program that would quantify your
"mesh" antenna. If you find that NEC2 or NEC4 based programs are
unsuitable for your purpose, there may be specialized programs that
may work.

--
Jeff Liebermann jeffl@cruzio.com
150 Felker St #D http://www.LearnByDestroying.com
Santa Cruz CA 95060 http://802.11junk.com
Skype: JeffLiebermann AE6KS 831-336-2558

2945. Re: Rebellion on NEC programs

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-08 19:38:41 UTC
From: Art Unwin <arthurunwin@gmail.com>
Message-ID: <b77bc10b-cf03-411d-8a58-899550b8cb4b@v25g2000yqk.googlegroups.com>
Source record: 12157

On Nov 8, 12:41 pm, Jeff Liebermann <je...@cruzio.com> wrote:
> On Sun, 8 Nov 2009 08:24:50 -0800 (PST), Art Unwin
>
> <arthurun...@gmail.com> wrote:
> >So what does the future hold for those here with an interest in
> >antennas as the title of this forum implies?
>
> Without calculations, math, engineering, and modeling, you can return
> to the days of trial by combat, proof by assertion, cut-n-try, claims
> of amazing performance, irreproducible results, witchcraft, magic,
> etc.
>
> Granted, there are limitations to NEC2 modeling software.
> <http://en.wikipedia.org/wiki/Numerical_Electromagnetics_Code#Limitations>
> Rather than abandon years of work simply because you have invented an
> antenna that cannot be visualized, optimized, modeled, seen or
> demonstrated, a more productive solution to your problem would be to
> find (or write) a suitable modeling program that would quantify your
> "mesh" antenna. If you find that NEC2 or NEC4 based programs are
> unsuitable for your purpose, there may be specialized programs that
> may work.
>
> --
> Jeff Liebermann   je...@cruzio.com
> 150 Felker St #D   http://www.LearnByDestroying.com
> Santa Cruz CA 95060http://802.11junk.com
> Skype: JeffLiebermann   AE6KS   831-336-2558

In the mean time those you recognise errant sciences when they see
them dominate over all others who choose not to question their
perceptability of total forsight of what is right and what is wrong.
It is not my problem, as you say, because I didn't write a program
that would win the day, the programs are already there. It is just at
this time the naysayers have the forsight to say what is wrong which
requires rebellion against that which say what is correct.
Personaly I believe there is progress in designing a radiator that
recognises CW and CCW
transmissions that provides choice in selection of what polarization
is used. After all hams wish to communicate with all and have no wish
to be left out because of the poor choice of antenna to use.
For the same radiator to be useable on all frequencies that we
are not licensed to use is purely academic to our interests tho for
the sake of science and the art of antennas the possibilities of what
is perceived to be a discovery should be pushed aside

on the basis of those that recognise what is bad based on what they perceive to have seen.
The real problem today is that what we have accepted as good for antennas ala NEC computer programs is not being accepted as viable by those who have visual forsight that takes precidence over the science of NEC programs and physics of the dayare using the volume level of their voices to persuade all to denounce same.
With this aproach being gradually accepted by those who remain silent we are being pushed back to personal antenna measurement which allows for assertions of incorrect use of testing which in effect gives credence with hams that for antennas all is really known! After all, it suggests that if mesh radiators were able to transmit all amatuers would be using them, when they are not! Thus the naysayers with undeniable visual forsight must be correct!
So now amateurs are on a roll having "proved that short circuits occur when using mesh via naysayers from both sides of the pond, who can now dismiss with confidence the demise of helical antenna design change having convinced all that NEC programs have now been shown as defective. Next the idea will prevail that sunspots are there in abundance but cannot be utelized while hams continue to use radiators that naysayers, using the same "ability to recognize pornography" when "they" see it, use the same abilities
to recognise psuedo sciences to deny those that pursue experimentation to achieve the
possibility of advances in the hobby.
Now it is labelled "my problem"..... (Yes Aussie, I am the ART that they usually attack), as it was for all the previous knowledgable hams with respect to science and antennas that fled rather than argue with those that belong to the "no" group which have the louder audibles that rule this group.

2946. Re: Rebellion on NEC programs

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-08 20:26:14 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <t4aef5lkg856l94lkhsi7lk74olu8saaq4@4ax.com>
Source record: 12158

On Sun, 08 Nov 2009 10:41:10 -0800, Jeff Liebermann <jeffl@cruzio.com>
wrote:

>Without calculations, math, engineering, and modeling, you can return
>to the days of trial by combat, proof by assertion, cut-n-try, claims
>of amazing performance, irreproducible results, witchcraft, magic,
>etc.

For Art, it has long been proven through auto de fi¿½ and in his honour
(sic) this forum should be renamed religious.radio.amateur.antenna.

73's
Richard Clark, KB7QHC

2947. Re: Matching impedance with coax

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-08 20:31:52 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <hgaef5dmnl5eqj70mbqkr17spuhv3555ep@4ax.com>
Source record: 12159
Cross-posted to: alt.internet.wireless,rec.radio.amateur.antenna

On Sun, 8 Nov 2009 11:25:01 -0600, "amdx" <amdx@knology.net> wrote:

>> I'll try to get a better picture of the feedpoint for you.
>> Is there a way to work the .66 wavelength of 50 ohm cable backwards ie.
>> What impedance would be transformed to 50 ohms with .66 wavelength of
>> 50 ohm coax?
>> (this assumes the little knowledge I have about impedance transformation
>> using
>> coax is correct.)
>> Mike
>>
>> Here's a link to a picture.
>http://i395.photobucket.com/albums/pp37/Qmavam/MFJCollage.jpg
> Mike
>

Hi Mike,

That is a pretty good rendering given the other pix. Have you any
experience with Smith Charts? Still, and all, you need to know the Z
of at least one point to transform to another.

73's
Richard Clark, KB7QHC

2948. Re: Matching impedance with coax

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-08 20:46:14 UTC
From: Dave <k1ttt@arrl.net>
Message-ID: <19c9807c-01e4-4893-9df5-abe5f82a9dad@k19g2000yqc.googlegroups.com>
Source record: 12160
Cross-posted to: alt.internet.wireless,rec.radio.amateur.antenna

On Nov 8, 3:48 pm, "amdx" <a...@knology.net> wrote:
> "Jeff Liebermann" <je...@cruzio.com> wrote in message
>
> news:ug0af516dijec4oekif2n3ele6h5co407v@4ax.com...
>
>
>
>
>
> > On Thu, 05 Nov 2009 08:06:30 +0800, who where <no...@home.net> wrote:
>
> >>The presense and spacing of the parasitic elements isn't going to
> >>change the feedpoint impedance that much.
>
> > Ummm... try again. If you simplify the antenna, the feed point
> > impedance of a 2 element yagi (just driven element and reflector) is
> > roughly the same as a dipole over a perfect ground. There are plenty
> > of graphs online to show how the impedance varies:
> > <http://extranosjacal.blogspot.com/2009/06/antenna-z-and-height-above-...>
> > Note that the impedance of a simple dipole varies from nearly zero for
> > very close to the ground, to a max of about 100 ohms at about 0.35
> > wavelengths. A folded dipole will behave similarly, with a nominal
> > impedance of about 277 ohms, but varying over roughly zero to perhaps
> > 450 ohms impedance. Add a director (or more director elements) and
> > available range of impedances changes even more.
>
> >>Mike needs to check out - and understand - how a side-mount folded
> >>dipole is matched to a 50 ohm line.
>
> > Assuming the folded dipole is the traditional 300 ohms, I usually
> > match it with a 1/2 wavelength 4:1 balun. At 2.4 GHz, it would look
> > something like:
> > <http://pe2er.nl/wifisector/>
> > Scroll down to the diagram and photo of the coax balun. I use
> > semi-rigid 0.141 coax, not RG-316.
>
> >>I'm sure this yagi will simply
> >>use a similar series coax balun.
>
> > I'm not so sure. The photos on the MFJ web pile seem to be
> > intentionally tiny and obscure. Looks like considerable effort was
> > made to hide the method of construction. This is the best photo I
> > could find:

> > <http://www.permo.no/MFJ/MFJ-1800.jpg>
> > I can't really see what's going on, much less have enough info to
> > create an NEC2 model. In addition, I'm more than a little suspicious
> > of what looks like about 1/2" of exposed coax center conductor at the
> > center pin of the "N"(?) connector. That's an inductor and radiator,
> > which are not very clever design or construction.
>
> I'll try to get a better picture of the feedpoint for you.
>   Is there a way to work the .66 wavelength of 50 ohm cable backwards ie.
> What impedance would be transformed to 50 ohms with .66 wavelength of
> 50 ohm coax?

the one and only answer is of course: 50ohms.

2949. Fos sale or swap

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-08 20:51:39 UTC
From: Michael <mbucci@shaw.ca>
Message-ID: <AbGJm.26387$1g6.19237@newsfe10.iad>
Source record: 12161

I have a 5/8 wave 136 - 230 Mhz, looking for something 2.4 2.5 Ghz.

mbucci@shaw.ca

2950. Re: Rebellion on NEC programs

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-08 20:56:15 UTC
From: Dave <k1ttt@arrl.net>
Message-ID: <0aa10fe7-0dd0-4f5d-9fee-504bbfcb73b9@l13g2000yqb.googlegroups.com>
Source record: 12162

On Nov 8, 7:38 pm, Art Unwin <arthurun...@gmail.com> wrote:
> On Nov 8, 12:41 pm, Jeff Liebermann <je...@cruzio.com> wrote:
>
>
>
>
>
> > On Sun, 8 Nov 2009 08:24:50 -0800 (PST), Art Unwin
>
> > <arthurun...@gmail.com> wrote:
> > >So what does the future hold for those here with an interest in
> > >antennas as the title of this forum implies?
>
> > Without calculations, math, engineering, and modeling, you can return
> > to the days of trial by combat, proof by assertion, cut-n-try, claims
> > of amazing performance, irreproducible results, witchcraft, magic,
> > etc.
>
> > Granted, there are limitations to NEC2 modeling software.
> > <http://en.wikipedia.org/wiki/Numerical_Electromagnetics_Code#Limitations>
> > Rather than abandon years of work simply because you have invented an
> > antenna that cannot be visualized, optimized, modeled, seen or
> > demonstrated, a more productive solution to your problem would be to
> > find (or write) a suitable modeling program that would quantify your
> > "mesh" antenna. If you find that NEC2 or NEC4 based programs are
> > unsuitable for your purpose, there may be specialized programs that
> > may work.
>
> > --
> > Jeff Liebermann   je...@cruzio.com
> > 150 Felker St #D   http://www.LearnByDestroying.com
> > Santa Cruz CA 95060http://802.11junk.com
> > Skype: JeffLiebermann   AE6KS   831-336-2558
>
> In the mean time those you recognise errant sciences when they see
> them dominate over all others who choose not to question their
> perceptability of total forsight of what is right and what is wrong.

what does that sentence mean? can anyone provide a translation
please?

> It is not my problem, as you say, because I didn't write a program
> that would win the day, the programs are already there. It is just at
> this time the naysayers have the forsight to say what is wrong which
> requires rebellion against that which say what is correct.

again, is there a google translator that will help with this?

> Personaly I believe there is progress in designing a radiator that
> recognises CW and CCW
> transmissions that provides choice in selection of what polarization
> is used. After all hams wish to communicate with all and have no wish
> to be left out because of the poor choice of antenna to use.

There are many antennas that discriminate between polarizations.
Satellite antennas often have CW or CCW switchable polarizations.
There used to be some 11m beams that had vertical, horizontal, or
circular selections. It is relatively easy to do vertical/horizontal/
cw/ccw with a pair of crossed yagis or just crossed dipole elements
and 1/4 wave phasing lines.

>   For the same radiator to be useable on all frequencies that we
> are not licensed to use is purely academic to our interests tho for
> the sake of science and the art of antennas the possibilities of what
> is perceived to be a discovery should be pushed aside
> on the basis of those that recognise what is bad based on what they
> perceive to have seen.

say what? i give up, seems to be a big rant about something that
doesn't make much sense.

>   The real problem today is that what we have accepted as good for
> antennas ala NEC computer programs is not being accepted as viable by
> those who have visual forsight that takes precidence over the science
> of NEC programs and physics of the dayare using the volume level of
> their voices to persuade all to denounce same.
>   With this aproach being gradually accepted by those who remain
> silent we are being pushed back to personal antenna measurement which
> allows for assertions of incorrect use of testing which in effect
> gives credence with hams that for antennas all is really known! After
> all, it suggests that if mesh radiators were able to transmit all
> amatuers would be using them, when they are not! Thus the naysayers
> with undeniable visual forsight must be correct!
>   So now amateurs are on a roll having "proved that short circuits
> occur when using mesh via naysayers from both sides of the pond, who
> can now dismiss with confidence the demise of helical antenna design
> change having convinced all that NEC programs have now been shown as
> defective. Next the idea will prevail that sunspots are there in
> abundance but cannot be utelized while hams continue to use radiators
> that naysayers, using the same "ability to recognize pornography" when
> "they" see it, use the same abilities
> to recognise psuedo sciences to deny those that pursue experimentation
> to achieve the
> possibility of advances in the hobby.
>   Now it is labelled "my problem"..... (Yes Aussie, I am the
> ART that they usually attack), as it was for all the previous
> knowledgable hams with respect to science and antennas that fled
> rather than argue with those that belong to the "no" group which have
> the louder audibles that rule this group.- Hide quoted text -

>
> - Show quoted text -

2951. Re: Rebellion on NEC programs

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-08 20:57:20 UTC
From: Dave <k1ttt@arrl.net>
Message-ID: <5734622c-dac2-487e-9c0f-6226fa692291@d5g2000yqm.googlegroups.com>
Source record: 12163

On Nov 8, 8:26 pm, Richard Clark <kb7...@comcast.net> wrote:
> On Sun, 08 Nov 2009 10:41:10 -0800, Jeff Liebermann <je...@cruzio.com>
> wrote:
>
> >Without calculations, math, engineering, and modeling, you can return
> >to the days of trial by combat, proof by assertion, cut-n-try, claims
> >of amazing performance, irreproducible results, witchcraft, magic,
> >etc.
>
> For Art, it has long been proven through auto de fé and in his honour
> (sic) this forum should be renamed religious.radio.amateur.antenna.
>
> 73's
> Richard Clark, KB7QHC

is that what this is, some kind of religious ranting? reminds me of
fracky and his 'all antennas are fractal' and trying to claim he
invented them all.

2952. Re: Matching impedance with coax

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-08 22:33:19 UTC
From: Jeff Liebermann <jeffl@cruzio.com>
Message-ID: <omfef51peeits818nlhn8mom5cq0g77pma@4ax.com>
Source record: 12164
Cross-posted to: alt.internet.wireless,rec.radio.amateur.antenna

On Sun, 8 Nov 2009 11:25:01 -0600, "amdx" <amdx@knology.net> wrote:
>> I'll try to get a better picture of the feedpoint for you.
>> Here's a link to a picture.
>http://i395.photobucket.com/albums/pp37/Qmavam/MFJCollage.jpg
> Mike

You moved resulting in the one area of interest, near the coax connector, being difficult to see. Can you try again, this time not moving? Extra credit for putting a piece of graph paper under the antenna so I extract dimensions.

The point I was trying to make is that the fairly long and exposed leads at the connector, are perfectly acceptable for low frequencies (HF) but are NOT acceptable for microwave work at 2.4GHz. The exposed wires are inductors and/or radiators. My guess is there's a total of about 4mm of exposed conductor. With a wavelength of 12.5mm, that's 1/3 of a wavelength. Before hitting the balun (or whatever that's suppose to be), most of the RF will be radiated by the exposed section of the coax, not the antenna.

I'm not an expert on baluns, but that thing doesn't look right. The coax cable forms a balun, but the ferrite cores aren't involved except to do block any RF coming back along the outside of the coax. My guess(tm), is that the designer attempted to design the folded dipole feed for 50 ohms, but discovered that the VSWR was far too high. So, rather than move the feed impedance up to the more common 200 or 300 ohms, and use a 4:1 balun/xformer, he just shoved a bunch of ferrite beads around the coax in order to "fix" the VSWR problem. It's not really fixed or even matched. It just doesn't show any VSWR. The real VSWR, measured at the feed point, is probably quite high.

>> Is there a way to work the .66 wavelength of 50 ohm cable backwards ie.
>> What impedance would be transformed to 50 ohms with .66 wavelength of
>> 50 ohm coax?

50 ohms. If the source, load, and coax are all 50 ohms, then there's no transformation. You can use any length of 50 ohm coax and it will still be 50 ohms in and out. Of course, we're assuming that the MJF-1800 uses 50 ohm coax, not 75 ohm, which would be another story.

>> (this assumes the little knowledge I have about impedance transformation
>> using
>> coax is correct.)

One must suffer before enlightenment. Let's pretend that it's 75 ohm coax instead of 50 ohms. Let's also ignore the sloppy exposed conductors at the RF connector. Let's also assume that we don't really know the impedance of the folded dipole fed antenna. Unfortunately, I also have to assume that your 0.66 wavelength doesn't include the velocity factor for the coax making it closer to 0.75 wavelengths (so I can do this without dragging out the Smith Chart). Odd multiples of 1/4 wavelength will neatly transform the endpoint impedances according to:
Zcoax = sqrt (Zin * Zout)
or
Zcoax^2 = Zin * Zout
So, with a 50 ohm load, 75 ohm coax, and 3/4 wavelengths of coax:
Zout = 112.5 ohms
which is a bit closer to what I would expect to see with a folded dipole antenna.
<http://www.antennex.com/preview/New/quarter.htm>
The designer could have also done it with 93 ohm coax, but the photo doesn't look like RG-62/u. However, if he had, it would transform to 173 ohms, which is quite close to a folded dipole.

Bottom line.
I'm not thrilled with the design or construction of the MFJ-1800.

--
Jeff Liebermann jeffl@cruzio.com
150 Felker St #D http://www.LearnByDestroying.com
Santa Cruz CA 95060 http://802.11junk.com
Skype: JeffLiebermann AE6KS 831-336-2558

2953. Re: Matching impedance with coax

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-08 22:47:10 UTC
From: amdx <amdx@knology.net>
Message-ID: <2c76f$4af74a73$d8baf3ed$25661@KNOLOGY.NET>
Source record: 12165
Cross-posted to: alt.internet.wireless,rec.radio.amateur.antenna

"Richard Clark" <kb7qhc@comcast.net> wrote in message
news:hgaef5dmnl5eqj70mbqkr17spuhv3555ep@4ax.com...
> On Sun, 8 Nov 2009 11:25:01 -0600, "amdx" <amdx@knology.net> wrote:
>
>>> I'll try to get a better picture of the feedpoint for you.
>>> Is there a way to work the .66 wavelength of 50 ohm cable backwards
>>> ie.
>>> What impedance would be transformed to 50 ohms with .66 wavelength of
>>> 50 ohm coax?
>>> (this assumes the little knowledge I have about impedance transformation
>>> using
>>> coax is correct.)
>>> Mike
>>>
>>> Here's a link to a picture.
>>http://i395.photobucket.com/albums/pp37/Qmavam/MFJCollage.jpg
>> Mike
>>
>
> Hi Mike,
>
> That is a pretty good rendering given the other pix. Have you any
> experience with Smith Charts? Still, and all, you need to know the Z
> of at least one point to transform to another.
>
> 73's
> Richard Clark, KB7QHC

They should have been better, those are pictures I took a couple of years
ago.
I didn't blowup someone elses pictures.
Re: "you need to know the Z of at least one point to transform to another."
I would be happy with the assumption the the impedance at the N connector
is 50 ohms. But I think I have a misunderstanding because, in use you would
add more 50 ohm coax to run from the N connector to the transmiter. Soo,
that .66
wavelength section on the antenna becomes anything you add to it.
AT this point, I have to think the folded loop is forced down to 50 ohms by
it's
surrounding structures and there is no impedance transformation betwen the
loop
and the N connector.
Mike

2954. Re: Rebellion on NEC programs

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-08 23:00:47 UTC
From: Jeff Liebermann <jeffl@cruzio.com>
Message-ID: <ohief5tbdgie0snqjg3r3g8144jquouj1a@4ax.com>
Source record: 12167

On Sun, 08 Nov 2009 12:26:14 -0800, Richard Clark <kb7qhc@comcast.net>
wrote:

>On Sun, 08 Nov 2009 10:41:10 -0800, Jeff Liebermann <jeffl@cruzio.com>
>wrote:
>
>>Without calculations, math, engineering, and modeling, you can return
>>to the days of trial by combat, proof by assertion, cut-n-try, claims
>>of amazing performance, irreproducible results, witchcraft, magic,
>>etc.
>
>For Art, it has long been proven through auto de fi¿½ and in his honour
>(sic) this forum should be renamed religious.radio.amateur.antenna.

I intentionally left out religion, congressional action, hucksterism,
fluoridation, and collectivism from my list of what might happen
without proper antenna calculations. These are all functional
alternatives to doing the numbers, but also have serious social and
political difficulties.

Also, there is religion in ham radio. Once a year, during the last
weekend in June, a horde of antenna worshipers ascend to the nearest
mountain top and erect monumental temporary altars in an attempt to
communicate to the radio gods their petition for more sunspots and
"good DXing". For an entire day and night, this horde will feverishly
"pound the brass" and "eat the mic" to noisily waken the radio spirits
and thus hear their petition. Yes, ham radio has religion.

--
Jeff Liebermann jeffl@cruzio.com
150 Felker St #D http://www.LearnByDestroying.com
Santa Cruz CA 95060 http://802.11junk.com
Skype: JeffLiebermann AE6KS 831-336-2558

2955. Re: an ontopic post about code

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-08 23:02:03 UTC
From: kb9rqz@yahoooo.com
Message-ID: <6fjef55072ci5bco6fq5vthmb9i0h9dnhg@4ax.com>
Source record: 12166
Cross-posted to: alt.ham-radio.vhf-uhf,rec.radio.amateur.policy,rec.radio.amateur.antenna

On Fri, 01 Dec 2006 09:36:47 -0800, John Smith
<assemblywizard@gmail.com> wrote:

>K4YZ wrote:
>> Nope.
>>
>> The IP Address and servers are complete proof that I do NOT share
>> any annonymous character's "address".
>>
>> Sounds like Lennie, to me....
>>
>> Steve, K4YZ
>>
>
>To anyone with even an elementary understanding of anonymous proxies,
>anonymous remailers, zombie backdoors, etc., the ability to change ones
>IP address and header details is simplistic, indeed, with little time
>spent anyone can appear to be "coming" from anywhere in the world.
>
>You waste my time. Worse, you think us all idiots here. You remind me
>of the "street smart" prosecutors and defense attorneys who stack jurys
>with members of little or no technical knowledge and then call in
>"expert witnesses" and propose arguments of technical details to boggle
>their minds.
>
>You have only proven that you, yourself are either ignorant to such
>technical details, or else you are indeed street smart, I favor the
>latter in this case (however, if you in the dark about such things, 15
>minutes on google will enlighten you.)
>
>JS

"one useless man is disgrace 2 become a law firm 3 or more become a congress"
adams

woger you are a Congress all in your own head
"http://www.3ix.org/sys/aff.php?aff=7439" target="_blank"

altopia is never used by KB9RQZ
http://kb9rqz.cc.cc
http://kd8ctl.com
nor is Konstans@hotmail.com ever
btw i can be found at
17366 N River Rd

Chassel Mi

but the cowards asking lack the gut to act

2956. Re: Matching impedance with coax

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-08 23:09:45 UTC
From: Jeff Liebermann <jeffl@cruzio.com>
Message-ID: <tkjef55gmv4a62l8t0vajr9gheu9k9jm20@4ax.com>
Source record: 12168
Cross-posted to: alt.internet.wireless,rec.radio.amateur.antenna

On Sun, 08 Nov 2009 14:33:19 -0800, Jeff Liebermann <jeffl@cruzio.com>
wrote:

>The point I was trying to make is that the fairly long and exposed
>leads at the connector, are perfectly acceptable for low frequencies
>(HF) but are NOT acceptable for microwave work at 2.4GHz. The exposed
>wires are inductors and/or radiators. My guess is there's a total of
>about 4mm of exposed conductor. With a wavelength of 12.5mm, that's
>1/3 of a wavelength. Before hitting the balun (or whatever that's
>suppose to be), most of the RF will be radiated by the exposed section
>of the coax, not the antenna.

Ok, let me try again, this time while not talking on the phone, eating
lunch, and watching TV.

One wavelength at 2.4Ghz is 12.5cm. Guessing from the photo, there's
a total of about 15mm of exposed conductor. That's about 1/8th
wavelenth, which will still radiate rather badly, but not as badly as
I previously erroniously assumed.

--
Jeff Liebermann jeffl@cruzio.com
150 Felker St #D http://www.LearnByDestroying.com
Santa Cruz CA 95060 http://802.11junk.com
Skype: JeffLiebermann AE6KS 831-336-2558

2957. Re: Rebellion on NEC programs

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-08 23:32:27 UTC
From: Richard Fry <rfry@adams.net>
Message-ID: <c33f3295-8a70-40e1-a84a-aa598413dd9a@m26g2000yqb.googlegroups.com>
Source record: 12169

On Nov 8, 10:24 am, Art Unwin <arthurun...@gmail.com> wrote:
> In the days before NEC...

Note that NEC uses the research and equations of "The Masters" that (allegedly) you revere, Art -- and which have proven valid and useful for many decades prior to the appearance of NEC.

Computers using NEC software make it easier to apply such equations. But accurate results when doing so require that the NEC software is well understood, and properly used for the system being modeled.

The accurate understanding, and proper use of NEC leads to valid conclusions about antenna system performance.

RF

2958. Re: Matching impedance with coax

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-09 00:11:42 UTC
From: atec7 7 <"atec 77"@hotmail.com>
Message-ID: <hd7mo5qod1@news.eternal-september.org>
Source record: 12170
Cross-posted to: alt.internet.wireless,rec.radio.amateur.antenna

Jeff Liebermann wrote:
> On Sun, 08 Nov 2009 14:33:19 -0800, Jeff Liebermann <jeffl@cruzio.com>
> wrote:
>
>> The point I was trying to make is that the fairly long and exposed
>> leads at the connector, are perfectly acceptable for low frequencies
>> (HF) but are NOT acceptable for microwave work at 2.4GHz. The exposed
>> wires are inductors and/or radiators. My guess is there's a total of
>> about 4mm of exposed conductor. With a wavelength of 12.5mm, that's
>> 1/3 of a wavelength. Before hitting the balun (or whatever that's
>> suppose to be), most of the RF will be radiated by the exposed section
>> of the coax, not the antenna.
>
> Ok, let me try again, this time while not talking on the phone, eating
> lunch, and watching TV.
>
> One wavelength at 2.4Ghz is 12.5cm. Guessing from the photo, there's
> a total of about 15mm of exposed conductor. That's about 1/8th
> wavelenth, which will still radiate rather badly, but not as badly as
> I previously erroniously assumed.
>
Assuming the radiator is actually resonant then the vswr doesn't really
matter but as you point out the exposed centre conductor will radiate
badly and certainly not a design to be emulated by effectively stopping
the reflected rather than matching correctly .

2959. Re: Matching impedance with coax

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-09 00:22:10 UTC
From: amdx <amdx@knology.net>
Message-ID: <4983e$4af76898$18ec6dd7$28238@KNOLOGY.NET>
Source record: 12171
Cross-posted to: alt.internet.wireless,rec.radio.amateur.antenna

"Jeff Liebermann" <jeffl@cruzio.com> wrote in message
news:omfef51peeits818nlhn8mom5cq0g77pma@4ax.com...
> On Sun, 8 Nov 2009 11:25:01 -0600, "amdx" <amdx@knology.net> wrote:
>>> I'll try to get a better picture of the feedpoint for you.
>>> Here's a link to a picture.
>>http://i395.photobucket.com/albums/pp37/Qmavam/MFJCollage.jpg
>> Mike
>
> You moved resulting in the one area of interest, near the coax
> connector, being difficult to see. Can you try again, this time not
> moving? Extra credit for putting a piece of graph paper under the
> antenna so I extract dimensions.
>

Ya sorry, I'll try again.:-0

> The point I was trying to make is that the fairly long and exposed
> leads at the connector, are perfectly acceptable for low frequencies
> (HF) but are NOT acceptable for microwave work at 2.4GHz. The exposed
> wires are inductors and/or radiators. My guess is there's a total of
> about 4mm of exposed conductor. With a wavelength of 12.5mm, that's
> 1/3 of a wavelength. Before hitting the balun (or whatever that's
> suppose to be), most of the RF will be radiated by the exposed section
> of the coax, not the antenna.
>
> I'm not an expert on baluns, but that thing doesn't look right. The
> coax cable forms a balun, but the ferrite cores aren't involved except
> to do block any RF coming back along the outside of the coax. My
> guess(tm), is that the designer attempted to design the folded dipole
> feed for 50 ohms, but discovered that the VSWR was far too high. So,
> rather than move the feed impedance up to the more common 200 or 300
> ohms, and use a 4:1 balun/xformer, he just shoved a bunch of ferrite
> beads around the coax in order to "fix" the VSWR problem. It's not
> really fixed or even matched. It just doesn't show any VSWR. The
> real VSWR, measured at the feed point, is probably quite high.
>
>>> Is there a way to work the .66 wavelength of 50 ohm cable backwards ie.
>>> What impedance would be transformed to 50 ohms with .66 wavelength of
>>> 50 ohm coax?
>
> 50 ohms. If the source, load, and coax are all 50 ohms, then there's
> no transformation. You can use any length of 50 ohm coax and it will
> still be 50 ohms in and out. Of course, we're assuming that the
> MJF-1800 uses 50 ohm coax, not 75 ohm, which would be another story.

>

I used a program that calculated impedance using OD of the center
conductor and
ID of the shield and VF of .66, That was a guess, it looks looks PE in the
core.

>>> (this assumes the little knowledge I have about impedance transformation
>>> using
>>> coax is correct.)
>
> One must suffer before enlightenment. Let's pretend that it's 75 ohm
> coax instead of 50 ohms. Let's also ignore the sloppy exposed
> conductors at the RF connector. Let's also assume that we don't
> really know the impedance of the folded dipole fed antenna.
> Unfortunately, I also have to assume that your 0.66 wavelength doesn't
include the velocity factor

I did figure in VF so .66 the proper figure to use. I know, both .66
but that was a coincidence, just the way the numbers crunched.

for the coax making it closer to 0.75
> wavelengths (so I can do this without dragging out the Smith Chart).
> Odd multiples of 1/4 wavelength will neatly transform the endpoint
> impedances according to:
> Zcoax = sqrt (Zin * Zout)
> or
> Zcoax^2 = Zin * Zout
> So, with a 50 ohm load, 75 ohm coax, and 3/4 wavelengths of coax:
> Zout = 112.5 ohms
> which is a bit closer to what I would expect to see with a folded
> dipole antenna.
> <http://www.antennex.com/preview/New/quarter.htm>
> The designer could have also done it with 93 ohm coax, but the photo
> doesn't look like RG-62/u. However, if he had, it would transform to
> 173 ohms, which is quite close to a folded dipole.
>
> Bottom line.
> I'm not thrilled with the design or construction of the MFJ-1800.

>
> --
> Jeff Liebermann jeffl@cruzio.com
> 150 Felker St #D http://www.LearnByDestroying.com
> Santa Cruz CA 95060 http://802.11junk.com
> Skype: JeffLiebermann AE6KS 831-336-2558

2960. Re: Matching impedance with coax

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-09 01:06:15 UTC
From: dplatt@radagast.org
Message-ID: <7h6ks6-67k.ln1@radagast.org>
Source record: 12173
Cross-posted to: alt.internet.wireless,rec.radio.amateur.antenna

In article <60c03$4af6e83f$d8baf3ed$6761@KNOLOGY.NET>,
amdx <amdx@knology.net> wrote:

> I'll try to get a better picture of the feedpoint for you.
> Is there a way to work the .66 wavelength of 50 ohm cable backwards ie.
>What impedance would be transformed to 50 ohms with .66 wavelength of
>50 ohm coax?

50 ohms! No impedance transformation would occur.

--
Dave Platt <dplatt@radagast.org> AE6EO
Friends of Jade Warrior home page: http://www.radagast.org/jade-warrior
I do _not_ wish to receive unsolicited commercial email, and I will
boycott any company which has the gall to send me such ads!

2961. Re: Matching impedance with coax

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-09 01:06:49 UTC
From: amdx <amdx@knology.net>
Message-ID: <3b7ec$4af76b22$18ec6dd7$29306@KNOLOGY.NET>
Source record: 12172
Cross-posted to: alt.internet.wireless,rec.radio.amateur.antenna

"Jeff Liebermann" <jeffl@cruzio.com> wrote in message
news:omfef51peeits818nlhn8mom5cq0g77pma@4ax.com...
> On Sun, 8 Nov 2009 11:25:01 -0600, "amdx" <amdx@knology.net> wrote:
>>> I'll try to get a better picture of the feedpoint for you.
>>> Here's a link to a picture.
>>http://i395.photobucket.com/albums/pp37/Qmavam/MFJCollage.jpg
>> Mike
>
> You moved resulting in the one area of interest, near the coax
> connector, being difficult to see. Can you try again, this time not
> moving? Extra credit for putting a piece of graph paper under the
> antenna so I extract dimensions.
>
> The point I was trying to make is that the fairly long and exposed
> leads at the connector, are perfectly acceptable for low frequencies
> (HF) but are NOT acceptable for microwave work at 2.4GHz. The exposed
> wires are inductors and/or radiators. My guess is there's a total of
> about 4mm of exposed conductor. With a wavelength of 12.5mm, that's
> 1/3 of a wavelength. Before hitting the balun (or whatever that's
> suppose to be), most of the RF will be radiated by the exposed section
> of the coax, not the antenna.
>
> I'm not an expert on baluns, but that thing doesn't look right. The
> coax cable forms a balun, but the ferrite cores aren't involved except
> to do block any RF coming back along the outside of the coax. My
> guess(tm), is that the designer attempted to design the folded dipole
> feed for 50 ohms, but discovered that the VSWR was far too high. So,
> rather than move the feed impedance up to the more common 200 or 300
> ohms, and use a 4:1 balun/xformer, he just shoved a bunch of ferrite
> beads around the coax in order to "fix" the VSWR problem. It's not
> really fixed or even matched. It just doesn't show any VSWR. The
> real VSWR, measured at the feed point, is probably quite high.
>
>>> Is there a way to work the .66 wavelength of 50 ohm cable backwards ie.
>>> What impedance would be transformed to 50 ohms with .66 wavelength of
>>> 50 ohm coax?
>
> 50 ohms. If the source, load, and coax are all 50 ohms, then there's
> no transformation. You can use any length of 50 ohm coax and it will
> still be 50 ohms in and out. Of course, we're assuming that the
> MJF-1800 uses 50 ohm coax, not 75 ohm, which would be another story.
>
>>> (this assumes the little knowledge I have about impedance transformation

>>> using
>>> coax is correct.)
>
> One must suffer before enlightenment. Let's pretend that it's 75 ohm
> coax instead of 50 ohms. Let's also ignore the sloppy exposed
> conductors at the RF connector. Let's also assume that we don't
> really know the impedance of the folded dipole fed antenna.
> Unfortunately, I also have to assume that your 0.66 wavelength doesn't
> include the velocity factor for the coax making it closer to 0.75
> wavelengths (so I can do this without dragging out the Smith Chart).
> Odd multiples of 1/4 wavelength will neatly transform the endpoint
> impedances according to:
> Zcoax = sqrt (Zin * Zout)
> or
> Zcoax^2 = Zin * Zout
> So, with a 50 ohm load, 75 ohm coax, and 3/4 wavelengths of coax:
> Zout = 112.5 ohms
> which is a bit closer to what I would expect to see with a folded
> dipole antenna.
> <http://www.antennex.com/preview/New/quarter.htm>
> The designer could have also done it with 93 ohm coax, but the photo
> doesn't look like RG-62/u. However, if he had, it would transform to
> 173 ohms, which is quite close to a folded dipole.
>
> Bottom line.
> I'm not thrilled with the design or construction of the MFJ-1800.
> Jeff

Ok, here are some more pictures. If anyone is so interested that they want
to
model the antenna I'll post picures or dimensions or both of the antenna.
But not today.

http://i395.photobucket.com/albums/pp37/Qmavam/MFJLOOPConnection.jpg
http://i395.photobucket.com/albums/pp37/Qmavam/MFJLoopwithRuler.jpg
http://i395.photobucket.com/albums/pp37/Qmavam/MFJLoopwithShield.jpg
http://i395.photobucket.com/albums/pp37/Qmavam/MFJLoopEnd-1.jpg
http://i395.photobucket.com/albums/pp37/Qmavam/MFJLoopwithShield.jpg
http://i395.photobucket.com/albums/pp37/Qmavam/MFJLoopEnd.jpg

2962. Re: Rebellion on NEC programs

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-09 01:56:45 UTC
From: Tom Horne <hornetd@gmail.com>
Message-ID: <37014d01-37de-46e2-8542-32287e7847dd@31g2000vbf.googlegroups.com>
Source record: 12174

On Nov 8, 6:00 pm, Jeff Liebermann <je...@cruzio.com> wrote:
> On Sun, 08 Nov 2009 12:26:14 -0800, Richard Clark <kb7...@comcast.net>
> wrote:
>
> >On Sun, 08 Nov 2009 10:41:10 -0800, Jeff Liebermann <je...@cruzio.com>
> >wrote:
>
> >>Without calculations, math, engineering, and modeling, you can return
> >>to the days of trial by combat, proof by assertion, cut-n-try, claims
> >>of amazing performance, irreproducible results, witchcraft, magic,
> >>etc.
>
> >For Art, it has long been proven through auto de fé and in his honour
> >(sic) this forum should be renamed religious.radio.amateur.antenna.
>
> I intentionally left out religion, congressional action, hucksterism,
> fluoridation, and collectivism from my list of what might happen
> without proper antenna calculations. These are all functional
> alternatives to doing the numbers, but also have serious social and
> political difficulties.
>
> Also, there is religion in ham radio. Once a year, during the last
> weekend in June, a horde of antenna worshipers ascend to the nearest
> mountain top and erect monumental temporary altars in an attempt to
> communicate to the radio gods their petition for more sunspots and
> "good DXing". For an entire day and night, this horde will feverishly
> "pound the brass" and "eat the mic" to noisily waken the radio spirits
> and thus hear their petition. Yes, ham radio has religion.
>
> --
> Jeff Liebermann   je...@cruzio.com
> 150 Felker St #D   http://www.LearnByDestroying.com
> Santa Cruz CA 95060http://802.11junk.com
> Skype: JeffLiebermann   AE6KS   831-336-2558

Is that what I was doing last field day. I could have sworn I was
putting up two jack up masts with commercial triband antennas on them
to practice radio in the field and have a little fun. How do I go
about getting my congregations ministry and worship committee to
except it as a religious retreat. The fact that we had a no alcohol
field day would get me part way there but antenna worship might come
across as idolatry to the more straight forward practitioners of more
traditional forms of religion. That brings up another item of faith.
I thought that the Amateur Radio Code specifically banned discussion

of religion via amateur radio. I take it you don't believe that simple courtesy should apply to off the air discussions of amateur radio. It's all good though you can just have the state militia band play drums around the scaffold so my heresy cannot be heard when you hang me for being the wrong religion. That worked for the puritans in Boston low these many years ago.
--
Tom Horne, W3TDH

2963. Re: Rebellion on NEC programs

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-09 01:59:24 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <rctef5tpnn47cmquej9osp6miapdaomrv1@4ax.com>
Source record: 12175

On Sun, 08 Nov 2009 15:00:47 -0800, Jeff Liebermann <jeffl@cruzio.com>
wrote:

>Yes, ham radio has religion.
and Art proclaims to be its ï¿½ssiah:
"Gauss, forgive them
for they know naught what de/do"

2964. Re: Matching impedance with coax

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-09 02:17:57 UTC
From: dplatt@radagast.org
Message-ID: <lnaks6-trk.ln1@radagast.org>
Source record: 12177
Cross-posted to: alt.internet.wireless,rec.radio.amateur.antenna

> Odd multiples of 1/4 wavelength will neatly transform the endpoint
> impedances according to:
> Zcoax = sqrt (Zin * Zout)
> or
> Zcoax^2 = Zin * Zout
> So, with a 50 ohm load, 75 ohm coax, and 3/4 wavelengths of coax:
> Zout = 112.5 ohms
> which is a bit closer to what I would expect to see with a folded
> dipole antenna.

Another thing to note: based on the pictures posted today, the DE isn't all that close to being a classic folded dipole, with close-spaced segments. The segments are much more widely spaced... it looks to be about half-way between being a folded dipole, and a one-wavelength loop such as might be used in a Quagi design.

This is going to significantly change its free-space impedance, I would think. An FD would be around 300 ohms, a one-wavelength circular or square loop would be somewhere in the general neighborhood of 100 ohms.

This DE may not need as much impedance transformation (from coax) or proximity reduction (e.g. from a reflector and one or more directors) than a classic FD would, to achieve a decent match to a 50 ohm coax.

--
Dave Platt <dplatt@radagast.org> AE6EO
Friends of Jade Warrior home page: http://www.radagast.org/jade-warrior
I do _not_ wish to receive unsolicited commercial email, and I will
boycott any company which has the gall to send me such ads!

2965. Re: Tuning 4 square elements

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-09 02:28:08 UTC
From: Tom Horne <hornetd@gmail.com>
Message-ID: <e189a5cc-86c9-42ce-be43-085caa3a9202@l2g2000yqd.googlegroups.com>
Source record: 12176

On Nov 5, 7:26 pm, Dave <k1...@arrl.net> wrote:
> On Nov 4, 3:16 am, Peter Taggart <radiostationw...@gmail.com> wrote:
>
> > Greetings:
>
> > Building a 4 square antenna system: How should I tune each
> > element? should I place a 50 ohm load on three elements   then tune
> > up one using my MFJ 259 after that element is tuned place the 50 ohm
> > load on it then tune up the next element repeat till all have been
> > tuned?
>
> > OR should I short the other three elements to the counterpoise   tune
> > the element them repeat till all have been tuned?
>
> > Or should   the three be left floating   then tune the one then
> > repeat till all have been tuned?
>
> If you are using one of the commercial hybrid phasing networks or one
> designed from the 4u1un book proceedure then the normal method is
> this:
> 1. erect ONLY one vertical with its intended ground system.
> 2. feed it with 50 ohm line and adjust length for resonance at the
> center frequency you want
> 3. replace 50 ohm line with 1/4 wave 75 ohm foam coax (must be foam or
> 1/4 wave won't reach corners of standard 1/4 wave spaced elements)
> 4. build other 3 elements identical to the first one.

Dave
Please forgive my ignorance but for the sake of my education would you
flesh out number three some more. We used a four square for the 2008
field day and I watched the construction process very carefully but I
don't recall what kind of seventy five ohm coax we used. Does using
foam coax bring the velocity factor closer to one so that the cable is
thus longer. I don't remember having any problem with the cable
lengths but I freely admit I was functioning as labor rather than
design or supervision. So maybe that had all been worked up in
advance so those of us assembling the antenna didn't have to cope with
it. I might well be putting my lack of education on display by asking
this but it is the only way I will learn. Could you not use the right
multiple of quarter waves and thus get the length you need with any
seventy five ohm cable? I realize we would have increased the
transmission line losses but would it be enough to be significant on
say forty meters. That's what our four square was built for. When we
were testing it weeks ahead of time it appeared to perform very well.

We got at least two S units better signal reports when compared with a
single vertical.
--
Tom Horne, W3TDH
--
Tom Horne, W3TDH

2966. Re: Matching impedance with coax

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-09 03:29:36 UTC
From: Jeff Liebermann <jeffl@cruzio.com>
Message-ID: <h60ff55vd3ctrjopff7m879a8i3th148ah@4ax.com>
Source record: 12178
Cross-posted to: alt.internet.wireless,rec.radio.amateur.antenna

On Sun, 8 Nov 2009 19:06:49 -0600, "amdx" <amdx@knology.net> wrote:

>Ok, here are some more pictures. If anyone is so interested that they want
>to
>model the antenna I'll post picures or dimensions or both of the antenna.
>But not today.

cm and mm if possible. The reason I suggested graph paper is that I
can usual compensate for parallax with graph paper, but not with just
a ruler.

<http://s395.photobucket.com/albums/pp37/Qmavam/>

Much more better photos. Thanks. However, I can't measure the length
of the coax "balun" with any of those pictures. I would like to check
your calcs for the 0.66 wavelengths, especially since I don't know
from where to where you measured. (Hint: from coax shield to coax
shield. Everything else is a radiator and/or series inductor).

You forgot to list one:
<http://s395.photobucket.com/albums/pp37/Qmavam/MFJNconnector.jpg>
That's 6 mm of exposed center conductor (including the center pin)
plus more at the ground lug (under the ruler). Guessing some more...
A 1mm dia wire, 6 mm long = 3.0 nH.
<http://www.consultrsr.com/resources/eis/induct5.htm>
At 2.4Ghz that's
XL = 2PiFL = 2 * 3.14 * 2.4*10^9 * 3.0*10^-9 = 45 ohms
of series reactance. With a 50 ohm "load", that's not going to help
make a very good match.

Modeling asymmetrical Yagi elements is not my idea of fun. I should
learn how to do it since I designed a similar sheet metal stamped Yagi
for 900MHz in about 1983. However, that was done with guesswork,
cut-n-try, a bit of plagiarism, and lots of midnight snarling.
Incidentally, to improve the bandwidth, it would have be trivial to
round off the ends of the elements. There are also some rather odd
effects caused by the width of the "boom", which doesn't follow the
usual round boom Yagi model. Oh well.

I can't find a photo of my stamped metal Yagi, but perhaps a
description might be interesting. I mounted a right angle N coax
connector centered on the "boom" at the driven elements and facing
towards the reflector. The driven elements were also stamped
aluminium. I used a gamma match consisting of a piston trimmer cap
mounted on one of the drive elements, and a heavy copper wire from the

cap to the center pin of the N connector. That was covered with a
clam shell plastic radome.

--
Jeff Liebermann jeffl@cruzio.com
150 Felker St #D http://www.LearnByDestroying.com
Santa Cruz CA 95060 http://802.11junk.com
Skype: JeffLiebermann AE6KS 831-336-2558

2967. Re: Matching impedance with coax

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-09 03:46:16 UTC
From: Jeff Liebermann <jeffl@cruzio.com>
Message-ID: <lb3ff5145d42onkb63faaq2jg7qvgl8eck@4ax.com>
Source record: 12179
Cross-posted to: alt.internet.wireless,rec.radio.amateur.antenna

On Mon, 09 Nov 2009 10:11:42 +1000, atec7 7 <"atec 77"@hotmail.com>
wrote:

>> One wavelength at 2.4Ghz is 12.5cm. Guessing from the photo, there's
>> a total of about 15mm of exposed conductor. That's about 1/8th
>> wavelenth, which will still radiate rather badly, but not as badly as
>> I previously erroniously assumed.

>Assuming the radiator is actually resonant then the vswr doesn't really
>matter

Wrongo. VSWR does matter. VSWR is a measure of impedance matching.
Failure to match impedances means that your antenna is no longer
working at the optimum power transfer point (i.e. maximum efficiency).
It will still work with a high VSWR, but not as well. High VSWR also
has highly undesirable side effects such as, mangled gain pattern,
radiation from undesired conductors, loss of gain, and loss of
efficiency. Resonance is a good thing, but not absolutely necessary
for proper operation. Resonance would be where the reactive
components are zero. Since I don't see any adjustment(s) to tune out
(resonate) the inductances introduced by the relatively long exposed
coax leads, I don't think this antenna is particularly close to
resonance.

>but as you point out the exposed centre conductor will radiate
>badly and certainly not a design to be emulated by effectively stopping
>the reflected rather than matching correctly .

Yep. It's like fixing the symptoms rather than fixing the source of
the problem.

--
Jeff Liebermann jeffl@cruzio.com
150 Felker St #D http://www.LearnByDestroying.com
Santa Cruz CA 95060 http://802.11junk.com
Skype: JeffLiebermann AE6KS 831-336-2558

2968. Re: Matching impedance with coax

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-09 04:11:53 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <ck4ff5pgip33f3bocpp0kg39mjp51ik8fv@4ax.com>
Source record: 12180
Cross-posted to: alt.internet.wireless,rec.radio.amateur.antenna

On Sun, 08 Nov 2009 19:46:16 -0800, Jeff Liebermann <jeffl@cruzio.com>
wrote:

> High VSWR also
>has highly undesirable side effects such as, mangled gain pattern,
>radiation from undesired conductors, loss of gain, and loss of
>efficiency. Resonance is a good thing, but not absolutely necessary
>for proper operation. Resonance would be where the reactive
>components are zero. Since I don't see any adjustment(s) to tune out
>(resonate) the inductances introduced by the relatively long exposed
>coax leads, I don't think this antenna is particularly close to
>resonance.

This is very problematic.

High SWR may be a product of unintended radiators (like the pigtail
going from the choke bead to the feed point), but far-field radiation
lobe pattern shape is NOT affected by SWR due simply to mismatch.

There's a lot going on in that statement, so I'll try it again this
way:

Added, unintended radiative elements cause mismatch AND pattern
distortion AND gain reduction (to the degree of mismatch). This is
the basis for concern about the pigtail.

A perfectly implemented design that presents an Z other than that
expected (mismatch) causes gain reduction (to the degree of mismatch).
The pattern's shape is not altered except that its gain values at any
angle are depressed equally by the degree of mismatch.

Resonance is desired for match AND efficiency.

Going further:

The degree of pattern distortion is a complex function of this
additional pigtail radiator. There is every chance that it won't
perturb the pattern much unless you are very concerned about nulling
out interfering sources. It probably won't affect the match much
either as the driven element Z will probably swamp out the
contribution from the pigtail Z.

73's
Richard Clark, KB7QHC

2969. Re: Rebellion on NEC programs

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-09 04:49:49 UTC
From: Jeff Liebermann <jeffl@cruzio.com>
Message-ID: <6g5ff5l7k1thcfdfp744p5a520ktuabm5u@4ax.com>
Source record: 12181

On Sun, 8 Nov 2009 17:56:45 -0800 (PST), Tom Horne <hornetd@gmail.com>
wrote:

>On Nov 8, 6:00ï¿½pm, Jeff Liebermann <je...@cruzio.com> wrote:
>> Also, there is religion in ham radio. ï¿½Once a year, during the last
>> weekend in June, a horde of antenna worshipers ascend to the nearest
>> mountain top and erect monumental temporary altars in an attempt to
>> communicate to the radio gods their petition for more sunspots and
>> "good DXing". ï¿½For an entire day and night, this horde will feverishly
>> "pound the brass" and "eat the mic" to noisily waken the radio spirits
>> and thus hear their petition. ï¿½Yes, ham radio has religion.

>Is that what I was doing last field day.

Possibly yes. The reason behind Field Day and the origin of the term
"ham" have been lost to antiquity. In the past, they had some
meaningful purpose, but over the ages, all we have left is the ritual.
At some point, there possibly was a real and useful purpose to the
ritual of climbing mountains, erecting antennas, and chanting arcane
acronyms and cryptic abbreviations into the radios. As with
archeology, anything that cannot be explained is automatically
attributed to a religious purpose. Archeologists have excavated many
a brothel and erroneously proclaimed it an ancient temple. So it is
with Field Day. Lacking a suitable alternative explanation for such
unproductive and irrational behavior (other than mass insanity), the
only logical purpose for Field Day can be religious in nature.

>I could have sworn I was
>putting up two jack up masts with commercial triband antennas on them
>to practice radio in the field and have a little fun.

If you were having fun, it is not religion. Religion requires
suffering. In future Field Days, I suggest you attempt something more
ambitious, such as running on bicycle generator power. That should
make it a real religious experience.

>How do I go
>about getting my congregations ministry and worship committee to
>except it as a religious retreat.

You can't. Established religions do not recognize pagan rituals and
derivative practices. I'm afraid that Field Day apparently had its
origins in the former, which are an anathema to the established
religions. The only reason there hasn't been a crusade against ham
radio and its Field Day ceremony is that much of the symbology is
similar to those of the established religions. Next time you erect a

mast with cross arm, ask yourself of what it resembles.

>The fact that we had a no alcohol
>field day would get me part way there

We tried a 50-50 alcohol gasoline mix in the generator. Bad idea.

>but antenna worship might come
>across as idolatry to the more straight forward practitioners of more
>traditional forms of religion.

I don't think that will be a problem. For example, I offer a silent prayer every time I use the ATM banking machine, hoping there will be some cash left in my account. Yet, nobody has accused me of worshiping the ATM banking machine. Similarly, nobody has ever suggested that you are worshiping your radio or antenna. Well, maybe the Collins S Line collectors may be an exception. As long as the radio deity is invisible, uniformly distributed through the cosmos, and can survive an audit, there shouldn't be a problem.

>That brings up another item of faith.
>I thought that the Amateur Radio Code specifically banned
>discussion of religion via amateur radio.

Well, perhaps religious discussions using code may be banned, but I don't recall any such thing for other modes. Little wonder the FCC dropped the code requirement. I've often suspected that the original founders of ham radio were all attorneys, since possession of a ham license also seems to entitle one to offer legal opinions and interpretations.

>I take it you don't believe that
>simple courtesy should apply to off the air discussions of amateur
>radio.

Yep. I prefer complex courtesy. The problem with most over the air discussions is that it's impossible to have a discussion, simple or otherwise. The cause is also lost in antiquity. At some point in the distant past, it was necessary to repeat ones transmission several times due to interference, fading, and static. This was probably the case with spark gap (the original broadband initiative). Like Field Day, the purpose was lost in antiquity, leaving use with long winded blow hards repeating themselves endlessly. Unless you want to engage in multi-hour long conversations, the average conversation more closely resembles a monolog. It's really difficult to be discourteous if the listener has gone to watch TV waiting for their turn.

The problem was recognized long ago. The answer is contesting. The contesting solution resulted in the opposite extreme. A conversation consists of call sign, signal report, and some trivial identifier. Courtesy and contesting are oxymorons, as it's almost impossible to win a contest by being courteous. The exercise sounds more like jamming than discourse. Contesting is not a solution to the courtesy

problem.

The digital modes have their own answer. Most conversations are computer to computer. The dialogs are canned and carefully word processed into political correctness. I don't know anyone that has insulting macros saved in the PSK31 program. Digital modes have simple courtesy, but also kinda dry conversations.

>It's all good though you can just have the state militia band
>play drums around the scaffold so my heresy cannot be heard when you
>hang me for being the wrong religion. That worked for the puritans in
>Boston low these many years ago.

That used to be the case up to about 10 years ago before cable TV, satellite TV, and CC&R's. Operating during prime time would result in the neighbors organizing a torch light parade to your doorstep, complaining of TVI, and offering to lynch the offender by his own antenna tower. I think you're fairly safe today, especially with todays QRP radios, which can easily be hidden when the torch light parade arrives.

--
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Skype: JeffLiebermann AE6KS 831-336-2558

2970. Re: Matching impedance with coax

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-09 05:09:27 UTC
From: Jeff Liebermann <jeffl@cruzio.com>
Message-ID: <de8ff59o14v8343idb51s4igt8602hps84@4ax.com>
Source record: 12182
Cross-posted to: alt.internet.wireless,rec.radio.amateur.antenna

On Sun, 08 Nov 2009 20:11:53 -0800, Richard Clark <kb7qhc@comcast.net>
wrote:

>On Sun, 08 Nov 2009 19:46:16 -0800, Jeff Liebermann <jeffl@cruzio.com>
>wrote:
>
>> High VSWR also
>>has highly undesirable side effects such as, mangled gain pattern,
>>radiation from undesired conductors, loss of gain, and loss of
>>efficiency. Resonance is a good thing, but not absolutely necessary
>>for proper operation. Resonance would be where the reactive
>>components are zero. Since I don't see any adjustment(s) to tune out
>>(resonate) the inductances introduced by the relatively long exposed
>>coax leads, I don't think this antenna is particularly close to
>>resonance.

>This is very problematic.

Groan. Now, where did I screw up?

>High SWR may be a product of unintended radiators (like the pigtail
>going from the choke bead to the feed point), but far-field radiation
>lobe pattern shape is NOT affected by SWR due simply to mismatch.

Agreed. However, I was thinking that the added inductances at both
ends of the coax are going to mangle the function of the balun, which
will create pattern changes.

>There's a lot going on in that statement, so I'll try it again this
>way:
>
>Added, unintended radiative elements cause mismatch AND pattern
>distortion AND gain reduction (to the degree of mismatch). This is
>the basis for concern about the pigtail.

Yep.

>A perfectly implemented design that presents an Z other than that
>expected (mismatch) causes gain reduction (to the degree of mismatch).
>The pattern's shape is not altered except that its gain values at any
>angle are depressed equally by the degree of mismatch.

Well, I previous guestimated that the 6 mm of exposed center conductor
at the coax connector was good for about 3 nH or about 45 ohms at
2.4Ghz. If the balun represents 50 ohms from the antenna, then the RF
power is roughly split evenly between being radiated by the 6 mm

"leak" and going to the antenna or connector. Its close proximity to the driven element and reflector suggests that there may be considerable re-radiation.

(I'm resisting the temptation to borrow or by an MFJ-1800 antenna and bench test it.)

>Resonance is desired for match AND efficiency.
>
>Going further:
>
>The degree of pattern distortion is a complex function of this
>additional pigtail radiator. There is every chance that it won't
>perturb the pattern much unless you are very concerned about nulling
>out interfering sources.

True if the "leak" is far away from the driven element. In this case, it's fairly close. I would expect some coupling and therefore some pattern distortion.

>It probably won't affect the match much
>either as the driven element Z will probably swamp out the
>contribution from the pigtail Z.

45 ohms reactance in series with the antenna is certainly going to do bad things to the VSWR. For it to be at resonance, there has to be a tuning cazapitor in there somewhere to tune out this added inductance.

--
Jeff Liebermann jeffl@cruzio.com
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Santa Cruz CA 95060 http://802.11junk.com
Skype: JeffLiebermann AE6KS 831-336-2558

2971. Re: Matching impedance with coax

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-09 05:38:08 UTC
From: Jeff Liebermann <jeffl@cruzio.com>
Message-ID: <l39ff5pvl38608gt95lmjdpoh22h3vrh13@4ax.com>
Source record: 12183
Cross-posted to: alt.internet.wireless,rec.radio.amateur.antenna

On Sun, 8 Nov 2009 18:17:57 -0800, dplatt@radagast.org (Dave Platt)
wrote:

>> Odd multiples of 1/4 wavelength will neatly transform the endpoint
>> impedances according to:
>> Zcoax = sqrt (Zin * Zout)
>> or
>> Zcoax^2 = Zin * Zout
>> So, with a 50 ohm load, 75 ohm coax, and 3/4 wavelengths of coax:
>> Zout = 112.5 ohms
>> which is a bit closer to what I would expect to see with a folded
>> dipole antenna.
>
>Another thing to note: based on the pictures posted today, the DE
>isn't all that close to being a classic folded dipole, with
>close-spaced segments. The segments are much more widely spaced... it
>looks to be about half-way between being a folded dipole, and a
>one-wavelength loop such as might be used in a Quagi design.

Good point. It does look a little on the short size for a folded
dipole. I also noticed that there's a plastic insulator at the
midpoint of the driven element. The midpoint can be at ground
potential with either a folded dipole or full wave loop, but this
design goes out of its way to use an insulated spacer. The only
reason I could think it would be necessary is if the balun isn't quite
balanced and grounding the midpoint sorta fixes half the driven
elements mismatch.

This is how a typical 1 wavelength loop Yagi driven element is usually
built:
<http://www.directivesystems.com/loopyagi.htm>
Notice the lack of a balun, exposed wires and ferrite beads.

>This is going to significantly change its free-space impedance, I
>would think. An FD would be around 300 ohms, a one-wavelength
>circular or square loop would be somewhere in the general neighborhood
>of 100 ohms.

Well, the wire length of a full wave loop and a folded dipole are
roughly the same. The way a folded dipole works is that you start
with a 1/2 wave 72 ohm dipole. Adding the extra wire creates a 4:1
transformer, resulting in 4*72 = 288 ohms.
<http://www.qsl.net/w4sat/fdipole.htm>
Take the same folded dipole and spread the 4ea 1/4 wave sides into a
square or circle, and the impedance changes to about 100 ohms. Off

hand, I would guess that the MFJ-1800 DE is about half way in between
a folded dipole and a loop at perhaps 150-175 ohms.

>This DE may not need as much impedance transformation (from coax) or
>proximity reduction (e.g. from a reflector and one or more directors)
>than a classic FD would, to achieve a decent match to a 50 ohm coax.

Agreed. The question of the moment is whether the MFJ-1800 balun is
50, 75, or 93 ohm coax and its length (shield to shield).

--
Jeff Liebermann jeffl@cruzio.com
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Santa Cruz CA 95060 http://802.11junk.com
Skype: JeffLiebermann AE6KS 831-336-2558

2972. Re: Matching impedance with coax

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-09 08:20:26 UTC
From: atec7 7 <"atec 77"@hotmail.com>
Message-ID: <hd8jch$r2b$1@news.eternal-september.org>
Source record: 12184
Cross-posted to: alt.internet.wireless,rec.radio.amateur.antenna

Jeff Liebermann wrote:
> On Mon, 09 Nov 2009 10:11:42 +1000, atec7 7 <"atec 77"@hotmail.com>
> wrote:
>
>>> One wavelength at 2.4Ghz is 12.5cm. Guessing from the photo, there's
>>> a total of about 15mm of exposed conductor. That's about 1/8th
>>> wavelenth, which will still radiate rather badly, but not as badly as
>>> I previously erroniously assumed.
>
>> Assuming the radiator is actually resonant then the vswr doesn't really
>> matter
>
> Wrongo. VSWR does matter.
Depends on the feed method long as the maximum transfer of enegy takes
place
I remember as a youngster open feeder balanced into the back of the
old tube tx , still use open feeder today with good success
VSWR is a measure of impedance matching.

take a breath son getting excited can be bad for the heart on old blokes
like us

> Failure to match impedances means that your antenna is no longer
> working at the optimum power transfer point (i.e. maximum efficiency).
> It will still work with a high VSWR, but not as well. High VSWR also
> has highly undesirable side effects such as, mangled gain pattern,
> radiation from undesired conductors, loss of gain, and loss of
> efficiency. Resonance is a good thing, but not absolutely necessary
> for proper operation. Resonance would be where the reactive
> components are zero.
yes BUT it may not offer a good match no ?

Since I don't see any adjustment(s) to tune out
> (resonate) the inductances introduced by the relatively long exposed
> coax leads, I don't think this antenna is particularly close to
> resonance.
The radiator may dip fine but the energy transffered will be radiated
badly into the ether I suspect
>
>> but as you point out the exposed centre conductor will radiate
>> badly and certainly not a design to be emulated by effectively stopping
>> the reflected rather than matching correctly .
>
> Yep. It's like fixing the symptoms rather than fixing the source of

> the problem.
Agreed , the manner of feeding also happens to radiate which of course
is bad as I did some testing a while back on some commerial yagi's and
with a fiddle the actual vswr hardly changed but energy transfer was
markidly improved
>

2973. Re: Matching impedance with coax

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-09 08:53:04 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <bklff5l5416q76ghnm93a15nt42og4orop@4ax.com>
Source record: 12185
Cross-posted to: alt.internet.wireless,rec.radio.amateur.antenna

On Sun, 08 Nov 2009 21:09:27 -0800, Jeff Liebermann <jeffl@cruzio.com>
wrote:

>Well, I previous guestimated that the 6 mm of exposed center conductor
>at the coax connector was good for about 3 nH or about 45 ohms at
>2.4Ghz. If the balun represents 50 ohms from the antenna, then the RF
>power is roughly split evenly between being radiated by the 6 mm
>"leak" and going to the antenna or connector. Its close proximity to
>the driven element and reflector suggests that there may be
>considerable re-radiation.

Hi Jeff,

Actually, the inductance is shunt, not series to the drive. Look at
the drive point connection and you will see the shield/center open up
with very little dressing needed, basically that span fills the loop
creating a virtual drive point at the end of the braid. At that point
looking back towards the beads is where the shunt reactance lives.

As for its contribution to skewing the pattern, that is a function of
the match to that shunt section, and its radiation resistance.

No doubt Roy will chime in if I've jumped the tracks here.

>True if the "leak" is far away from the driven element. In this case,
>it's fairly close. I would expect some coupling and therefore some
>pattern distortion.

Coupling is certainly a confounding factor to my explanation above.

>>It probably won't affect the match much
>>either as the driven element Z will probably swamp out the
>>contribution from the pigtail Z.
>
>45 ohms reactance in series with the antenna is certainly going to do
>bad things to the VSWR. For it to be at resonance, there has to be a
>tuning cazapitor in there somewhere to tune out this added inductance.

Or in parallel.

73's
Richard Clark, KB7QHC

2974. Re: Matching impedance with coax

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-09 12:16:47 UTC
From: amdx <amdx@knology.net>
Message-ID: <c6ebb$4af80828$18ec6dd7$22058@KNOLOGY.NET>
Source record: 12186
Cross-posted to: alt.internet.wireless,rec.radio.amateur.antenna

"Jeff Liebermann" <jeffl@cruzio.com> wrote in message
news:l39ff5pvl38608gt95lmjdpoh22h3vrh13@4ax.com...
> On Sun, 8 Nov 2009 18:17:57 -0800, dplatt@radagast.org (Dave Platt)
> wrote:
>
>>> Odd multiples of 1/4 wavelength will neatly transform the endpoint
>>> impedances according to:
>>> Zcoax = sqrt (Zin * Zout)
>>> or
>>> Zcoax^2 = Zin * Zout
>>> So, with a 50 ohm load, 75 ohm coax, and 3/4 wavelengths of coax:
>>> Zout = 112.5 ohms
>>> which is a bit closer to what I would expect to see with a folded
>>> dipole antenna.
>>
>>Another thing to note: based on the pictures posted today, the DE
>>isn't all that close to being a classic folded dipole, with
>>close-spaced segments. The segments are much more widely spaced... it
>>looks to be about half-way between being a folded dipole, and a
>>one-wavelength loop such as might be used in a Quagi design.
>
> Good point. It does look a little on the short size for a folded
> dipole. I also noticed that there's a plastic insulator at the
> midpoint of the driven element. The midpoint can be at ground
> potential with either a folded dipole or full wave loop, but this
> design goes out of its way to use an insulated spacer. The only
> reason I could think it would be necessary is if the balun isn't quite
> balanced and grounding the midpoint sorta fixes half the driven
> elements mismatch.
>
> This is how a typical 1 wavelength loop Yagi driven element is usually
> built:
> <http://www.directivesystems.com/loopyagi.htm>
> Notice the lack of a balun, exposed wires and ferrite beads.
>
>>This is going to significantly change its free-space impedance, I
>>would think. An FD would be around 300 ohms, a one-wavelength
>>circular or square loop would be somewhere in the general neighborhood
>>of 100 ohms.
>
> Well, the wire length of a full wave loop and a folded dipole are
> roughly the same. The way a folded dipole works is that you start
> with a 1/2 wave 72 ohm dipole. Adding the extra wire creates a 4:1

> transformer, resulting in 4*72 = 288 ohms.
> <http://www.qsl.net/w4sat/fdipole.htm>
> Take the same folded dipole and spread the 4ea 1/4 wave sides into a
> square or circle, and the impedance changes to about 100 ohms. Off
> hand, I would guess that the MFJ-1800 DE is about half way in between
> a folded dipole and a loop at perhaps 150-175 ohms.
>
>>This DE may not need as much impedance transformation (from coax) or
>>proximity reduction (e.g. from a reflector and one or more directors)
>>than a classic FD would, to achieve a decent match to a 50 ohm coax.
>
> Agreed. The question of the moment is whether the MFJ-1800 balun is
> 50, 75, or 93 ohm coax and its length (shield to shield).
>
> --
> Jeff Liebermann jeffl@cruzio.com
> 150 Felker St #D http://www.LearnByDestroying.com
> Santa Cruz CA 95060 http://802.11junk.com
> Skype: JeffLiebermann AE6KS 831-336-2558

I remeasured the coax, (shield to shield) it is 2.135" long.
The length of the Loop is 4.85"
Got a little hurricane coming our way, need to take care
of the boat and business today. Need to drive 9 hours Tuesday,
then again on Wednesday. I hope to get dimensional pictures
posted on Thursday or Friday.
Mike

2975. Remote progr. antenna rotator AR500 - Manual

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-09 13:09:58 UTC
From: "D.K." <blabla@blabla.fr>
Message-ID: <4af814a6$0$976$ba4acef3@news.orange.fr>
Source record: 12187

Hi all,
I'm looking for the instructions manual of the "Remote Programmable Antenna Rotator AR500". I bought one at a local 2nd-hand-ham-market but I can't use it without the manual.
Has anybody a scan of it ? Or does anybody know a link to download it?
I would be very gratefull if I found any help !
Thanks a lot in advance

Dk
Normandy/France
dominique dot kremp at wanadoo dot fr

2976. Re: SMS?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-09 18:24:45 UTC
From: JoeH <JoeH.53e5776@radiobanter.com>
Message-ID: <JoeH.53e5776@radiobanter.com>
Source record: 12189

tom;692686 Wrote:
>
>
> On the screen is a dot-dot-dot, dash-dash-dash, dot-dot-dot.
>
> But the sound is di-di-dit, dah-dah, di-di-dit.[/i][/color]
>
>

I read it as "VTTS"

Joe
W2HFD

--
JoeH

2977. Re: Tuning 4 square elements

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-09 22:51:53 UTC
From: Dave <k1ttt@arrl.net>
Message-ID: <afde6cd7-a76d-479c-95cd-82e916958530@k4g2000yqb.googlegroups.com>
Source record: 12188

On Nov 9, 2:28 am, Tom Horne <horn...@gmail.com> wrote:
> On Nov 5, 7:26 pm, Dave <k1...@arrl.net> wrote:
>
>
>
>
>
> > On Nov 4, 3:16 am, Peter Taggart <radiostationw...@gmail.com> wrote:
>
> > > Greetings:
>
> > > Building a 4 square antenna system: How should I tune each
> > > element? should I place a 50 ohm load on three elements   then tune
> > > up one using my MFJ 259 after that element is tuned place the 50 ohm
> > > load on it then tune up the next element repeat till all have been
> > > tuned?
>
> > > OR should I short the other three elements to the counterpoise   tune
> > > the element them repeat till all have been tuned?
>
> > > Or should   the three be left floating   then tune the one then
> > > repeat till all have been tuned?
>
> > If you are using one of the commercial hybrid phasing networks or one
> > designed from the 4u1un book proceedure then the normal method is
> > this:
> > 1. erect ONLY one vertical with its intended ground system.
> > 2. feed it with 50 ohm line and adjust length for resonance at the
> > center frequency you want
> > 3. replace 50 ohm line with 1/4 wave 75 ohm foam coax (must be foam or
> > 1/4 wave won't reach corners of standard 1/4 wave spaced elements)
> > 4. build other 3 elements identical to the first one.
>
> Dave
> Please forgive my ignorance but for the sake of my education would you
> flesh out number three some more. We used a four square for the 2008
> field day and I watched the construction process very carefully but I
> don't recall what kind of seventy five ohm coax we used. Does using
> foam coax bring the velocity factor closer to one so that the cable is
> thus longer. I don't remember having any problem with the cable
> lengths but I freely admit I was functioning as labor rather than
> design or supervision. So maybe that had all been worked up in
> advance so those of us assembling the antenna didn't have to cope with
> it. I might well be putting my lack of education on display by asking

> this but it is the only way I will learn. Could you not use the right
> multiple of quarter waves and thus get the length you need with any
> seventy five ohm cable? I realize we would have increased the
> transmission line losses but would it be enough to be significant on
> say forty meters. That's what our four square was built for. When we
> were testing it weeks ahead of time it appeared to perform very well.
> We got at least two S units better signal reports when compared with a
> single vertical.
> --
> Tom Horne, W3TDH
> --
> Tom Horne, W3TDH- Hide quoted text -
>
> - Show quoted text -

the cable i normally use is rg-11u with foam dielectric, that gets the
velocity factor up to .78-.80 so the cable is longer to get the
required 1/4 wave. since the distance from the center to the corner
of a normal 1/4 wave spacing 4-square is .707 of a wavelength the
normal hard poly with a .66 velocity factor won't reach.

2978. Re: Matching impedance with coax

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-10 04:00:25 UTC
From: amdx <amdx@knology.net>
Message-ID: <64aad$4af8e551$18ec6dd7$31095@KNOLOGY.NET>
Source record: 12190
Cross-posted to: alt.internet.wireless,rec.radio.amateur.antenna

"Jeff Liebermann" <jeffl@cruzio.com> wrote in message
news:h60ff55vd3ctrjopff7m879a8i3th148ah@4ax.com...
> On Sun, 8 Nov 2009 19:06:49 -0600, "amdx" <amdx@knology.net> wrote:
>
>>Ok, here are some more pictures. If anyone is so interested that they want
>>to
>>model the antenna I'll post picures or dimensions or both of the antenna.
>>But not today.
>
> cm and mm if possible. The reason I suggested graph paper is that I
> can usual compensate for parallax with graph paper, but not with just
> a ruler.
>
> <http://s395.photobucket.com/albums/pp37/Qmavam/>
>
> Much more better photos. Thanks. However, I can't measure the length
> of the coax "balun" with any of those pictures. I would like to check
> your calcs for the 0.66 wavelengths, especially since I don't know
> from where to where you measured. (Hint: from coax shield to coax
> shield. Everything else is a radiator and/or series inductor).
>
> You forgot to list one:
> <http://s395.photobucket.com/albums/pp37/Qmavam/MFJNconnector.jpg>
> That's 6 mm of exposed center conductor (including the center pin)
> plus more at the ground lug (under the ruler). Guessing some more...
> A 1mm dia wire, 6 mm long = 3.0 nH.
> <http://www.consultrsr.com/resources/eis/induct5.htm>
> At 2.4Ghz that's
> XL = 2PiFL = 2 * 3.14 * 2.4*10^9 * 3.0*10^-9 = 45 ohms
> of series reactance. With a 50 ohm "load", that's not going to help
> make a very good match.
>
> Modeling asymmetrical Yagi elements is not my idea of fun. I should
> learn how to do it since I designed a similar sheet metal stamped Yagi
> for 900MHz in about 1983. However, that was done with guesswork,
> cut-n-try, a bit of plagiarism, and lots of midnight snarling.
> Incidentally, to improve the bandwidth, it would have be trivial to
> round off the ends of the elements. There are also some rather odd
> effects caused by the width of the "boom", which doesn't follow the
> usual round boom Yagi model. Oh well.
>
> I can't find a photo of my stamped metal Yagi, but perhaps a
> description might be interesting. I mounted a right angle N coax

> connector centered on the "boom" at the driven elements and facing
> towards the reflector. The driven elements were also stamped
> aluminium. I used a gamma match consisting of a piston trimmer cap
> mounted on one of the drive elements, and a heavy copper wire from the
> cap to the center pin of the N connector. That was covered with a
> clam shell plastic radome.
>
>
> --
> Jeff Liebermann jeffl@cruzio.com
> 150 Felker St #D http://www.LearnByDestroying.com
> Santa Cruz CA 95060 http://802.11junk.com
> Skype: JeffLiebermann AE6KS 831-336-2558

Here is a drawing and some more pics.
http://i395.photobucket.com/albums/pp37/Qmavam/MFJPaintFileJPG.jpg
http://i395.photobucket.com/albums/pp37/Qmavam/MFJCoaxconnection.jpg
http://i395.photobucket.com/albums/pp37/Qmavam/MFJRuledDE.jpg
http://i395.photobucket.com/albums/pp37/Qmavam/MFJruledcoax.jpg
Hope I covered everything, I'll be back on late tomorrow to check.
Mike

2979. Re: Rebellion on NEC programs

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-10 05:07:15 UTC
From: JIMMIE <JIMMIEDEE123@YAHOO.COM>
Message-ID: <9fb4a3f1-02f4-470a-8dc1-0491efc46b24@l2g2000yqd.googlegroups.com>
Source record: 12191

On Nov 8, 11:24 am, Art Unwin <arthurun...@gmail.com> wrote:
> In the days before NEC amateurs did antenna testing in the field. This
> was
> a very fruitfull area for the naysayers to argue because the attack on
> the method of testing could never have closure and the naysayers with
> the loudest voices continued to rein as the true experts with respect
> to antennas and amateurs.
> Then we had the onset of Mininec and Nec computer programs that
> initially
> was welcomed with open arms until program discrepancies began to show
> up and the naysayers began to rein supreme again. We now have the
> instance that programs are downright wrong when they cannot forecast
> the shorting actions of electricity with respect to antennas! Since
> amateurs are of different backgrounds those not knowlegable of science
> will follow the naysayer with the loudest voice who believes as with
> pornography new radio science when seen can obviously be recognised as
> a bogus technology.
>   Thus hams who desire smaller and better antennas to use in the
> hobby to compete with the bigger and better have no where to go in the
> pursuit of the truth other than self satisfaction with their own
> antenna set ups in silence, while those with the loudest voices
> continue with the mantra that all is known about antennas because the
> naysayers volume of denials of the new because of their ability to
> recognise fraud when they see it. Now we are at the point where
> naysayers have presented the arguement that antennas made of mesh
> cannot be used at radiators
> while on the other side we have a report that some hams use shopping
> carts as radiators while waiting in spacious parking lots.
>   Now, after trashing the usefulnes of NEC programs by those who
> "know" are taking on those whose experience of mesh radiators as being
> feaseable who have decided to remain meek and silent rather than face
> the wrath of those led by the loudest voice. Now the trend is to roll
> back the science teachings of Einstein, Planck and others by verbal
> agression so that a new antenna technology can emerge and slaughter
> the sciences that some profess to know as "false just by visuallizing"
> without the need for thought.
>   So what does the future hold for those here with an interest in
> antennas as the title of this forum implies?

What the heck is this all about, I thought Art was going to rant about
how hams just sit around and model antennas and never actually build
them. That would have been funny.

Jimmie

2980. Re: Multi polarization antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-10 05:45:55 UTC
From: orfus <orfus@orfus.net>
Message-ID: <p67Km.3455$dc2.1753@newsfe20.iad>
Source record: 12192

Art Unwin wrote:
> What is the best antenna for use with all circular, horizontal,
> vertical and other polarizations without drastic fall of in gain, and
> without changes in angular position and feed point via switches e.t.c
> at the tower top?

Another troll from Art ...

2981. Re: SMS?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-10 12:30:00 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <N1dKm.7808$Xf2.4311@newsfe12.iad>
Source record: 12193

JoeH wrote:
> I read it as "VTTS"

Can't be - there are only two dahs.
--
73, Cecil, IEEE, OOTC, http://www.w5dxp.com

2982. Re: Angry WHY is it spammers and assorted other trash are posted in the WRONG forums??

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-10 14:35:14 UTC
From: Michael Coslo <mjc5@psu.edu>
Message-ID: <hdbtn5$ok2k$1@tr22n12.aset.psu.edu>
Source record: 12194

n9zas wrote:

> This is RADIOBANTER.COM not politics.com or obama.com which is where
> everyone makes their first mistake!

This is rec.radio.amateur antenna. Your first mistake.

That TRASH doesn't BELONG here.

WIth all due respect. YOU are part of the noise here. You are part of the problem. You are part of the trash. Learn to use a filter, my good man. I don't see the people you are complaining about, but I see you carping about them (but not beyond this post.

> This a site for RADIO oriented articles,so why are people so dense they
> can't figure this out until someone has to break out the crayons and
> draw them a picture?? Post that crap on cnn.com or some OTHER political
> website!

> Wanna talk about RADIO then stay here,otherwise scroll to ANOTHER
> site!

What is this site scrolling you speak of?

> This sh*t is getting old! I feel like I'm explaining this to a bunch of
> damn 3rd graders!!!!
> Ok,rant mode off. F*CK IT!

Wow. Before I put you into my crazies filter, realize that your posts have been cluttering up rec.radio.amateur.antenna with every bit as much annoyance as the nut cases. Congratulations, you've made it to netnews undesirable status!

- Mike -

2983. Re: Rebellion on NEC programs

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-10 14:40:39 UTC
From: Michael Coslo <mjc5@psu.edu>
Message-ID: <hdbu17$ok2k$2@tr22n12.aset.psu.edu>
Source record: 12195

JIMMIE wrote:

> What the heck is this all about, I thought Art was going to rant about
> how hams just sit around and model antennas and never actually build
> them. That would have been funny.

Careful Jimmie, you'll upset that guy from Radiobanter.com if you don't watch it! 8^)

But the rest of you take notice, and quit hijacking Art's thread here to talk about field day. I want to hear about how NEC has it all wrong!

Sheesh!

- 73 de Mike N3LI -

2984. Re: Multi polarization antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-10 14:46:58 UTC
From: Michael Coslo <mjc5@psu.edu>
Message-ID: <hdbud2$ok2m$1@tr22n12.aset.psu.edu>
Source record: 12196

Richard Clark wrote:
>
> I've consigned Art's evacuations to the trashbin.

But he was such a good straight man for ya, Richard!

- 73 de Mike N3LI -

2985. Re: Rebellion on NEC programs

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-10 16:16:40 UTC
From: Art Unwin <arthurunwin@gmail.com>
Message-ID: <8fa1d1b4-9d0b-4e2d-a596-f6315c2228d9@g27g2000yqn.googlegroups.com>
Source record: 12197

On Nov 10, 8:40 am, Michael Coslo <m...@psu.edu> wrote:
> JIMMIE wrote:
> > What the heck is this all about, I thought Art was going to rant about
> > how hams just sit around and model antennas and never actually build
> > them. That would have been funny.
>
> Careful Jimmie, you'll upset that guy from Radiobanter.com if you don't
> watch it! 8^)
>
> But the rest of you take notice, and quit hijacking Art's thread here to
> talk about field day. I want to hear about how NEC has it all wrong!
>
> Sheesh!
>
>   - 73 de Mike N3LI -

Consensus of the group say RF applied to a mesh will short or fuse.
NEC shows that it will not and that it will radiate.
On my home page I did the same thing and got an SWR curve
Therefore Art and NEC programs have got it all wrong.
This probably means that a faraday shield will short also, but that
needs a little more
consensus from the group as it would destroy the shielding of the
innards.
Therefore the NEC programs must have it all wrong!

2986. Re: Tuning 4 square elements

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-10 17:57:40 UTC
From: Tom Horne <hornetd@gmail.com>
Message-ID: <6c4ecf0a-d1d9-4128-ae89-173f978d3a18@c3g2000yqd.googlegroups.com>
Source record: 12198

On Nov 9, 5:51 pm, Dave <k1...@arrl.net> wrote:
> On Nov 9, 2:28 am, Tom Horne <horn...@gmail.com> wrote:
>
>
>
> > On Nov 5, 7:26 pm, Dave <k1...@arrl.net> wrote:
>
> > > On Nov 4, 3:16 am, Peter Taggart <radiostationw...@gmail.com> wrote:
>
> > > > Greetings:
>
> > > > Building a 4 square antenna system: How should I tune each
> > > > element? should I place a 50 ohm load on three elements   then tune
> > > > up one using my MFJ 259 after that element is tuned place the 50 ohm
> > > > load on it then tune up the next element repeat till all have been
> > > > tuned?
>
> > > > OR should I short the other three elements to the counterpoise   tune
> > > > the element them repeat till all have been tuned?
>
> > > > Or should   the three be left floating   then tune the one then
> > > > repeat till all have been tuned?
>
> > > If you are using one of the commercial hybrid phasing networks or one
> > > designed from the 4u1un book proceedure then the normal method is
> > > this:
> > > 1. erect ONLY one vertical with its intended ground system.
> > > 2. feed it with 50 ohm line and adjust length for resonance at the
> > > center frequency you want
> > > 3. replace 50 ohm line with 1/4 wave 75 ohm foam coax (must be foam or
> > > 1/4 wave won't reach corners of standard 1/4 wave spaced elements)
> > > 4. build other 3 elements identical to the first one.
>
> > Dave
> > Please forgive my ignorance but for the sake of my education would you
> > flesh out number three some more. We used a four square for the 2008
> > field day and I watched the construction process very carefully but I
> > don't recall what kind of seventy five ohm coax we used. Does using
> > foam coax bring the velocity factor closer to one so that the cable is
> > thus longer. I don't remember having any problem with the cable
> > lengths but I freely admit I was functioning as labor rather than
> > design or supervision. So maybe that had all been worked up in
> > advance so those of us assembling the antenna didn't have to cope with
> > it. I might well be putting my lack of education on display by asking

> > this but it is the only way I will learn. Could you not use the right
> > multiple of quarter waves and thus get the length you need with any
> > seventy five ohm cable? I realize we would have increased the
> > transmission line losses but would it be enough to be significant on
> > say forty meters. That's what our four square was built for. When we
> > were testing it weeks ahead of time it appeared to perform very well.
> > We got at least two S units better signal reports when compared with a
> > single vertical.
> > --
> > Tom Horne, W3TDH
> > --
> > Tom Horne, W3TDH- Hide quoted text -
>
> > - Show quoted text -
>
> the cable i normally use is rg-11u with foam dielectric, that gets the
> velocity factor up to .78-.80 so the cable is longer to get the
> required 1/4 wave. since the distance from the center to the corner
> of a normal 1/4 wave spacing 4-square is .707 of a wavelength the
> normal hard poly with a .66 velocity factor won't reach.

Dave
So my guess was close but what about the rest of the question. Would
any odd multiple of a quarter wave work as well except for the
transmission losses it would introduce? Would three quarter waves
work?
--
Tom Horne. W3TDH

2987. Re: Multi polarization antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-10 18:06:37 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <fnajf59imnavrphecngg0906v56o9n5u70@4ax.com>
Source record: 12199

On Tue, 10 Nov 2009 09:46:58 -0500, Michael Coslo <mjc5@psu.edu>
wrote:

>Richard Clark wrote:
>>
>> I've consigned Art's evacuations to the trashbin.
>
>
>But he was such a good straight man for ya, Richard!

Hi Mike,

Careful, he might mis-interpret "straight." For him, this forum is
about sex, politics, or religion - but not science, engineering, and
certainly not antennas.

73's
Richard Clark, KB7QHC

2988. Re: Rebellion on NEC programs

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-10 18:07:59 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <juajf594ubu4arrv2sficn6mjg881m5v8q@4ax.com>
Source record: 12200

On Tue, 10 Nov 2009 09:40:39 -0500, Michael Coslo <mjc5@psu.edu>
wrote:

> I want to hear about how NEC has it all wrong!

Was that the Google translation?

73's
Richard Clark, KB7QHC

2989. Re: Rebellion on NEC programs

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-10 21:00:38 UTC
From: Richard Fry <rfry@adams.net>
Message-ID: <ec58ff7d-9bd7-4a96-81a2-64f20ab99737@g27g2000yqn.googlegroups.com>
Source record: 12101

On Nov 10, 10:16 am, Art Unwin <arthurun...@gmail.com> wrote:

> Consensus of the group say RF applied to a mesh will short or fuse.
> NEC shows that it will not and that it will radiate.

Art, did you forget about the NEC analysis linked below?

How much will your mesh antenna radiate, unless you have invented a
VERY heroic network to match it to typical transmission lines
(comments, please)?

http://i62.photobucket.com/albums/h85/rfry-100/Arts_Mesh_Antenna.jpg

RF

2990. Re: Rebellion on NEC programs

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-10 21:56:21 UTC
From: Art Unwin <arthurunwin@gmail.com>
Message-ID: <0100328e-c13a-48a1-b154-5410f8482d6f@l13g2000yqb.googlegroups.com>
Source record: 12102

On Nov 10, 3:00 pm, Richard Fry <r...@adams.net> wrote:
> On Nov 10, 10:16 am, Art Unwin <arthurun...@gmail.com> wrote:
>
> > Consensus of the group say RF applied to a mesh will short or fuse.
> > NEC shows that it will not and that it will radiate.
>
> Art, did you forget about the NEC analysis linked below?
>
> How much will your mesh antenna radiate, unless you have invented a
> VERY heroic network to match it to typical transmission lines
> (comments, please)?
>
> http://i62.photobucket.com/albums/h85/rfry-100/Arts_Mesh_Antenna.jpg
>
> RF
Actual mesh used by Art
Aluminum mesh, windows, insects
Wire dia .011", mesh 18 by 16
Per group analysis, wires will short.

Your analysis, shows it radiates
physical measurements of Art, shows radiation.

Conclusion
NEC faulty per the groups teachings
Art's actual measurements also false
per groups teachings

Future actions suggested
Repeat NEC with actual mesh sample measurements used.
Show mesh circuit currents
Apply RF to outside of actual faraday shield and document results.

2991. Re: Tuning 4 square elements

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-10 23:05:27 UTC
From: Dave <k1ttt@arrl.net>
Message-ID: <70f7566f-f178-4b03-82b8-6a0fa1d51ee0@k19g2000yqc.googlegroups.com>
Source record: 12103

```
On Nov 10, 5:57 pm, Tom Horne <horn...@gmail.com> wrote:
> On Nov 9, 5:51 pm, Dave <k1...@arrl.net> wrote:
>
>
>
>
>
> > On Nov 9, 2:28 am, Tom Horne <horn...@gmail.com> wrote:
>
> > > On Nov 5, 7:26 pm, Dave <k1...@arrl.net> wrote:
>
> > > > On Nov 4, 3:16 am, Peter Taggart <radiostationw...@gmail.com> wrote:
>
> > > > > Greetings:
>
> > > > > Building a 4 square  antenna system:    How should I tune each
> > > > > element? should I  place a 50 ohm load on three  elements    then tune
> > > > > up  one using my MFJ 259  after that element is tuned place the 50 ohm
> > > > > load on it then tune up the next  element repeat till all have been
> > > > > tuned?
>
> > > > > OR should I short the other three  elements to the counterpoise   tune
> > > > > the element them repeat till all have been tuned?
>
> > > > > Or should   the three be left floating    then tune the one then
> > > > > repeat till all have been tuned?
>
> > > > If you are using one of the commercial hybrid phasing networks or one
> > > > designed from the 4u1un book proceedure then the normal method is
> > > > this:
> > > > 1. erect ONLY one vertical with its intended ground system.
> > > > 2. feed it with 50 ohm line and adjust length for resonance at the
> > > > center frequency you want
> > > > 3. replace 50 ohm line with 1/4 wave 75 ohm foam coax (must be foam or
> > > > 1/4 wave won't reach corners of standard 1/4 wave spaced elements)
> > > > 4. build other 3 elements identical to the first one.
>
> > > Dave
> > > Please forgive my ignorance but for the sake of my education would you
> > > flesh out number three some more.  We used a four square for the 2008
> > > field day and I watched the construction process very carefully but I
> > > don't recall what kind of seventy five ohm coax we used.  Does using
> > > foam coax bring the velocity factor closer to one so that the cable is
> > > thus longer.  I don't remember having any problem with the cable
```

> > > lengths but I freely admit I was functioning as labor rather than
> > > design or supervision. So maybe that had all been worked up in
> > > advance so those of us assembling the antenna didn't have to cope with
> > > it. I might well be putting my lack of education on display by asking
> > > this but it is the only way I will learn. Could you not use the right
> > > multiple of quarter waves and thus get the length you need with any
> > > seventy five ohm cable? I realize we would have increased the
> > > transmission line losses but would it be enough to be significant on
> > > say forty meters. That's what our four square was built for. When we
> > > were testing it weeks ahead of time it appeared to perform very well.
> > > We got at least two S units better signal reports when compared with a
> > > single vertical.
> > > --
> > > Tom Horne, W3TDH
> > > --
> > > Tom Horne, W3TDH- Hide quoted text -
>
> > > - Show quoted text -
>
> > the cable i normally use is rg-11u with foam dielectric, that gets the
> > velocity factor up to .78-.80 so the cable is longer to get the
> > required 1/4 wave. since the distance from the center to the corner
> > of a normal 1/4 wave spacing 4-square is .707 of a wavelength the
> > normal hard poly with a .66 velocity factor won't reach.
>
> Dave
> So my guess was close but what about the rest of the question. Would
> any odd multiple of a quarter wave work as well except for the
> transmission losses it would introduce? Would three quarter waves
> work?
> --
> Tom Horne. W3TDH- Hide quoted text -
>
> - Show quoted text -

i 'think' so. since it adds an extra 1/2 wave delay to each of the
elements and should result in the same impedance transformation it
should work ok. it may be a bit more narrow banded since the
impedance transformation would change faster with frequency, but
probably not enough to notice.

2992. Re: Rebellion on NEC programs

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-10 23:25:40 UTC
From: Richard Fry <rfry@adams.net>
Message-ID: <4b43a73a-6355-4f7d-ad46-2e55e76650c4@k17g2000yqh.googlegroups.com>
Source record: 12104

On Nov 10, 3:56 pm, Art Unwin <arthurun...@gmail.com> wrote:

> Future actions suggested
> Repeat NEC with actual mesh sample measurements used.
> Show mesh circuit currents
> Apply RF to outside of actual faraday shield and
> document results.

And the "future actions" you suggest above should be
accomplished and scientifically documented by you, Art.

This mesh antenna is your design, after all.

RF

2993. Re: Rebellion on NEC programs

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-10 23:51:45 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <91ujf5p5ua3i3ieavtjc5vd7qnt0lj660p@4ax.com>
Source record: 12105

On Tue, 10 Nov 2009 13:00:38 -0800 (PST), Richard Fry <rfry@adams.net>
wrote:

>On Nov 10, 10:16ï¿½am, Art Unwin <arthurun...@gmail.com> wrote:
>
>> Consensus of the group say RF applied to a mesh will short or fuse.
>> NEC shows that it will not and that it will radiate.

Being able to pick up only 'snippets' through the stovepipe, it would
seem that Art either damns or praises NEC according to the wind
blowing to his detriment or to his favor.

If there were any dispute with the "consensus" it would seem to be
simple enough to contribute engineering evidence rather than religious
testimony. Art recites NEC, but I don't see (and that is possibly due
to filtering of static) any NEC content in the fragments of Art's
hymnals that survive through to the willing suspension of disbelief.

W'ot? Ain't I demonstrandum? (the alpha and omega of Art's
intellectual proofs).

Art, you are going to need at least two more criminals up there on
calvary before you can draw a crowd of legionaries to throw dice at
your feet.

73's
Richard Clark, KB7QHC

2994. Re: Multi polarization antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-11 00:12:54 UTC
From: tom <news4792@taring.org>
Message-ID: <4afa017c$0$42843$8046368a@newsreader.iphouse.net>
Source record: 12106

Richard Clark wrote:
>
> Hi Mike,
>
> Careful, he might mis-interpret "straight." For him, this forum is
> about sex, politics, or religion - but not science, engineering, and
> certainly not antennas.
>
> 73's
> Richard Clark, KB7QHC

Richard,

You forgot metaphysics.

tom
K0TAR

2995. Re: Angry WHY is it spammers and assorted other trash are posted in the WRONG forums??

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-11 00:15:35 UTC
From: tom <news4792@taring.org>
Message-ID: <4afa021c$0$42843$8046368a@newsreader.iphouse.net>
Source record: 12107

n9zas wrote:
> Angry WHY is it spammers and assorted other trash are posted in the
> WRONG forums??
> If EVERYONE would pay attention to what the hell they're posting,then
> this site would be more enjoyable for everybody here!!! Politics crap
> does NOT belong in the shortwave forum!!!! Garbage from you tube does
> NOT belong in the antenna forum!!! Etc,etc!!! Get a clue people,or get
> lost!!!
> Why is it that no one reads what they post... BEFORE they post it??
> IS everyone really that stupid? As for SPAMMERS???? ...Death is the
> only answer for those that have nothing intelligent to add!!!
> Wise up already!
>
>
>
>

More ice and mixer are needed here.

tom
K0TAR

2996. Re: Angry WHY is it spammers and assorted other trash are posted in the WRONG forums??

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-11 00:18:00 UTC
From: tom <news4792@taring.org>
Message-ID: <4afa02ad$0$42843$8046368a@newsreader.iphouse.net>
Source record: 12108

n9zas wrote:
>
> This is RADIOBANTER.COM not politics.com or obama.com which is where
> everyone makes their first mistake! That TRASH doesn't BELONG here.
> This a site for RADIO oriented articles,so why are people so dense they
> can't figure this out until someone has to break out the crayons and
> draw them a picture?? Post that crap on cnn.com or some OTHER political
> website!
> Wanna talk about RADIO then stay here,otherwise scroll to ANOTHER
> site!
> This sh*t is getting old! I feel like I'm explaining this to a bunch of
> damn 3rd graders!!!!
> Ok,rant mode off. F*CK IT!
>

Lots more ice and mixer are needed. Or maybe a visit to a place where
everyone is made happy with the proper drugs and treatment.

Sure hope you don't own weapons.

tom
K0TAR

2997. Re: Rebellion on NEC programs

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-11 01:04:09 UTC
From: Art Unwin <arthurunwin@gmail.com>
Message-ID: <5aca1d8a-a0cb-438c-8d39-a4674b6f26a1@r5g2000yqb.googlegroups.com>
Source record: 12109

On Nov 10, 5:51 pm, Richard Clark <kb7...@comcast.net> wrote:
> On Tue, 10 Nov 2009 13:00:38 -0800 (PST), Richard Fry <r...@adams.net>
> wrote:
>
> >On Nov 10, 10:16 am, Art Unwin <arthurun...@gmail.com> wrote:
>
> >> Consensus of the group say RF applied to a mesh will short or fuse.
> >> NEC shows that it will not and that it will radiate.
>
> Being able to pick up only 'snippets' through the stovepipe, it would
> seem that Art either damns or praises NEC according to the wind
> blowing to his detriment or to his favor.
>
> If there were any dispute with the "consensus" it would seem to be
> simple enough to contribute engineering evidence rather than religious
> testimony. Art recites NEC, but I don't see (and that is possibly due
> to filtering of static) any NEC content in the fragments of Art's
> hymnals that survive through to the willing suspension of disbelief.
>
> W'ot? Ain't I demonstrandum? (the alpha and omega of Art's
> intellectual proofs).
>
> Art, you are going to need at least two more criminals up there on
> calvary before you can draw a crowd of legionaries to throw dice at
> your feet.
>
> 73's
> Richard Clark, KB7QHC

Well that's the end of this thread! Clark and his followers now appear
to be moving towards accepting NEC and also that mesh will radiate
according to the physics portion of his degree in literature(assuming
he is following the teachings of physics that is extensively
used in literature and shakesphere) with honors for showing he
had no balls when dancing in mesh tights at his hide out! It would
appear that the group is in disarray over whether Clark is to be
followed with respect to R.F. having the same characteristics of D.C.
current when applied to a mesh conductor. When you all make up your
minds whether a mesh radiates or not. let me know so I may use it or
discard it to satisfy the group. Since R.F.what ever his name is
intent on desception by suggesting that window mesh wires to keep
insects out are 0.5" apart in mimicing my findings there is no point
in responding to him anymore with his trash in the future. As for
religeon, you will make no friends by encouraging others to forsake

their religeous faith in favor of homosexuality.

2998. Re: Rebellion on NEC programs

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-11 01:17:45 UTC
From: tom <news4792@taring.org>
Message-ID: <4afa10ae$0$42840$8046368a@newsreader.iphouse.net>
Source record: 12110

Art Unwin wrote:

>
> Well that's the end of this thread!

Because you said so?

>Clark and his followers now appear
> to be moving towards accepting NEC and also that mesh will radiate
> according to the physics portion of his degree in literature(assuming
> he is following the teachings of physics that is extensively
> used in literature and shakesphere) with honors for showing he
> had no balls when dancing in mesh tights at his hide out! It would
> appear that the group is in disarray over whether Clark is to be
> followed with respect to R.F. having the same characteristics of D.C.
> current when applied to a mesh conductor. When you all make up your
> minds whether a mesh radiates or not. let me know so I may use it or
> discard it to satisfy the group. Since R.F.what ever his name is
> intent on desception by suggesting that window mesh wires to keep
> insects out are 0.5" apart in mimicing my findings there is no point
> in responding to him anymore with his trash in the future. As for
> religeon, you will make no friends by encouraging others to forsake
> their religeous faith in favor of homosexuality.

Art, you really need to get back to the clinic for your meds before they
send the men in the white coats for you again.

tom
K0TAR

2999. Re: Rebellion on NEC programs

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-11 01:53:39 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <0k5kf5lhfq31t8h35le8pn8sq3jrank6tt@4ax.com>
Source record: 12111

On Tue, 10 Nov 2009 19:17:45 -0600, tom <news4792@taring.org> wrote:

I still don't see any NEC files. Would posting them be gay - or
heretical?

73's
Richard Clark, KB7QHC

3000. Re: Rebellion on NEC programs

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-11 01:58:19 UTC
From: tom <news4792@taring.org>
Message-ID: <4afa1a30$0$42844$8046368a@newsreader.iphouse.net>
Source record: 12112

Richard Clark wrote:
> On Tue, 10 Nov 2009 19:17:45 -0600, tom <news4792@taring.org> wrote:
>
> I still don't see any NEC files. Would posting them be gay - or
> heretical?
>
> 73's
> Richard Clark, KB7QHC

It would depend on the spacing.

tom
K0TAR

3001. Re: Rebellion on NEC programs

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-11 02:09:34 UTC
From: Art Unwin <arthurunwin@gmail.com>
Message-ID: <855eb097-2dad-447d-97fa-f7ac8a9168bc@v25g2000yqk.googlegroups.com>
Source record: 12113

On Nov 10, 7:17 pm, tom <news4...@taring.org> wrote:
> Art Unwin wrote:
>
> > Well that's the end of this thread!
>
> Because you said so?
>
>
>
> >Clark and his followers now appear
> > to be moving towards accepting NEC and also that mesh will radiate
> > according to the physics portion of his degree in literature(assuming
> > he is following the teachings of physics that is extensively
> > used in literature and shakesphere)   with honors for showing he
> > had no balls when dancing in mesh tights at his hide out! It would
> > appear that the group is in disarray over whether Clark is to be
> > followed with respect to R.F. having the same characteristics of D.C.
> > current when applied to a mesh conductor. When you all make up your
> > minds whether a mesh radiates or not. let me know so I may use it or
> > discard it to satisfy the group. Since R.F.what ever his name is
> > intent on desception by suggesting that window mesh wires to keep
> > insects out are 0.5" apart in mimicing my findings there is no point
> > in responding to him anymore with his trash in the future. As for
> > religeon, you will make no friends by encouraging others to forsake
> > their religeous faith in favor of homosexuality.
>
> Art, you really need to get back to the clinic for your meds before they
> send the men in the white coats for you again.
>
> tom
> K0TAR

Then tell me. Do you agree with Clark and others that RF applied to a
mesh will short out at the first square of the mesh or not?
This is for discussion of antennas by the so called experts to educate
those who enjoy the hobby. You say that you have extensive experience
with antennas! So share with others your opinion whether a mesh screen
will radiate or not , and move away from your nonsensical attacks on
others and share your extensive experiences which you always shy away
from. If you move away again from antennas to vent your internal
feelings the thread will die whether you like it or not, as others
will move away from such response postings. Sooner or later you will
have to verify your expertise with antennas instead of constantly
wielding the knife, instead of contributing to the newsgroup with

respect to antennas. You called me "sick" and I respond with say "you are a female impersonator"
You then come back with another rabid comment and so on. Is that what you want for the group? If so, there are some here who will probably join you since they are natural followers. In no time you can then join those that decry religion and thus you will be in your comfort zone if that meets your needs.
Antennas or slander, where do you want to go?
A group of hams have declared that mesh will fuse and will not radiate. This is contrary to NEC teachings so what shall we believe, NEC or the opinions of this group?

3002. Re: Rebellion on NEC programs

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-11 02:30:14 UTC
From: christofire <christofire@btinternet.com>
Message-ID: <fYmdnd6P2rohvGfXnZ2dnUVZ8iidnZ2d@bt.com>
Source record: 12114

"Art Unwin" <arthurunwin@gmail.com> wrote in message
news:855eb097-2dad-447d-97fa-f7ac8a9168bc@v25g2000yqk.googlegroups.com...
On Nov 10, 7:17 pm, tom <news4...@taring.org> wrote:
> Art Unwin wrote:
>
> > Well that's the end of this thread!
>
> Because you said so?
>
>
>
> >Clark and his followers now appear
> > to be moving towards accepting NEC and also that mesh will radiate
> > according to the physics portion of his degree in literature(assuming
> > he is following the teachings of physics that is extensively
> > used in literature and shakesphere) with honors for showing he
> > had no balls when dancing in mesh tights at his hide out! It would
> > appear that the group is in disarray over whether Clark is to be
> > followed with respect to R.F. having the same characteristics of D.C.
> > current when applied to a mesh conductor. When you all make up your
> > minds whether a mesh radiates or not. let me know so I may use it or
> > discard it to satisfy the group. Since R.F.what ever his name is
> > intent on desception by suggesting that window mesh wires to keep
> > insects out are 0.5" apart in mimicing my findings there is no point
> > in responding to him anymore with his trash in the future. As for
> > religeon, you will make no friends by encouraging others to forsake
> > their religeous faith in favor of homosexuality.
>
> Art, you really need to get back to the clinic for your meds before they
> send the men in the white coats for you again.
>
> tom
> K0TAR

Then tell me. Do you agree with Clark and others that RF applied to a
mesh will short out at the first square of the mesh or not?
This is for discussion of antennas by the so called experts to educate
those who enjoy the hobby. You say that you have extensive experience
with antennas! So share with others your opinion whether a mesh screen
will radiate or not , and move away from your nonsensical attacks on
others and share your extensive experiences which you always shy away
from. If you move away again from antennas to vent your internal
feelings the thread will die whether you like it or not, as others
will move away from such response postings. Sooner or later you will

have to verify your expertise with antennas instead of constantly wielding the knife, instead of contributing to the newsgroup with respect to antennas. You called me "sick" and I respond with say "you are a female impersonator"
You then come back with another rabid comment and so on. Is that what you want for the group? If so, there are some here who will probably join you since they are natural followers. In no time you can then join those that decry religion and thus you will be in your comfort zone if that meets your needs.
Antennas or slander, where do you want to go?
A group of hams have declared that mesh will fuse and will not radiate. This is contrary to NEC teachings so what shall we believe, NEC or the opinions of this group?

** New posting, not from the previous author Art Unwin (clear enough?). The author of the previous post apparently forgot to sign his name.

Art, you must be applying EzNec, or whatever it is you use, beyond its capabilities. As I wrote several days ago, if you believe an EM wave travelling on a transmission line (in a normal transmission-line mode such as a TEM wave) can propagate beyond a short circuit between the conductors of the line then I think you are missing something rather important - like Ohm's law!

Some clever antenna designs make use of a short across a line to reflect the differential-mode wave (in order to improve the match) whilst allowing propagation of a common-mode wave beyond it (in order to increase the effective length of the driven element). However, it would be difficult to apply this to a piece of mesh - lots of inter-node links would need to be cut. At the end of the day, almost anything can be made to radiate, inefficiently though.

** This post from christofire@btinternet.com , not Art Unwin (clear enough?).

Chris

3003. Re: Rebellion on NEC programs

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-11 02:47:34 UTC
From: christofire <christofire@btinternet.com>
Message-ID: <Vf2dnZg-4O9RuGfXnZ2dnUVZ7tKdnZ2d@bt.com>
Source record: 12115

"christofire" <christofire@btinternet.com> wrote in message
news:fYmdnd6P2rohvGfXnZ2dnUVZ8iidnZ2d@bt.com...
>
> "Art Unwin" <arthurunwin@gmail.com> wrote in message
> news:855eb097-2dad-447d-97fa-f7ac8a9168bc@v25g2000yqk.googlegroups.com...
> On Nov 10, 7:17 pm, tom <news4...@taring.org> wrote:
>> Art Unwin wrote:
>>
>> > Well that's the end of this thread!
>>
>> Because you said so?
>>
>>
>>
>> >Clark and his followers now appear
>> > to be moving towards accepting NEC and also that mesh will radiate
>> > according to the physics portion of his degree in literature(assuming
>> > he is following the teachings of physics that is extensively
>> > used in literature and shakesphere) with honors for showing he
>> > had no balls when dancing in mesh tights at his hide out! It would
>> > appear that the group is in disarray over whether Clark is to be
>> > followed with respect to R.F. having the same characteristics of D.C.
>> > current when applied to a mesh conductor. When you all make up your
>> > minds whether a mesh radiates or not. let me know so I may use it or
>> > discard it to satisfy the group. Since R.F.what ever his name is
>> > intent on desception by suggesting that window mesh wires to keep
>> > insects out are 0.5" apart in mimicing my findings there is no point
>> > in responding to him anymore with his trash in the future. As for
>> > religeon, you will make no friends by encouraging others to forsake
>> > their religeous faith in favor of homosexuality.
>>
>> Art, you really need to get back to the clinic for your meds before they
>> send the men in the white coats for you again.
>>
>> tom
>> K0TAR
>
> Then tell me. Do you agree with Clark and others that RF applied to a
> mesh will short out at the first square of the mesh or not?
> This is for discussion of antennas by the so called experts to educate
> those who enjoy the hobby. You say that you have extensive experience
> with antennas! So share with others your opinion whether a mesh screen
> will radiate or not , and move away from your nonsensical attacks on
> others and share your extensive experiences which you always shy away

> from. If you move away again from antennas to vent your internal
> feelings the thread will die whether you like it or not, as others
> will move away from such response postings. Sooner or later you will
> have to verify your expertise with antennas instead of constantly
> wielding the knife, instead of contributing to the newsgroup with
> respect to antennas. You called me "sick" and I respond with say "you
> are a female impersonator"
> You then come back with another rabid comment and so on. Is that what
> you want for the group? If so, there are some here who will probably
> join you since they are natural followers. In no time you can then
> join those that decry religion and thus you will be in your comfort
> zone if that meets your needs.
> Antennas or slander, where do you want to go?
> A group of hams have declared that mesh will fuse and will not
> radiate. This is contrary to NEC teachings so what shall we believe,
> NEC or the opinions of this group?
>
>
> ** New posting, not from the previous author Art Unwin (clear enough?).
> The author of the previous post apparently forgot to sign his name.
>
> Art, you must be applying EzNec, or whatever it is you use, beyond its
> capabilities. As I wrote several days ago, if you believe an EM wave
> travelling on a transmission line (in a normal transmission-line mode such
> as a TEM wave) can propagate beyond a short circuit between the conductors
> of the line then I think you are missing something rather important - like
> Ohm's law!
>
> Some clever antenna designs make use of a short across a line to reflect
> the differential-mode wave (in order to improve the match) whilst allowing
> propagation of a common-mode wave beyond it (in order to increase the
> effective length of the driven element). However, it would be difficult
> to apply this to a piece of mesh - lots of inter-node links would need to
> be cut. At the end of the day, almost anything can be made to radiate,
> inefficiently though.
>
> ** This post from christofire@btinternet.com , not Art Unwin (clear
> enough?).
>
> Chris

** additional posting from christofire@etc., not from Art Unwin.

I just wrote 'Art, you must be applying EzNec, or whatever it is you use,
beyond its capabilities' but it could be simply that you are
mis-interpreting the results it gives. Richard Fry's effort at
http://i62.photobucket.com/albums/h85/rfry-100/Arts_Mesh_Antenna.jpg
suggests a VSWR approaching infinity - what VSWR did your model give for a
shorted transmission line of small length?

** Chris (again)

3004. Re: Rebellion on NEC programs

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-11 03:07:32 UTC
From: JIMMIE <JIMMIEDEE123@YAHOO.COM>
Message-ID: <4c7727f9-0da9-47e2-a72d-d7369df3ad19@k4g2000yqb.googlegroups.com>
Source record: 12116

On Nov 10, 11:16 am, Art Unwin <arthurun...@gmail.com> wrote:
> On Nov 10, 8:40 am, Michael Coslo <m...@psu.edu> wrote:
>
> > JIMMIE wrote:
> > > What the heck is this all about, I thought Art was going to rant about
> > > how hams just sit around and model antennas and never actually build
> > > them. That would have been funny.
>
> > Careful Jimmie, you'll upset that guy from Radiobanter.com if you don't
> > watch it! 8^)
>
> > But the rest of you take notice, and quit hijacking Art's thread here to
> > talk about field day. I want to hear about how NEC has it all wrong!
>
> > Sheesh!
>
> >   - 73 de Mike N3LI -
>
> Consensus of the group say RF applied to a mesh will short or fuse.
> NEC shows that it will not and that it will radiate.
> On my home page I did the same thing and got an SWR curve
> Therefore Art and NEC programs have got it all wrong.
> This probably means that a faraday shield will short also, but that
> needs a little more
> consensus from the group as it would destroy the shielding of the
> innards.
> Therefore the NEC programs must have it all wrong!

No such consensus that I am aware of . It could behave in many ways
depending on geometry, frequency, size. I have a slot antenna that
could be described as such. I doubt if anyone here would claim that it
will short or fuse.

Jimmie

3005. Re: Rebellion on NEC programs

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-11 03:10:24 UTC
From: JIMMIE <JIMMIEDEE123@YAHOO.COM>
Message-ID: <a1a1b216-b7ee-4a23-96e5-30b527f0a65f@a31g2000yqn.googlegroups.com>
Source record: 12117

On Nov 8, 2:38 pm, Art Unwin <arthurun...@gmail.com> wrote:
> On Nov 8, 12:41 pm, Jeff Liebermann <je...@cruzio.com> wrote:
>
>
>
> > On Sun, 8 Nov 2009 08:24:50 -0800 (PST), Art Unwin
>
> > <arthurun...@gmail.com> wrote:
> > >So what does the future hold for those here with an interest in
> > >antennas as the title of this forum implies?
>
> > Without calculations, math, engineering, and modeling, you can return
> > to the days of trial by combat, proof by assertion, cut-n-try, claims
> > of amazing performance, irreproducible results, witchcraft, magic,
> > etc.
>
> > Granted, there are limitations to NEC2 modeling software.
> > <http://en.wikipedia.org/wiki/Numerical_Electromagnetics_Code#Limitations>
> > Rather than abandon years of work simply because you have invented an
> > antenna that cannot be visualized, optimized, modeled, seen or
> > demonstrated, a more productive solution to your problem would be to
> > find (or write) a suitable modeling program that would quantify your
> > "mesh" antenna. If you find that NEC2 or NEC4 based programs are
> > unsuitable for your purpose, there may be specialized programs that
> > may work.
>
> > --
> > Jeff Liebermann   je...@cruzio.com
> > 150 Felker St #D   http://www.LearnByDestroying.com
> > Santa Cruz CA 95060http://802.11junk.com
> > Skype: JeffLiebermann   AE6KS   831-336-2558
>
> In the mean time those you recognise errant sciences when they see
> them dominate over all others who choose not to question their
> perceptability of total forsight of what is right and what is wrong.
> It is not my problem, as you say, because I didn't write a program
> that would win the day, the programs are already there. It is just at
> this time the naysayers have the forsight to say what is wrong which
> requires rebellion against that which say what is correct.
> Personaly I believe there is progress in designing a radiator that
> recognises CW and CCW
> transmissions that provides choice in selection of what polarization
> is used. After all hams wish to communicate with all and have no wish
> to be left out because of the poor choice of antenna to use.

> For the same radiator to be useable on all frequencies that we
> are not licensed to use is purely academic to our interests tho for
> the sake of science and the art of antennas the possibilities of what
> is perceived to be a discovery should be pushed aside
> on the basis of those that recognise what is bad based on what they
> perceive to have seen.
> The real problem today is that what we have accepted as good for
> antennas ala NEC computer programs is not being accepted as viable by
> those who have visual forsight that takes precidence over the science
> of NEC programs and physics of the dayare using the volume level of
> their voices to persuade all to denounce same.
> With this aproach being gradually accepted by those who remain
> silent we are being pushed back to personal antenna measurement which
> allows for assertions of incorrect use of testing which in effect
> gives credence with hams that for antennas all is really known! After
> all, it suggests that if mesh radiators were able to transmit all
> amatuers would be using them, when they are not! Thus the naysayers
> with undeniable visual forsight must be correct!
> So now amateurs are on a roll having "proved that short circuits
> occur when using mesh via naysayers from both sides of the pond, who
> can now dismiss with confidence the demise of helical antenna design
> change having convinced all that NEC programs have now been shown as
> defective. Next the idea will prevail that sunspots are there in
> abundance but cannot be utelized while hams continue to use radiators
> that naysayers, using the same "ability to recognize pornography" when
> "they" see it, use the same abilities
> to recognise psuedo sciences to deny those that pursue experimentation
> to achieve the
> possibility of advances in the hobby.
> Now it is labelled "my problem"..... (Yes Aussie, I am the
> ART that they usually attack), as it was for all the previous
> knowledgable hams with respect to science and antennas that fled
> rather than argue with those that belong to the "no" group which have
> the louder audibles that rule this group.

Alas are we here to praise or bury NEC.

Jimmie

3006. Re: Rebellion on NEC programs

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-11 03:19:24 UTC
From: tom <news4792@taring.org>
Message-ID: <4afa2d35$0$42846$8046368a@newsreader.iphouse.net>
Source record: 12118

Art Unwin wrote:
> On Nov 10, 7:17 pm, tom <news4...@taring.org> wrote:
>> Art Unwin wrote:
>>
>>> Well that's the end of this thread!
>> Because you said so?
>>
>>
>>
>>> Clark and his followers now appear
>>> to be moving towards accepting NEC and also that mesh will radiate
>>> according to the physics portion of his degree in literature(assuming
>>> he is following the teachings of physics that is extensively
>>> used in literature and shakesphere) with honors for showing he
>>> had no balls when dancing in mesh tights at his hide out! It would
>>> appear that the group is in disarray over whether Clark is to be
>>> followed with respect to R.F. having the same characteristics of D.C.
>>> current when applied to a mesh conductor. When you all make up your
>>> minds whether a mesh radiates or not. let me know so I may use it or
>>> discard it to satisfy the group. Since R.F.what ever his name is
>>> intent on desception by suggesting that window mesh wires to keep
>>> insects out are 0.5" apart in mimicing my findings there is no point
>>> in responding to him anymore with his trash in the future. As for
>>> religeon, you will make no friends by encouraging others to forsake
>>> their religeous faith in favor of homosexuality.
>> Art, you really need to get back to the clinic for your meds before they
>> send the men in the white coats for you again.
>>
>> tom
>> K0TAR
>
> Then tell me. Do you agree with Clark and others that RF applied to a
> mesh will short out at the first square of the mesh or not?

You misunderstood what they stated, but that's nothing new.

> This is for discussion of antennas by the so called experts to educate
> those who enjoy the hobby. You say that you have extensive experience

And you are an expert? I think not.

> with antennas! So share with others your opinion whether a mesh screen
> will radiate or not , and move away from your nonsensical attacks on

Sure it will radiate, like crap, which is what the link RF put up
showed. Or are you also ignorant and can't read text and a graph?

> others and share your extensive experiences which you always shy away
> from. If you move away again from antennas to vent your internal
> feelings the thread will die whether you like it or not, as others
> will move away from such response postings. Sooner or later you will
> have to verify your expertise with antennas instead of constantly
> wielding the knife, instead of contributing to the newsgroup with
> respect to antennas. You called me "sick" and I respond with say "you
> are a female impersonator"
> You then come back with another rabid comment and so on. Is that what
> you want for the group? If so, there are some here who will probably
> join you since they are natural followers. In no time you can then
> join those that decry religion and thus you will be in your comfort
> zone if that meets your needs.
> Antennas or slander, where do you want to go?
> A group of hams have declared that mesh will fuse and will not
> radiate.

No one said that. Show me a quote.

This is contrary to NEC teachings so what shall we believe,
> NEC or the opinions of this group?

I thought you said NEC was crap.

What do you believe?

I believe you need meds.

tom
K0TAR

3007. Re: Rebellion on NEC programs

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-11 03:35:37 UTC
From: Art Unwin <arthurunwin@gmail.com>
Message-ID: <ca7f846e-0ebd-471e-9cb3-8c39fbaaf298@s15g2000yqs.googlegroups.com>
Source record: 12119

On Nov 10, 8:30 pm, "christofire" <christof...@btinternet.com> wrote:
> "Art Unwin" <arthurun...@gmail.com> wrote in message
>
> news:855eb097-2dad-447d-97fa-f7ac8a9168bc@v25g2000yqk.googlegroups.com...
> On Nov 10, 7:17 pm, tom <news4...@taring.org> wrote:
>
>
>
> > Art Unwin wrote:
>
> > > Well that's the end of this thread!
>
> > Because you said so?
>
> > >Clark and his followers now appear
> > > to be moving towards accepting NEC and also that mesh will radiate
> > > according to the physics portion of his degree in literature(assuming
> > > he is following the teachings of physics that is extensively
> > > used in literature and shakesphere) with honors for showing he
> > > had no balls when dancing in mesh tights at his hide out! It would
> > > appear that the group is in disarray over whether Clark is to be
> > > followed with respect to R.F. having the same characteristics of D.C.
> > > current when applied to a mesh conductor. When you all make up your
> > > minds whether a mesh radiates or not. let me know so I may use it or
> > > discard it to satisfy the group. Since R.F.what ever his name is
> > > intent on desception by suggesting that window mesh wires to keep
> > > insects out are 0.5" apart in mimicing my findings there is no point
> > > in responding to him anymore with his trash in the future. As for
> > > religeon, you will make no friends by encouraging others to forsake
> > > their religeous faith in favor of homosexuality.
>
> > Art, you really need to get back to the clinic for your meds before they
> > send the men in the white coats for you again.
>
> > tom
> > K0TAR
>
> Then tell me. Do you agree with Clark and others that RF applied to a
> mesh will short out at the first square of the mesh or not?
> This is for discussion of antennas by the so called experts to educate
> those who enjoy the hobby. You say that you have extensive experience
> with antennas! So share with others your opinion whether a mesh screen
> will radiate or not , and move away from your nonsensical attacks on
> others and share your extensive experiences which you always shy away

> from. If you move away again from antennas to vent your internal
> feelings the thread will die whether you like it or not, as others
> will move away from such response postings. Sooner or later you will
> have to verify your expertise with antennas instead of constantly
> wielding the knife, instead of contributing to the newsgroup with
> respect to antennas. You called me "sick" and I respond with say "you
> are a female impersonator"
> You then come back with another rabid comment and so on. Is that what
> you want for the group? If so, there are some here who will probably
> join you since they are natural followers. In no time you can then
> join those that decry religion and thus you will be in your comfort
> zone if that meets your needs.
> Antennas or slander, where do you want to go?
> A group of hams have declared that mesh will fuse and will not
> radiate. This is contrary to NEC teachings so what shall we believe,
> NEC or the opinions of this group?
>
> ** New posting, not from the previous author Art Unwin (clear enough?). The
> author of the previous post apparently forgot to sign his name.
>
> Art, you must be applying EzNec, or whatever it is you use, beyond its
> capabilities. As I wrote several days ago, if you believe an EM wave
> travelling on a transmission line (in a normal transmission-line mode such
> as a TEM wave) can propagate beyond a short circuit between the conductors
> of the line then I think you are missing something rather important - like
> Ohm's law!

Well you started all this but never explained your position so Clark
entered the picture with his interpretation of physics which appeared
to match yours.
Ohms law is fairly short so explain your position.

>
> Some clever antenna designs make use of a short across a line to reflect the
> differential-mode wave (in order to improve the match) whilst allowing
> propagation of a common-mode wave beyond it (in order to increase the
> effective length of the driven element). However, it would be difficult to
> apply this to a piece of mesh - lots of inter-node links would need to be
> cut.

Yup you need a more expensive program to do it. Eznec wont do it.
You will need a lot of segments. Of course you can measure it if you
have a sample and a MFJ259b like I did.

 At the end of the day, almost anything can be made to radiate,
> not very efficiently tho.

Hmm, mesh allows the displacement to be broken up into parts which
allows for the intersection of two fields to create radiation by
particle levitation where as your way you would disregard the enclosed
particles by the displacement current so you can state a wave floats
away for propagation

>Any thing can radiate

Very true unless, as Clark states, a direct short results and that is stupid. But he likes to mislead others into agreeing with him. Then on insults start and we are again at that point.

>
> ** This post from christof...@btinternet.com , not Art Unwin (clear
> enough?).
>
> Chris

3008. Re: Rebellion on NEC programs

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-11 03:43:11 UTC
From: tom <news4792@taring.org>
Message-ID: <4afa32c4$0$42851$8046368a@newsreader.iphouse.net>
Source record: 12120

```
Art Unwin wrote:
>
> Well you started all this but never explained your position so Clark
> entered the picture with his interpretation of physics which appeared
> to match yours.
> Ohms law is fairly short so explain your position.

Art, you've obviously forgotten that YOU started this thread.

Get meds, you need them.

tom
K0TAR
```

3009. Re: Rebellion on NEC programs

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-11 04:01:42 UTC
From: Art Unwin <arthurunwin@gmail.com>
Message-ID: <675f8574-70ff-43cc-8c3d-a8a670cb0c98@m16g2000yqc.googlegroups.com>
Source record: 12121

On Nov 10, 8:47 pm, "christofire" <christof...@btinternet.com> wrote:
> "christofire" <christof...@btinternet.com> wrote in message
>
> news:fYmdnd6P2rohvGfXnZ2dnUVZ8iidnZ2d@bt.com...
>
>
>
>
>
> > "Art Unwin" <arthurun...@gmail.com> wrote in message
> >news:855eb097-2dad-447d-97fa-f7ac8a9168bc@v25g2000yqk.googlegroups.com...
> > On Nov 10, 7:17 pm, tom <news4...@taring.org> wrote:
> >> Art Unwin wrote:
>
> >> > Well that's the end of this thread!
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> >> Because you said so?
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> >> > to be moving towards accepting NEC and also that mesh will radiate
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> >> > appear that the group is in disarray over whether Clark is to be
> >> > followed with respect to R.F. having the same characteristics of D.C.
> >> > current when applied to a mesh conductor. When you all make up your
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> >> > insects out are 0.5" apart in mimicing my findings there is no point
> >> > in responding to him anymore with his trash in the future. As for
> >> > religeon, you will make no friends by encouraging others to forsake
> >> > their religeous faith in favor of homosexuality.
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> >> Art, you really need to get back to the clinic for your meds before they
> >> send the men in the white coats for you again.
>
> >> tom
> >> K0TAR
>
> > Then tell me. Do you agree with Clark and others that RF applied to a
> > mesh will short out at the first square of the mesh or not?
> > This is for discussion of antennas by the so called experts to educate

> > those who enjoy the hobby. You say that you have extensive experience
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> > Antennas or slander, where do you want to go?
> > A group of hams have declared that mesh will fuse and will not
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> > NEC or the opinions of this group?
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> > The author of the previous post apparently forgot to sign his name.
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> > Some clever antenna designs make use of a short across a line to reflect
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> > be cut. At the end of the day, almost anything can be made to radiate,
> > inefficiently though.
>
> > ** This post from christof...@btinternet.com , not Art Unwin (clear
> > enough?).
>
> > Chris
>
> ** additional posting from christofire@etc., not from Art Unwin.
>
> I just wrote 'Art, you must be applying EzNec, or whatever it is you use,
> beyond its capabilities' but it could be simply that you are
> mis-interpreting the results it gives. Richard Fry's effort
athttp://i62.photobucket.com/albums/h85/rfry-100/Arts_Mesh_Antenna.jpg

> suggests a VSWR approaching infinity - what VSWR did your model give for a
> shorted transmission line of small length?
>
> ** Chris (again)

Look at my page ! I measured it! See for yourself.
Should I ignore actual measurements ?
Fri didn't show all the data used, but he DID falsify the distance between wires which has a direct bearing on impedance/ VSWR ? Not only that, we only have his word that he used a program with enough segments to model the same sample that I measured.
As for my modeling I never did one for a shorted transmission line. I can tell you, that I will model a ribbon style helix antenna as shown on my page and I will present it for all to see. You may then comment why it is in error per the groups interpretation. That is basically a shorted ladder line which is being used as a radiator which apparently you are looking for. The cross bars will simulate a ladder line where it got wet which reduced the effect of the insulation dependent on the frequency applied.This allows the displacement current to deploy earlier than intended by the design and thus radiate. Discuss with your physics friends or just rely on Clark;'s antics.

3010. Re: Tuning 4 square elements

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-11 04:05:50 UTC
From: Tom Horne <hornetd@gmail.com>
Message-ID: <7c08339f-a49b-4e50-8a87-2d5a438ac32c@k4g2000yqb.googlegroups.com>
Source record: 12122

On Nov 10, 6:05 pm, Dave <k1...@arrl.net> wrote:
> On Nov 10, 5:57 pm, Tom Horne <horn...@gmail.com> wrote:
>
>
>
> > On Nov 9, 5:51 pm, Dave <k1...@arrl.net> wrote:
>
> > > On Nov 9, 2:28 am, Tom Horne <horn...@gmail.com> wrote:
>
> > > > On Nov 5, 7:26 pm, Dave <k1...@arrl.net> wrote:
>
> > > > > On Nov 4, 3:16 am, Peter Taggart <radiostationw...@gmail.com> wrote:
>
> > > > > > Greetings:
>
> > > > > > Building a 4 square antenna system: How should I tune each
> > > > > > element? should I place a 50 ohm load on three elements   then tune
> > > > > > up one using my MFJ 259 after that element is tuned place the 50 ohm
> > > > > > load on it then tune up the next element repeat till all have been
> > > > > > tuned?
>
> > > > > > OR should I short the other three elements to the counterpoise   tune
> > > > > > the element them repeat till all have been tuned?
>
> > > > > > Or should   the three be left floating   then tune the one then
> > > > > > repeat till all have been tuned?
>
> > > > > If you are using one of the commercial hybrid phasing networks or one
> > > > > designed from the 4u1un book proceedure then the normal method is
> > > > > this:
> > > > > 1. erect ONLY one vertical with its intended ground system.
> > > > > 2. feed it with 50 ohm line and adjust length for resonance at the
> > > > > center frequency you want
> > > > > 3. replace 50 ohm line with 1/4 wave 75 ohm foam coax (must be foam or
> > > > > 1/4 wave won't reach corners of standard 1/4 wave spaced elements)
> > > > > 4. build other 3 elements identical to the first one.
>
> > > > Dave
> > > > Please forgive my ignorance but for the sake of my education would you
> > > > flesh out number three some more. We used a four square for the 2008
> > > > field day and I watched the construction process very carefully but I
> > > > don't recall what kind of seventy five ohm coax we used. Does using
> > > > foam coax bring the velocity factor closer to one so that the cable is
> > > > thus longer. I don't remember having any problem with the cable

> > > > lengths but I freely admit I was functioning as labor rather than
> > > > design or supervision. So maybe that had all been worked up in
> > > > advance so those of us assembling the antenna didn't have to cope with
> > > > it. I might well be putting my lack of education on display by asking
> > > > this but it is the only way I will learn. Could you not use the right
> > > > multiple of quarter waves and thus get the length you need with any
> > > > seventy five ohm cable? I realize we would have increased the
> > > > transmission line losses but would it be enough to be significant on
> > > > say forty meters. That's what our four square was built for. When we
> > > > were testing it weeks ahead of time it appeared to perform very well.
> > > > We got at least two S units better signal reports when compared with a
> > > > single vertical.
> > > > --
> > > > Tom Horne, W3TDH
> > > > --
> > > > Tom Horne, W3TDH- Hide quoted text -
> >
> > > > - Show quoted text -
> >
> > > the cable i normally use is rg-11u with foam dielectric, that gets the
> > > velocity factor up to .78-.80 so the cable is longer to get the
> > > required 1/4 wave. since the distance from the center to the corner
> > > of a normal 1/4 wave spacing 4-square is .707 of a wavelength the
> > > normal hard poly with a .66 velocity factor won't reach.
> >
> > Dave
> > So my guess was close but what about the rest of the question. Would
> > any odd multiple of a quarter wave work as well except for the
> > transmission losses it would introduce? Would three quarter waves
> > work?
> > --
> > Tom Horne. W3TDH- Hide quoted text -
> >
> > - Show quoted text -
> >
> i 'think' so. since it adds an extra 1/2 wave delay to each of the
> elements and should result in the same impedance transformation it
> should work ok. it may be a bit more narrow banded since the
> impedance transformation would change faster with frequency, but
> probably not enough to notice.

Dave
Thank you for your patience and courtesy with this technical
neophyte. I hesitate to ask questions here because there is always at
least one flame war in progress at any given time any I really don't
want to cause or get caught up in one.
--
Tom Horne, W3TDH

3011. Re: Rebellion on NEC programs

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-11 04:09:22 UTC
From: Art Unwin <arthurunwin@gmail.com>
Message-ID: <f17ad2eb-b591-4fcc-a229-1b1461819ab6@r24g2000yqd.googlegroups.com>
Source record: 12123

On Nov 10, 9:10 pm, JIMMIE <JIMMIEDEE...@YAHOO.COM> wrote:
> On Nov 8, 2:38 pm, Art Unwin <arthurun...@gmail.com> wrote:
>
>
>
> > On Nov 8, 12:41 pm, Jeff Liebermann <je...@cruzio.com> wrote:
>
> > > On Sun, 8 Nov 2009 08:24:50 -0800 (PST), Art Unwin
>
> > > <arthurun...@gmail.com> wrote:
> > > >So what does the future hold for those here with an interest in
> > > >antennas as the title of this forum implies?
>
> > > Without calculations, math, engineering, and modeling, you can return
> > > to the days of trial by combat, proof by assertion, cut-n-try, claims
> > > of amazing performance, irreproducible results, witchcraft, magic,
> > > etc.
>
> > > Granted, there are limitations to NEC2 modeling software.
> > > <http://en.wikipedia.org/wiki/Numerical_Electromagnetics_Code#Limitations>
> > > Rather than abandon years of work simply because you have invented an
> > > antenna that cannot be visualized, optimized, modeled, seen or
> > > demonstrated, a more productive solution to your problem would be to
> > > find (or write) a suitable modeling program that would quantify your
> > > "mesh" antenna. If you find that NEC2 or NEC4 based programs are
> > > unsuitable for your purpose, there may be specialized programs that
> > > may work.
>
> > > --
> > > Jeff Liebermann   je...@cruzio.com
> > > 150 Felker St #D   http://www.LearnByDestroying.com
> > > Santa Cruz CA 95060http://802.11junk.com
> > > Skype: JeffLiebermann   AE6KS   831-336-2558
>
> > In the mean time those you recognise errant sciences when they see
> > them dominate over all others who choose not to question their
> > perceptability of total forsight of what is right and what is wrong.
> > It is not my problem, as you say, because I didn't write a program
> > that would win the day, the programs are already there. It is just at
> > this time the naysayers have the forsight to say what is wrong which
> > requires rebellion against that which say what is correct.
> > Personaly I believe there is progress in designing a radiator that
> > recognises CW and CCW
> > transmissions that provides choice in selection of what polarization

> > is used. After all hams wish to communicate with all and have no wish
> > to be left out because of the poor choice of antenna to use.
> > For the same radiator to be useable on all frequencies that we
> > are not licensed to use is purely academic to our interests tho for
> > the sake of science and the art of antennas the possibilities of what
> > is perceived to be a discovery should be pushed aside
> > on the basis of those that recognise what is bad based on what they
> > perceive to have seen.
> > The real problem today is that what we have accepted as good for
> > antennas ala NEC computer programs is not being accepted as viable by
> > those who have visual forsight that takes precidence over the science
> > of NEC programs and physics of the dayare using the volume level of
> > their voices to persuade all to denounce same.
> > With this aproach being gradually accepted by those who remain
> > silent we are being pushed back to personal antenna measurement which
> > allows for assertions of incorrect use of testing which in effect
> > gives credence with hams that for antennas all is really known! After
> > all, it suggests that if mesh radiators were able to transmit all
> > amatuers would be using them, when they are not! Thus the naysayers
> > with undeniable visual forsight must be correct!
> > So now amateurs are on a roll having "proved that short circuits
> > occur when using mesh via naysayers from both sides of the pond, who
> > can now dismiss with confidence the demise of helical antenna design
> > change having convinced all that NEC programs have now been shown as
> > defective. Next the idea will prevail that sunspots are there in
> > abundance but cannot be utelized while hams continue to use radiators
> > that naysayers, using the same "ability to recognize pornography" when
> > "they" see it, use the same abilities
> > to recognise psuedo sciences to deny those that pursue experimentation
> > to achieve the
> > possibility of advances in the hobby.
> > Now it is labelled "my problem"..... (Yes Aussie, I am the
> > ART that they usually attack), as it was for all the previous
> > knowledgable hams with respect to science and antennas that fled
> > rather than argue with those that belong to the "no" group which have
> > the louder audibles that rule this group.
>
> Alas are we here to praise or bury NEC.
>
> Jimmie

I don't know. I was comfortable with NEC until Clark stated it was
producing incorrect answers i.e. it shorts so it cannot radiate, It
seems that the group agrees with him.
Must I now throw my antenna programs away to abide by the majority of
the experts?

3012. Re: Rebellion on NEC programs

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-11 04:13:01 UTC
From: Art Unwin <arthurunwin@gmail.com>
Message-ID: <c4543741-5f1d-4ab9-b12c-9ba06bb9c724@p35g2000yqh.googlegroups.com>
Source record: 12124

On Nov 10, 9:43 pm, tom <news4...@taring.org> wrote:
> Art Unwin wrote:
>
> > Well you started all this but never explained your position so Clark
> > entered the picture with his interpretation of physics which appeared
> > to match yours.
> > Ohms law is fairly short so explain your position.
>
> Art, you've obviously forgotten that YOU started this thread.
>
> Get meds, you need them.
>
> tom
> K0TAR

Yes idiot. I started it after Clark made an observation and the group
agreed with him.
I am not willing as yet to discard NEC just on his say so.
Are you? Why?

3013. Re: Rebellion on NEC programs

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-11 04:27:09 UTC
From: Art Unwin <arthurunwin@gmail.com>
Message-ID: <d1d7fc82-77b1-4edb-a405-470512b53bf4@j19g2000yqk.googlegroups.com>
Source record: 12125

On Nov 10, 9:19 pm, tom <news4...@taring.org> wrote:
> Art Unwin wrote:
> > On Nov 10, 7:17 pm, tom <news4...@taring.org> wrote:
> >> Art Unwin wrote:
>
> >>> Well that's the end of this thread!
> >> Because you said so?
>
> >>> Clark and his followers now appear
> >>> to be moving towards accepting NEC and also that mesh will radiate
> >>> according to the physics portion of his degree in literature(assuming
> >>> he is following the teachings of physics that is extensively
> >>> used in literature and shakesphere)   with honors for showing he
> >>> had no balls when dancing in mesh tights at his hide out! It would
> >>> appear that the group is in disarray over whether Clark is to be
> >>> followed with respect to R.F. having the same characteristics of D.C.
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> >>> discard it to satisfy the group. Since R.F.what ever his name is
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> >>> insects out are 0.5" apart in mimicing my findings there is no point
> >>> in responding to him anymore with his trash in the future. As for
> >>> religeon, you will make no friends by encouraging others to forsake
> >>> their religeous faith in favor of homosexuality.
> >> Art, you really need to get back to the clinic for your meds before they
> >> send the men in the white coats for you again.
>
> >> tom
> >> K0TAR
>
> > Then tell me. Do you agree with Clark and others that RF applied to a
> > mesh will short out at the first square of the mesh or not?
>
> You misunderstood what they stated, but that's nothing new.
>
> > This is for discussion of antennas by the so called experts to educate
> > those who enjoy the hobby. You say that you have extensive experience
>
> And you are an expert? I think not.
>
> > with antennas! So share with others your opinion whether a mesh screen
> > will radiate or not , and move away from your nonsensical attacks on
>
> Sure it will radiate, like crap, which is what the link RF put up

> showed. Or are you also ignorant and can't read text and a graph?
>
>
>
> > others and share your extensive experiences which you always shy away
> > from. If you move away again from antennas to vent your internal
> > feelings the thread will die whether you like it or not, as others
> > will move away from such response postings. Sooner or later you will
> > have to verify your expertise with antennas instead of constantly
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> > you want for the group? If so, there are some here who will probably
> > join you since they are natural followers. In no time you can then
> > join those that decry religion   and thus you will be in your comfort
> > zone if that meets your needs.
> > Antennas or slander, where do you want to go?
> > A group of hams have declared that mesh will fuse and will not
> > radiate.
>
> No one said that. Show me a quote.
>
> This is contrary to NEC teachings so what shall we believe,
>
> > NEC or the opinions of this group?
>
> I thought you said NEC was crap.
>
> What do you believe?
>
> I believe you need meds.
>
> tom
> K0TAR

OK Tom
I called you an idiot in return last time.
This time I will ask if you ever perseuded your wife to
come back home after your last augument? Why is she refusing?
You sound lonely.
Are you and I going to take over this newsgroup from now on?
You insult and I insult in return?
What are the limits on the type of insults before the cannons come out?

3014. Re: Rebellion on NEC programs

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-11 04:33:37 UTC
From: Art Unwin <arthurunwin@gmail.com>
Message-ID: <1e689759-4e0b-49d3-b076-f937d1ddc38a@a32g2000yqm.googlegroups.com>
Source record: 12126

On Nov 10, 9:19 pm, tom <news4...@taring.org> wrote:
> Art Unwin wrote:
> > On Nov 10, 7:17 pm, tom <news4...@taring.org> wrote:
> >> Art Unwin wrote:
>
> >>> Well that's the end of this thread!
> >> Because you said so?
>
> >>> Clark and his followers now appear
> >>> to be moving towards accepting NEC and also that mesh will radiate
> >>> according to the physics portion of his degree in literature(assuming
> >>> he is following the teachings of physics that is extensively
> >>> used in literature and shakesphere)   with honors for showing he
> >>> had no balls when dancing in mesh tights at his hide out! It would
> >>> appear that the group is in disarray over whether Clark is to be
> >>> followed with respect to R.F. having the same characteristics of D.C.
> >>> current when applied to a mesh conductor. When you all make up your
> >>> minds whether a mesh radiates or not. let me know so I may use it or
> >>> discard it to satisfy the group. Since R.F.what ever his name is
> >>> intent on desception by suggesting that window mesh wires to keep
> >>> insects out are 0.5" apart in mimicing my findings there is no point
> >>> in responding to him anymore with his trash in the future. As for
> >>> religeon, you will make no friends by encouraging others to forsake
> >>> their religeous faith in favor of homosexuality.
> >> Art, you really need to get back to the clinic for your meds before they
> >> send the men in the white coats for you again.
>
> >> tom
> >> K0TAR
>
> > Then tell me. Do you agree with Clark and others that RF applied to a
> > mesh will short out at the first square of the mesh or not?
>
> You misunderstood what they stated, but that's nothing new.
>
> > This is for discussion of antennas by the so called experts to educate
> > those who enjoy the hobby. You say that you have extensive experience
>
> And you are an expert? I think not.
>
> > with antennas! So share with others your opinion whether a mesh screen
> > will radiate or not , and move away from your nonsensical attacks on
>
> Sure it will radiate, like crap, which is what the link RF put up

> showed. Or are you also ignorant and can't read text and a graph?
>
>
>
> > others and share your extensive experiences which you always shy away
> > from. If you move away again from antennas to vent your internal
> > feelings the thread will die whether you like it or not, as others
> > will move away from such response postings. Sooner or later you will
> > have to verify your expertise with antennas instead of constantly
> > wielding the knife, instead of contributing to the newsgroup with
> > respect to antennas. You called me "sick" and I respond with say "you
> > are a female impersonator"
> > You then come back with another rabid comment and so on. Is that what
> > you want for the group? If so, there are some here who will probably
> > join you since they are natural followers. In no time you can then
> > join those that decry religion   and thus you will be in your comfort
> > zone if that meets your needs.
> > Antennas or slander, where do you want to go?
> > A group of hams have declared that mesh will fuse and will not
> > radiate.
>
> No one said that. Show me a quote.
>
> This is contrary to NEC teachings so what shall we believe,
>
> > NEC or the opinions of this group?
>
> I thought you said NEC was crap.
>
> What do you believe?
>
> I believe you need meds.
>
> tom
> K0TAR

Heh. If you can't be bothered to read it in the first place
then you surely will not read a quote. Did you ever graduate from high
school?
What did you graduate from next? I know, you have never responded on
that to others.
Why did you beat your wife in the first place that made her leave?

3015. Re: Rebellion on NEC programs

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-11 04:55:46 UTC
From: Art Unwin <arthurunwin@gmail.com>
Message-ID: <ddeda745-eb16-4547-99d1-b25934f97769@m26g2000yqb.googlegroups.com>
Source record: 12127

On Nov 10, 9:07 pm, JIMMIE <JIMMIEDEE...@YAHOO.COM> wrote:
> On Nov 10, 11:16 am, Art Unwin <arthurun...@gmail.com> wrote:
>
>
>
> > On Nov 10, 8:40 am, Michael Coslo <m...@psu.edu> wrote:
>
> > > JIMMIE wrote:
> > > > What the heck is this all about, I thought Art was going to rant about
> > > > how hams just sit around and model antennas and never actually build
> > > > them. That would have been funny.
>
> > > Careful Jimmie, you'll upset that guy from Radiobanter.com if you don't
> > > watch it! 8^)
>
> > > But the rest of you take notice, and quit hijacking Art's thread here to
> > > talk about field day. I want to hear about how NEC has it all wrong!
>
> > > Sheesh!
>
> > >   - 73 de Mike N3LI -
>
> > Consensus of the group say RF applied to a mesh will short or fuse.
> > NEC shows that it will not and that it will radiate.
> > On my home page I did the same thing and got an SWR curve
> > Therefore Art and NEC programs have got it all wrong.
> > This probably means that a faraday shield will short also, but that
> > needs a little more
> > consensus from the group as it would destroy the shielding of the
> > innards.
> > Therefore the NEC programs must have it all wrong!
>
> No such consensus that I am aware of . It could behave in many ways
> depending on geometry, frequency, size. I have a slot antenna that
> could be described as such. I doubt if anyone here would claim that it
> will short or fuse.
>
> Jimmie

Jimmie
Have you plonked Clark?

3016. Re: Rebellion on NEC programs

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-11 04:59:46 UTC
From: orfus <orfus@orfus.net>
Message-ID: <9xrKm.15305$ET3.5353@newsfe17.iad>
Source record: 12128

Art Unwin wrote:
> On Nov 10, 9:10 pm, JIMMIE <JIMMIEDEE...@YAHOO.COM> wrote:
>> On Nov 8, 2:38 pm, Art Unwin <arthurun...@gmail.com> wrote:
>>
>>
>>
>>> On Nov 8, 12:41 pm, Jeff Liebermann <je...@cruzio.com> wrote:
>>>> On Sun, 8 Nov 2009 08:24:50 -0800 (PST), Art Unwin
>>>> <arthurun...@gmail.com> wrote:
>>>>> So what does the future hold for those here with an interest in
>>>>> antennas as the title of this forum implies?
>>>> Without calculations, math, engineering, and modeling, you can return
>>>> to the days of trial by combat, proof by assertion, cut-n-try, claims
>>>> of amazing performance, irreproducible results, witchcraft, magic,
>>>> etc.
>>>> Granted, there are limitations to NEC2 modeling software.
>>>> <http://en.wikipedia.org/wiki/Numerical_Electromagnetics_Code#Limitations>
>>>> Rather than abandon years of work simply because you have invented an
>>>> antenna that cannot be visualized, optimized, modeled, seen or
>>>> demonstrated, a more productive solution to your problem would be to
>>>> find (or write) a suitable modeling program that would quantify your
>>>> "mesh" antenna. If you find that NEC2 or NEC4 based programs are
>>>> unsuitable for your purpose, there may be specialized programs that
>>>> may work.
>>>> --
>>>> Jeff Liebermann je...@cruzio.com
>>>> 150 Felker St #D http://www.LearnByDestroying.com
>>>> Santa Cruz CA 95060http://802.11junk.com
>>>> Skype: JeffLiebermann AE6KS 831-336-2558
>>> In the mean time those you recognise errant sciences when they see
>>> them dominate over all others who choose not to question their
>>> perceptability of total forsight of what is right and what is wrong.
>>> It is not my problem, as you say, because I didn't write a program
>>> that would win the day, the programs are already there. It is just at
>>> this time the naysayers have the forsight to say what is wrong which
>>> requires rebellion against that which say what is correct.
>>> Personaly I believe there is progress in designing a radiator that
>>> recognises CW and CCW
>>> transmissions that provides choice in selection of what polarization
>>> is used. After all hams wish to communicate with all and have no wish
>>> to be left out because of the poor choice of antenna to use.
>>> For the same radiator to be useable on all frequencies that we
>>> are not licensed to use is purely academic to our interests tho for
>>> the sake of science and the art of antennas the possibilities of what

>>> is perceived to be a discovery should be pushed aside
>>> on the basis of those that recognise what is bad based on what they
>>> perceive to have seen.
>>> The real problem today is that what we have accepted as good for
>>> antennas ala NEC computer programs is not being accepted as viable by
>>> those who have visual forsight that takes precidence over the science
>>> of NEC programs and physics of the dayare using the volume level of
>>> their voices to persuade all to denounce same.
>>> With this aproach being gradually accepted by those who remain
>>> silent we are being pushed back to personal antenna measurement which
>>> allows for assertions of incorrect use of testing which in effect
>>> gives credence with hams that for antennas all is really known! After
>>> all, it suggests that if mesh radiators were able to transmit all
>>> amatuers would be using them, when they are not! Thus the naysayers
>>> with undeniable visual forsight must be correct!
>>> So now amateurs are on a roll having "proved that short circuits
>>> occur when using mesh via naysayers from both sides of the pond, who
>>> can now dismiss with confidence the demise of helical antenna design
>>> change having convinced all that NEC programs have now been shown as
>>> defective. Next the idea will prevail that sunspots are there in
>>> abundance but cannot be utelized while hams continue to use radiators
>>> that naysayers, using the same "ability to recognize pornography" when
>>> "they" see it, use the same abilities
>>> to recognise psuedo sciences to deny those that pursue experimentation
>>> to achieve the
>>> possibility of advances in the hobby.
>>> Now it is labelled "my problem"..... (Yes Aussie, I am the
>>> ART that they usually attack), as it was for all the previous
>>> knowledgable hams with respect to science and antennas that fled
>>> rather than argue with those that belong to the "no" group which have
>>> the louder audibles that rule this group.
>> Alas are we here to praise or bury NEC.
>>
>> Jimmie
>
> I don't know. I was comfortable with NEC until Clark stated it was
> producing incorrect answers i.e. it shorts so it cannot radiate, It
> seems that the group agrees with him.
> Must I now throw my antenna programs away to abide by the majority of
> the experts?
I'd say yes, you should.

3017. Re: Rebellion on NEC programs

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-11 05:01:44 UTC
From: orfus <orfus@orfus.net>
Message-ID: <%yrKm.15306$ET3.1392@newsfe17.iad>
Source record: 12129

Art Unwin wrote:
> On Nov 10, 9:07 pm, JIMMIE <JIMMIEDEE...@YAHOO.COM> wrote:
>> On Nov 10, 11:16 am, Art Unwin <arthurun...@gmail.com> wrote:
>>
>>
>>
>>> On Nov 10, 8:40 am, Michael Coslo <m...@psu.edu> wrote:
>>>> JIMMIE wrote:
>>>>> What the heck is this all about, I thought Art was going to rant about
>>>>> how hams just sit around and model antennas and never actually build
>>>>> them. That would have been funny.
>>>> Careful Jimmie, you'll upset that guy from Radiobanter.com if you don't
>>>> watch it! 8^)
>>>> But the rest of you take notice, and quit hijacking Art's thread here to
>>>> talk about field day. I want to hear about how NEC has it all wrong!
>>>> Sheesh!
>>>> - 73 de Mike N3LI -
>>> Consensus of the group say RF applied to a mesh will short or fuse.
>>> NEC shows that it will not and that it will radiate.
>>> On my home page I did the same thing and got an SWR curve
>>> Therefore Art and NEC programs have got it all wrong.
>>> This probably means that a faraday shield will short also, but that
>>> needs a little more
>>> consensus from the group as it would destroy the shielding of the
>>> innards.
>>> Therefore the NEC programs must have it all wrong!
>> No such consensus that I am aware of . It could behave in many ways
>> depending on geometry, frequency, size. I have a slot antenna that
>> could be described as such. I doubt if anyone here would claim that it
>> will short or fuse.
>>
>> Jimmie
>
> Jimmie
> Have you plonked Clark?
Art, you're such a troll!

3018. Re: Rebellion on NEC programs

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-11 05:10:22 UTC
From: Art Unwin <arthurunwin@gmail.com>
Message-ID: <199f3cb2-520a-4f1c-9db7-e5e2e9a98dc1@d10g2000yqh.googlegroups.com>
Source record: 12130

Hmmm. who is this?

On Nov 10, 10:59 pm, orfus <or...@orfus.net> wrote:
> Art Unwin wrote:
> > On Nov 10, 9:10 pm, JIMMIE <JIMMIEDEE...@YAHOO.COM> wrote:
> >> On Nov 8, 2:38 pm, Art Unwin <arthurun...@gmail.com> wrote:
>
> >>> On Nov 8, 12:41 pm, Jeff Liebermann <je...@cruzio.com> wrote:
> >>>> On Sun, 8 Nov 2009 08:24:50 -0800 (PST), Art Unwin
> >>>> <arthurun...@gmail.com> wrote:
> >>>>> So what does the future hold for those here with an interest in
> >>>>> antennas as the title of this forum implies?
> >>>> Without calculations, math, engineering, and modeling, you can return
> >>>> to the days of trial by combat, proof by assertion, cut-n-try, claims
> >>>> of amazing performance, irreproducible results, witchcraft, magic,
> >>>> etc.
> >>>> Granted, there are limitations to NEC2 modeling software.
> >>>> <http://en.wikipedia.org/wiki/Numerical_Electromagnetics_Code#Limitations>
> >>>> Rather than abandon years of work simply because you have invented an
> >>>> antenna that cannot be visualized, optimized, modeled, seen
or
> >>>> demonstrated, a more productive solution to your problem would
be to
> >>>> find (or write) a suitable modeling program that would
quantify your
> >>>> "mesh" antenna. If you find that NEC2 or NEC4 based programs
are
> >>>> unsuitable for your purpose, there may be specialized programs
that
> >>>> may work.
> >>>> --
> >>>> Jeff Liebermann   je...@cruzio.com
> >>>> 150 Felker St #D   http://www.Learn ByDestroying.com
> >>>> Santa Cruz CA 95060http://802.11junk.com
> >>>> Skype: JeffLiebermann   AE6KS   831-336-2558
> >>> In the mean time those you recognise errant sciences when they see
> >>> them dominate over all others who choose not to question their
> >>> perceptability of total forsight of what is right and what is wrong.
> >>> It is not my problem, as you say, because I didn't write a program
> >>> that would win the day, the programs are already there. It is
just at
> >>> this time the naysayers have the forsight to say what is wrong
which
> >>> requires rebellion against that which say what is correct.

> >>> Personaly I believe there is progress in designing a radiator
that
> >>> recognises CW and CCW
> >>> transmissions that provides choice in selection of what polarization
> >>> is used. After all hams wish to communicate with all and have no wish
> >>> to be left out because of the poor choice of antenna to use.
> >>>   For the same radiator to be useable on all frequencies that we
> >>> are not licensed to use is purely academic to our interests tho for
> >>> the sake of science and the art of antennas the possibilities of what
> >>> is perceived to be a discovery should be pushed aside
> >>> on the basis of those that recognise what is bad based on what
they
> >>> perceive to have seen.
> >>>   The real problem today is that what we have accepted as good for
> >>> antennas ala NEC computer programs is not being accepted as viable by
> >>> those who have visual forsight that takes precidence over the
science
> >>> of NEC programs and physics of the dayare using the volume
level of
> >>> their voices to persuade all to denounce same.
> >>>   With this aproach being gradually accepted by those who
remain
> >>> silent we are being pushed back to personal antenna measurement
which
> >>> allows for assertions of incorrect use of testing which in effect
> >>> gives credence with hams that for antennas all is really
known! After
> >>> all, it suggests that if mesh radiators were able to transmit
all
> >>> amatuers would be using them, when they are not! Thus the
naysayers
> >>> with undeniable visual forsight must be correct!
> >>>   So now amateurs are on a roll having "proved that short circuits
> >>> occur when using mesh via naysayers from both sides of the pond, who
> >>> can now dismiss with confidence the demise of helical antenna
design
> >>> change having convinced all that NEC programs have now been
shown as
> >>> defective. Next the idea will prevail that sunspots are there
in
> >>> abundance but cannot be utelized while hams continue to use
radiators
> >>> that naysayers, using the same "ability to recognize
pornography" when
> >>> "they" see it, use the same abilities
> >>> to recognise psuedo sciences to deny those that pursue
experimentation
> >>> to achieve the
> >>> possibility of advances in the hobby.
> >>>   Now it is labelled "my problem"..... (Yes Aussie, I am the

> >>> ART that they usually attack), as it was for all the previous
> >>> knowledgable hams with respect to science and antennas that fled
> >>> rather than argue with those that belong to the "no" group
which have
> >>> the louder audibles that rule this group.
> >> Alas are we here to praise or bury NEC.
>
> >> Jimmie
>
> > I don't know. I was comfortable with NEC until Clark stated it was
> > producing incorrect answers i.e. it shorts so it cannot radiate, It
> > seems that the group agrees with him.
> > Must I now throw my antenna programs away to abide by the
majority of
> > the experts?

>
> I'd say yes, you should.

I may do as you say, who ever you are. Welcome to the group of
arguement, you fit in well

3019. Re: Rebellion on NEC programs

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-11 05:14:36 UTC
From: Art Unwin <arthurunwin@gmail.com>
Message-ID: <3fbf23f0-29bc-44e4-b54a-c816f6bb5cc9@d21g2000yqn.googlegroups.com>
Source record: 12131

On Nov 10, 11:01 pm, orfus <or...@orfus.net> wrote:
> Art Unwin wrote:
> > On Nov 10, 9:07 pm, JIMMIE <JIMMIEDEE...@YAHOO.COM> wrote:
> >> On Nov 10, 11:16 am, Art Unwin <arthurun...@gmail.com> wrote:
>
> >>> On Nov 10, 8:40 am, Michael Coslo <m...@psu.edu> wrote:
> >>>> JIMMIE wrote:
> >>>>> What the heck is this all about, I thought Art was going to rant about
> >>>>> how hams just sit around and model antennas and never actually build
> >>>>> them. That would have been funny.
> >>>> Careful Jimmie, you'll upset that guy from Radiobanter.com if you don't
> >>>> watch it! 8^)
> >>>> But the rest of you take notice, and quit hijacking Art's thread here to
> >>>> talk about field day. I want to hear about how NEC has it all wrong!
> >>>> Sheesh!
> >>>>   - 73 de Mike N3LI -
> >>> Consensus of the group say RF applied to a mesh will short or fuse.
> >>> NEC shows that it will not and that it will radiate.
> >>> On my home page I did the same thing and got an SWR curve
> >>> Therefore Art and NEC programs have got it all wrong.
> >>> This probably means that a faraday shield will short also, but that
> >>> needs a little more
> >>> consensus from the group as it would destroy the shielding of the
> >>> innards.
> >>> Therefore the NEC programs must have it all wrong!
> >> No such consensus that I am aware of . It could behave in many ways
> >> depending on geometry, frequency, size. I have a slot antenna that
> >> could be described as such. I doubt if anyone here would claim that it
> >> will short or fuse.
>
> >> Jimmie
>
> > Jimmie
> > Have you plonked Clark?
>
> Art, you're such a troll!

Am I ?

3020. Re: Rebellion on NEC programs

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-11 06:28:34 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <uklkf5du3dtrc58o38tetrr5thkk4vges8@4ax.com>
Source record: 12132

On Tue, 10 Nov 2009 22:01:44 -0700, orfus <orfus@orfus.net> wrote:
>Art Unwin wrote:
...
>> Have you plonked Clark?

What a curious complement. I have "plonked" Art, and it has reduced screen clutter other than that which survives quotation (fellows, you really need to learn selective quoting - wading through his rambles returns that tedium by proxy).

In the world of physics that goes to particles, photons, the weak force, and so on, there is a branch that takes on "strange attractors."

I wonder what force restrains Art from "plonking" me?

I happened upon a recent incident in Soccer that had a youtube commemoration of a thrashing (those girls show more muscle than Art) set to a song by Drowning Pool:

Let the bodies hit the floor
Let the bodies hit the floor
Let the bodies hit the floor
Let the bodies hit the floor Beaten why for
Can't take much more
One - Nothing wrong with me
Two - Nothing wrong with me
Three - Nothing wrong with me
Four - Nothing wrong with me
One - Something's got to give
Two - Something's got to give
Three - Something's got to give
Now
Let the bodies hit the floor
Push me again
This is the end

Kind of repetitive. Lots of anger. Cogent self analysis. More repetition.

And it is rebellious.

Well, I don't expect any NEC file (damned if you do, damned if you don't - had to keep the religion in it).

73's
Richard Clark, KB7QHC

3021. Re: Multi polarization antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-11 08:41:24 UTC
From: Szczepan Bialek <sz.bialek@wp.pl>
Message-ID: <hddso3mki1@node1.news.atman.pl>
Source record: 12133

"tom" <news4792@taring.org> wrote
news:4afa017c$0$42843$8046368a@newsreader.iphouse.net...
> Richard Clark wrote:
>>
>> Hi Mike,
>>
>> Careful, he might mis-interpret "straight." For him, this forum is
>> about sex, politics, or religion - but not science, engineering, and
>> certainly not antennas.
>>
>> 73's
>> Richard Clark, KB7QHC
>
> Richard,
>
> You forgot metaphysics.

Like EM. Look at this:

See:
http://www.electronics.radiouk.com/equip/antenna/reflect.php

"Standing wave.
When energy is reflected back towards the source, the combination of the
forward and reflected signals create a third wave. The picture on the right
is a rough demonstration of the creation of a standing wave.
The forward signal (black) combines with the reflected (blue) to create the
standing wave (green) which, although stood still, is continually varying in
amplitude."

It means that at the end of an antenna the voltage is doubled (the same take
place in a capacitor).

Now see at this: http://en.wikipedia.org/wiki/Kundt's_tube
"The sound generator is turned on and the piston is adjusted until the sound
from the tube suddenly gets much louder. This indicates that the tube is at
resonance, which means its length is a multiple of the wavelength of the
sound wave. At this point the sound waves in the tube are in the form of
standing waves, and the amplitude of vibrations of air are zero at equally
spaced intervals along the tube, called the nodes."

Between the nodes are places where the amplitude is doubled.

Derive the voltage doubling from EM.
S*

3022. Re: Rebellion on NEC programs

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-11 12:53:13 UTC
From: Richard Fry <rfry@adams.net>
Message-ID: <23fa186e-e131-4584-83d9-bc4356e2b373@l2g2000yqd.googlegroups.com>
Source record: 12134

On Nov 10, 10:01 pm, Art Unwin <arthurun...@gmail.com> wrote:

> As for my modeling I never did one for a shorted transmission line.

Art, are you thinking that if you put a short circuit across the output connector of your HF transmitter, it will not be affected -- as the short is not located one wavelength or some other length from the source?

If so, please invoke your self-stated spirit of experimentation by doing so, and reporting back to us with the result.

For those not so adventurous, the link below leads to a NEC analysis that should be of interest. Note that zero current flows past the first short in the line.

Art - consider how the result of this NEC analysis affects your concepts about a mesh antenna (no matter what the grid spacing).

http://i62.photobucket.com/albums/h85/rfry-100/Arts_Ladder.jpg

RF

3023. Re: Rebellion on NEC programs

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-11 13:04:26 UTC
From: Registered User <n4jvp@ix.netcom.com>
Message-ID: <jt9lf59iibj5n464ulmelqr3vgjijhp7t5@4ax.com>
Source record: 12135

On Tue, 10 Nov 2009 18:09:34 -0800 (PST), Art Unwin
<arthurunwin@gmail.com> wrote:

>
>Then tell me. Do you agree with Clark and others that RF applied to a
>mesh will short out at the first square of the mesh or not?

The correct answer is maybe. The characteristics of the intersection
of any two wires in the mesh can be dynamically inconsistent. At any
time any junction might act as an insulator, a conductor or a
semiconductor.

It would be wise to understand the materials you're working with
before making any grand assumptions. If any two intersections in a
mesh can have different characteristics, any piece of "identical" mesh
will be different from its model. Such differences will make it
impossible to create reproducible results.

3024. Re: Rebellion on NEC programs

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-11 13:41:43 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <1bzKm.15330$ET3.5165@newsfe17.iad>
Source record: 12136

Richard Fry wrote:
> For those not so adventurous, the link below leads to a NEC analysis
> that should be of interest. Note that zero current flows past the
> first short in the line.

How about the plumber's delight techniques used
in beam construction?
--
73, Cecil, IEEE, OOTC, http://www.w5dxp.com

3025. Re: Rebellion on NEC programs

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-11 14:29:43 UTC
From: Michael Coslo <mjc5@psu.edu>
Message-ID: <hdehon$b04a$1@tr22n12.aset.psu.edu>
Source record: 12137

Art Unwin wrote:
> On Nov 10, 8:40 am, Michael Coslo <m...@psu.edu> wrote:

<snip>
>>
>> But the rest of you take notice, and quit hijacking Art's thread here to
>> talk about field day. I want to hear about how NEC has it all wrong!
>>
>> Sheesh!
>>
>> - 73 de Mike N3LI -
>
> Consensus of the group say RF applied to a mesh will short or fuse.
> NEC shows that it will not and that it will radiate.
> On my home page I did the same thing and got an SWR curve
> Therefore Art and NEC programs have got it all wrong.
> This probably means that a faraday shield will short also, but that
> needs a little more
> consensus from the group as it would destroy the shielding of the
> innards.
> Therefore the NEC programs must have it all wrong!

As a side note, last night I won my clubs "weird antenna" contest with a
2 meter vertical dipole made from Jello! (this is not kidding)

Top half was Orange Jello - with a little salt added, bottom half was
raspberry Jello and some salt.

Now on to the NEC issues. There is no doubt that in certain applications
or antennas that NEC will have some problems in calculation.

It is doing a service to the discipline to point out these special cases.

But that doesn't mean that NEC is invalidated because of those cases.
Just means some fine tuning is needed.

I don't get too excited about antennas until they are built. Simulations
are not the end product.

- 73 de Mike N3LI -

3026. Re: Rebellion on NEC programs

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-11 14:31:21 UTC
From: Art Unwin <arthurunwin@gmail.com>
Message-ID: <6a74dd81-8a69-4772-8ab5-03a5b8442f47@m16g2000yqc.googlegroups.com>
Source record: 12138

On Nov 11, 7:04 am, Registered User <n4...@ix.netcom.com> wrote:
> On Tue, 10 Nov 2009 18:09:34 -0800 (PST), Art Unwin
>
> <arthurun...@gmail.com> wrote:
>
> >Then tell me. Do you agree with Clark and others that RF applied to a
> >mesh will short out at the first square of the mesh or not?
>
> The correct answer is maybe. The characteristics of the intersection
> of any two wires in the mesh can be dynamically inconsistent. At any
> time any junction might act as an insulator, a conductor or a
> semiconductor.

Yes that is correct, the same goes with any radiator or antenna

>
> It would be wise to understand the materials you're working with
> before making any grand assumptions. If any two intersections in a
> mesh can have different characteristics, any piece of "identical" mesh
> will be different from its model. Such differences will make it
> impossible to create reproducible results.

Well it wasn't a "grand assumption.) To remove the "maybees" that you
refer to you, use as a sample a stretched lath or a multi perforated
sheet of aluminum from the local hardware store
If you are uneasy about using mesh then weld the intersections using a
car battery set up.
or buy a welded shopping basket and play with that to duplicate
reports. Imponderables are always best removed before
experimenting. You can buy sample sheets of different types of mesh
with different types of materials, weave or otherwise on E Bay but as
always
mesh types have to be cleaned of coatings and less so for perforated
forms. The graphs pictured on my page were of these types and the
curves shown are on site measurements.
As always trust in computer programs but always verify.

3027. Re: Rebellion on NEC programs

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-11 14:31:26 UTC
From: Michael Coslo <mjc5@psu.edu>
Message-ID: <hdehru$b04a$2@tr22n12.aset.psu.edu>
Source record: 12139

Art Unwin wrote:
> On Nov 10, 3:00 pm, Richard Fry <r...@adams.net> wrote:
>> On Nov 10, 10:16 am, Art Unwin <arthurun...@gmail.com> wrote:
>>
>>> Consensus of the group say RF applied to a mesh will short or fuse.
>>> NEC shows that it will not and that it will radiate.
>> Art, did you forget about the NEC analysis linked below?
>>
>> How much will your mesh antenna radiate, unless you have invented a
>> VERY heroic network to match it to typical transmission lines
>> (comments, please)?
>>
>> http://i62.photobucket.com/albums/h85/rfry-100/Arts_Mesh_Antenna.jpg
>>
>> RF
> Actual mesh used by Art
> Aluminum mesh, windows, insects
> Wire dia .011", mesh 18 by 16
> Per group analysis, wires will short.

Perhaps I should have read this before my previous post - You did build
an antenna? If so, my apologies!

- 73 de Mike N3LI -

3028. Re: Rebellion on NEC programs

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-11 14:35:19 UTC
From: Michael Coslo <mjc5@psu.edu>
Message-ID: <hdei37$b04a$3@tr22n12.aset.psu.edu>
Source record: 12140

Art Unwin wrote:
> On Nov 10, 9:43 pm, tom <news4...@taring.org> wrote:
>> Art Unwin wrote:
>>
>>> Well you started all this but never explained your position so Clark
>>> entered the picture with his interpretation of physics which appeared
>>> to match yours.
>>> Ohms law is fairly short so explain your position.
>> Art, you've obviously forgotten that YOU started this thread.
>>
>> Get meds, you need them.
>>
>> tom
>> K0TAR
>
> Yes idiot. I started it after Clark made an observation and the group
> agreed with him.
> I am not willing as yet to discard NEC just on his say so.
> Are you? Why?

Who is this group you speak of, and where and how do they decide things?

- 73 de Mike N3LI -

3029. Re: Multi polarization antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-11 14:38:25 UTC
From: Michael Coslo <mjc5@psu.edu>
Message-ID: <hdei91$b04a$4@tr22n12.aset.psu.edu>
Source record: 12141

```
tom wrote:
> Richard Clark wrote:
>>
>> Hi Mike,
>>
>> Careful, he might mis-interpret "straight." For him, this forum is
>> about sex, politics, or religion - but not science, engineering, and
>> certainly not antennas.
>>
>> 73's
>> Richard Clark, KB7QHC
>
> Richard,
>
> You forgot metaphysics.

Isn't that spelled metaphysicks?

- 73 de Mike N3LI -
```

3030. mast position when mounting a beam?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-11 15:06:31 UTC
From: Steve <zarco@sonic.net>
Message-ID: <4afad2fc$0$1639$742ec2ed@news.sonic.net>
Source record: 12142

I'm in the process of putting up a 4 element 6 meter beam.
I'd like it to be balanced but that means I'll be attaching
it to my pole half way between the driven element and
first director. This is a 2" diameter aluminum pole and I'm
concerned that it will interfere with the pattern.

Can anyone say (with some level of confidence) if this is
a problem? Normally, beams seem to be mounted adjacent
to an element. TIA

Steve

3031. Re: mast position when mounting a beam?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-11 15:57:02 UTC
From: christofire <christofire@btinternet.com>
Message-ID: <S5OdnQ_YEtNJQ2fXnZ2dnUVZ7vSdnZ2d@bt.com>
Source record: 12143

"Steve" <zarco@sonic.net> wrote in message
news:4afad2fc$0$1639$742ec2ed@news.sonic.net...
> I'm in the process of putting up a 4 element 6 meter beam.
> I'd like it to be balanced but that means I'll be attaching
> it to my pole half way between the driven element and
> first director. This is a 2" diameter aluminum pole and I'm
> concerned that it will interfere with the pattern.
>
> Can anyone say (with some level of confidence) if this is
> a problem? Normally, beams seem to be mounted adjacent
> to an element. TIA
>
> Steve

If the pole is perpendicular to the elements it shouldn't have much effect on the pattern or the match, but if you want vertical polarisation then you'll have a number of issues to contend with - the feeder as well as the mounting pole.

Chris

3032. Re: mast position when mounting a beam?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-11 16:30:22 UTC
From: tom <news4792@taring.org>
Message-ID: <4afae68f$0$42841$8046368a@newsreader.iphouse.net>
Source record: 12144

Steve wrote:
> I'm in the process of putting up a 4 element 6 meter beam.
> I'd like it to be balanced but that means I'll be attaching
> it to my pole half way between the driven element and
> first director. This is a 2" diameter aluminum pole and I'm
> concerned that it will interfere with the pattern.
>
> Can anyone say (with some level of confidence) if this is
> a problem? Normally, beams seem to be mounted adjacent
> to an element. TIA
>
> Steve
>
>

Assuming that it's going up horizontally polarized and that the pole is vertical, it won't make any difference where you put it.

tom
K0TAR

3033. Genius

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-11 16:41:50 UTC
From: Bill <k4wge@arrl.net>
Message-ID: <255200ed-04ef-4e5d-a2ea-79996d030fd7@37g2000yqm.googlegroups.com>
Source record: 12145

from http://unwinantennas.com/:

"The Sun is very hot because it is burning. Burning as we know it
produces soot and other by products in abundance that when these
particles collect in the air they become visual to the eye as smoke
even tho the particles themselves are invisible to the eye unless
there is a contrast in light as with particles passing thru a shaft of
light thru a window."

Does the author not understand the difference between fusion and
combustion? Why would anyone pay attention to such an ignoramus when
he writes about antenna theory?

3034. Re: Genius

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-11 17:50:38 UTC
From: Art Unwin <arthurunwin@gmail.com>
Message-ID: <198b7753-d2b4-42ad-a3ee-3052d03d6b3b@a32g2000yqm.googlegroups.com>
Source record: 12146

On Nov 11, 10:41 am, Bill <k4...@arrl.net> wrote:
> fromhttp://unwinantennas.com/:
>
> "The Sun is very hot because it is burning. Burning as we know it
> produces soot and other by products in abundance that when these
> particles collect in the air they become visual to the eye as smoke
> even tho the particles themselves are invisible to the eye unless
> there is a contrast in light as with particles passing thru a shaft of
> light thru a window."
>
> Does the author not understand the difference between fusion and
> combustion? Why would anyone pay attention to such an ignoramus when
> he writes about antenna theory?

By all means re write it according to your own teachings. I paid for
the option of what I wrote and I assume you can do the same.
Maybe your efforts will be printed in many books as a cannon, tho
critiscism alone rarely is !

3035. Re: Genius

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-11 19:12:37 UTC
From: Bill <k4wge@arrl.net>
Message-ID: <5d5f6ac6-b125-4113-a43d-8058a695e791@b2g2000yqi.googlegroups.com>
Source record: 12147

On Nov 11, 5:50 pm, Art Unwin <arthurun...@gmail.com> wrote:
> On Nov 11, 10:41 am, Bill <k4...@arrl.net> wrote:
>
> > fromhttp://unwinantennas.com/:
>
> > "The Sun is very hot because it is burning. Burning as we know it
> > produces soot and other by products in abundance that when these
> > particles collect in the air they become visual to the eye as smoke
> > even tho the particles themselves are invisible to the eye unless
> > there is a contrast in light as with particles passing thru a shaft of
> > light thru a window."
>
> > Does the author not understand the difference between fusion and
> > combustion? Why would anyone pay attention to such an ignoramus when
> > he writes about antenna theory?
>
> By all means re write it according to your own teachings

It is too hopeless to be rewritten.

>I paid for the option of what I wrote and I assume you can >do the same.

You should have paid for an editor. I would not pay to display myself
as a great ass on the internet.

> Maybe your efforts will be printed in many books as a
> cannon, tho critiscism alone rarely is !

You are illiterate AND ignorant. Can't you even use a dictionary?

3036. Re: mast position when mounting a beam?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-11 19:54:34 UTC
From: Steve <zarco@sonic.net>
Message-ID: <4afb167f$0$1596$742ec2ed@news.sonic.net>
Source record: 12148

Thanks guys....yes the beam will be horizontal and
perpendicular to the mast.

"tom" <news4792@taring.org> wrote in message
news:4afae68f$0$42841$8046368a@newsreader.iphouse.net...
> Steve wrote:
>> I'm in the process of putting up a 4 element 6 meter beam.
>> I'd like it to be balanced but that means I'll be attaching
>> it to my pole half way between the driven element and
>> first director. This is a 2" diameter aluminum pole and I'm
>> concerned that it will interfere with the pattern.
>>
>> Can anyone say (with some level of confidence) if this is
>> a problem? Normally, beams seem to be mounted adjacent
>> to an element. TIA
>>
>> Steve
>
> Assuming that it's going up horizontally polarized and that the pole is
> vertical, it won't make any difference where you put it.
>
> tom
> K0TAR

3037. Re: Genius

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-11 20:12:36 UTC
From: Art Unwin <arthurunwin@gmail.com>
Message-ID: <807eed2d-d83b-4b0b-82b7-e92f6d2dbae5@u7g2000yqm.googlegroups.com>
Source record: 12149

On Nov 11, 1:12 pm, Bill <k4...@arrl.net> wrote:
> On Nov 11, 5:50 pm, Art Unwin <arthurun...@gmail.com> wrote:
>
>
>
> > On Nov 11, 10:41 am, Bill <k4...@arrl.net> wrote:
>
> > > fromhttp://unwinantennas.com/:
>
> > > "The Sun is very hot because it is burning. Burning as we know it
> > > produces soot and other by products in abundance that when these
> > > particles collect in the air they become visual to the eye as smoke
> > > even tho the particles themselves are invisible to the eye unless
> > > there is a contrast in light as with particles passing thru a shaft of
> > > light thru a window."
>
> > > Does the author not understand the difference between fusion and
> > > combustion? Why would anyone pay attention to such an ignoramus when
> > > he writes about antenna theory?
>
> > By all means re write it according to your own teachings
>
> It is too hopeless to be rewritten.
>
> >I paid for the option of what I wrote and I assume you can >do the same.
>
> You should have paid for an editor. I would not pay to display myself
> as a great ass on the internet.
>
> > Maybe your efforts will be printed in many books as a
>
> > cannon, tho critiscism alone rarely is !
>
> You are illiterate AND ignorant. Can't you even use a dictionary?

It is better to ask for forgiveness than requesting permission

3038. Re: mast position when mounting a beam?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-12 00:21:38 UTC
From: MTV <volztexas@comcast.net>
Message-ID: <KyIKm.193901$ua.26459@en-nntp-05.dc1.easynews.com>
Source record: 12150

Steve wrote:
> Thanks guys....yes the beam will be horizontal and
> perpendicular to the mast.
>
> "tom" <news4792@taring.org> wrote in message
> news:4afae68f$0$42841$8046368a@newsreader.iphouse.net...
>> Steve wrote:
>>> I'm in the process of putting up a 4 element 6 meter beam.
>>> I'd like it to be balanced but that means I'll be attaching
>>> it to my pole half way between the driven element and
>>> first director. This is a 2" diameter aluminum pole and I'm
>>> concerned that it will interfere with the pattern.
>>>
>>> Can anyone say (with some level of confidence) if this is
>>> a problem? Normally, beams seem to be mounted adjacent
>>> to an element. TIA
>>>
>>> Steve
>> Assuming that it's going up horizontally polarized and that the pole is
>> vertical, it won't make any difference where you put it.
>>
>> tom
>> K0TAR

Steve,

One thing I found out AFTER I'd put up my HF beam is that 1) I'd mounted the beam too close to the tower, abt 4" - just enough to clear the tower, or 2) I should have located the top egg insulators on the guy wires right next to the tower instead of 3-5' below. Methinks the guy wires at the top of the tower may be resonate on 10-15 meters and raised the SWR being so close to the HF beam. I also put VHF/UHF beams on top of the mast about 3' above the HF beam but their SWR is a very wide band 1:1. If I had to do it over again I'd use a longer mast, which I could have done since the lower part of the mast is secured at least 3' below the rotator bushing.

Marv
W5MTV

3039. Re: SMS?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-12 01:06:06 UTC
From: Wayne <mygarbagecan@verizon.net>
Message-ID: <hdfn1v$e76$1@news.eternal-september.org>
Source record: 12051

"Cecil Moore" <nospam@w5dxp.com> wrote in message
news:N1dKm.7808$Xf2.4311@newsfe12.iad...
> JoeH wrote:
>> I read it as "VTTS"
>
> Can't be - there are only two dahs.
> --
> 73, Cecil, IEEE, OOTC, http://www.w5dxp.com
-
I copy "VTTS" also.
--Wayne

3040. Re: SMS?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-12 02:17:43 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <LfKKm.25452$Xf2.2542@newsfe12.iad>
Source record: 12052

Wayne wrote:
> "Cecil Moore" <nospam@w5dxp.com> wrote in message
>> Can't be - there are only two dahs.

> I copy "VTTS" also.

There must be more than one version of that
commercial. On the one I viewed, there were
only two dahs.
--
73, Cecil, IEEE, OOTC, http://www.w5dxp.com

3041. Re: mast position when mounting a beam?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-12 02:24:41 UTC
From: tom <news4792@taring.org>
Message-ID: <4afb71d9$0$42840$8046368a@newsreader.iphouse.net>
Source record: 12053

MTV wrote:
>
> Steve,
>
> One thing I found out AFTER I'd put up my HF beam is that 1) I'd mounted
> the beam too close to the tower, abt 4" - just enough to clear the
> tower, or 2) I should have located the top egg insulators on the guy
> wires right next to the tower instead of 3-5' below. Methinks the guy
> wires at the top of the tower may be resonate on 10-15 meters and raised
> the SWR being so close to the HF beam. I also put VHF/UHF beams on top
> of the mast about 3' above the HF beam but their SWR is a very wide band
> 1:1. If I had to do it over again I'd use a longer mast, which I could
> have done since the lower part of the mast is secured at least 3' below
> the rotator bushing.
>
> Marv
> W5MTV

He makes a good point. I was responding only to the antenna elements,
boom and mast. The environment surrounding it needs to be reasonably
clear, and that includes height above ground.

tom
K0TAR

3042. Re: Genius

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-12 12:59:03 UTC
From: AndyS <andysharpe@juno.com>
Message-ID: <e2b1d182-95a5-4936-9817-e9ef8b594694@f20g2000prn.googlegroups.com>
Source record: 12054

On Nov 11, 10:41 am, Bill <k4...@arrl.net> wrote:
> fromhttp://unwinantennas.com/:
>
> "The Sun is very hot because it is burning. Burning as we know it
> produces soot and other by products in abundance that when these
> particles collect in the air they become visual to the eye as smoke
> even tho the particles themselves are invisible to the eye unless
> there is a contrast in light as with particles passing thru a shaft of
> light thru a window."
>
> Does the author not understand the difference between fusion and
> combustion? Why would anyone pay attention to such an ignoramus when
> he writes about antenna theory?

Andy comments;

It looks like satire to me. I got a chuckle out of it.... But you
can
verify this by going to the sun and lchecking it out for yourself....
It'll be OK
if you go at night when it's a lot cooler.

Andy W4OAH

3043. Re: Genius

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-12 18:59:28 UTC
From: Bill <k4wge@arrl.net>
Message-ID: <a57738c1-40f3-4d93-b373-29f083866c6d@m26g2000yqb.googlegroups.com>
Source record: 12055

>
> Andy comments;
>
>   It looks like satire to me. I got a chuckle out of it.... But you
> can
> verify this by going to the sun and lchecking it out for yourself....
> It'll be OK
> if you go at night when it's a lot cooler.
>
>   Andy W4OAH

Seriously, you can see great pictures of the solar surface with
DX ToolBox:

http://www.blackcatsystems.com/software/dxtoolbox.html

3044. Re: SMS?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-12 22:33:43 UTC
From: Ian Jackson <ianREMOVETHISjackson@g3ohx.demon.co.uk>
Message-ID: <Yup9aeLH1I$KFwKW@g3ohx.demon.co.uk>
Source record: 12056

In message <hdfn1v$e76$1@news.eternal-september.org>, Wayne
<mygarbagecan@verizon.net> writes
>
>"Cecil Moore" <nospam@w5dxp.com> wrote in message
>news:N1dKm.7808$Xf2.4311@newsfe12.iad...
>> JoeH wrote:
>>> I read it as "VTTS"
>>
>> Can't be - there are only two dahs.
>> --
>> 73, Cecil, IEEE, OOTC, http://www.w5dxp.com
>-
>I copy "VTTS" also.

In the UK, the only 'SMS' morse I've ever heard is 'SMS' with no breaks
(di-di-di-dah-dah-di-di-dit). Why would it be otherwise?
--
Ian

3045. Re: SMS?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-13 12:41:57 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <%ucLm.11198$dc2.6221@newsfe20.iad>
Source record: 12057

Ian Jackson wrote:
> In the UK, the only 'SMS' morse I've ever heard is 'SMS' with no breaks
> (di-di-di-dah-dah-di-di-dit). Why would it be otherwise?

It appears that, for that Prudential commercial, the
spacing between the dahs is longer than the spacing
between the dits.
--
73, Cecil, IEEE, OOTC, http://www.w5dxp.com

3046. Matching on the MFJ-1800

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-13 13:28:34 UTC
From: amdx <amdx@knology.net>
Message-ID: <660d9$4afd5f0e$18ec6dd7$25249@KNOLOGY.NET>
Source record: 12058
Cross-posted to: rec.radio.amateur.antenna,alt.internet.wireless

Hi All,
My original thread seems to have died, still wondering how the folded loop
is matched to 50 ohms. (probably isn't? cheap, but works?)
I've added a dimensional drawing and some more pics.
If more info is needed let me know.

Here is a drawing and some more pics.
http://i395.photobucket.com/albums/pp37/Qmavam/MFJPaintFileJPG.jpg
http://i395.photobucket.com/albums/pp37/Qmavam/MFJCoaxconnection.jpg
http://i395.photobucket.com/albums/pp37/Qmavam/MFJRuledDE.jpg
http://i395.photobucket.com/albums/pp37/Qmavam/MFJruledcoax.jpg
Hope I covered everything,
Mike

3047. Folded Dipole Calculator Help

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-14 18:05:21 UTC
From: amdx <amdx@knology.net>
Message-ID: <d3a46$4afef16c$18ec6dd7$10181@KNOLOGY.NET>
Source record: 12059
Cross-posted to: rec.radio.amateur.antenna,alt.internet.wireless,sci.electronics.design

Hi All,
I'm having a disagreement about the use of this folded dipole calculator
impedance calculator.
http://www.k7mem.150m.com/Electronic_Notebook/antennas/folded_dipole.html
We are using it to calculate the impedance of folded dipoles to drive a
yagi.
When entering data it asks for "Simple dipole feed impedance (ohms)"
Default is 72 ohms. This assumes a 1/2 wave dipole.
The fellow I'm disagreeing with say's,
"the reason that the variable in the calculator for the "dipole feed
impedance"
could be if you want to transform the z to something else, such as 50 ohms."
I don't even understand what he means.
I can only think of one reason to alter the 72 ohms, that would be if you
use a a different length folded dipole.
I'll readily admit the other fellow knows more about this than me, but
I need more convincing :-)
Can anyone explain this to me.
Thanks, Mike

3048. Re: Folded Dipole Calculator Help

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-14 18:23:06 UTC
From: Tony Hwang <dragon40@shaw.ca>
Message-ID: <hACLm.21858$de6.6577@newsfe21.iad>
Source record: 12060
Cross-posted to: rec.radio.amateur.antenna,alt.internet.wireless,sci.electronics.design

amdx wrote:
> Hi All,
> I'm having a disagreement about the use of this folded dipole calculator
> impedance calculator.
> http://www.k7mem.150m.com/Electronic_Notebook/antennas/folded_dipole.html
> We are using it to calculate the impedance of folded dipoles to drive a
> yagi.
> When entering data it asks for "Simple dipole feed impedance (ohms)"
> Default is 72 ohms. This assumes a 1/2 wave dipole.
> The fellow I'm disagreeing with say's,
> "the reason that the variable in the calculator for the "dipole feed
> impedance"
> could be if you want to transform the z to something else, such as 50 ohms."
> I don't even understand what he means.
> I can only think of one reason to alter the 72 ohms, that would be if you
> use a a different length folded dipole.
> I'll readily admit the other fellow knows more about this than me, but
> I need more convincing :-)
> Can anyone explain this to me.
> Thanks, Mike
>
>
>
Hi,
The eq. seems right. Folded dipole is basically a loop.
Usually we use 300 Ohm feeder.
Tony
VE6CGX

3049. Re: Folded Dipole Calculator Help

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-14 18:28:02 UTC
From: Tony Hwang <dragon40@shaw.ca>
Message-ID: <VECLm.313$tz6.81@newsfe02.iad>
Source record: 12061
Cross-posted to: rec.radio.amateur.antenna,alt.internet.wireless,sci.electronics.design

Tony Hwang wrote:
> amdx wrote:
>> Hi All,
>> I'm having a disagreement about the use of this folded dipole calculator
>> impedance calculator.
>> http://www.k7mem.150m.com/Electronic_Notebook/antennas/folded_dipole.html
>> We are using it to calculate the impedance of folded dipoles to drive a
>> yagi.
>> When entering data it asks for "Simple dipole feed impedance (ohms)"
>> Default is 72 ohms. This assumes a 1/2 wave dipole.
>> The fellow I'm disagreeing with say's,
>> "the reason that the variable in the calculator for the "dipole feed
>> impedance"
>> could be if you want to transform the z to something else, such as 50
>> ohms."
>> I don't even understand what he means.
>> I can only think of one reason to alter the 72 ohms, that would be if you
>> use a a different length folded dipole.
>> I'll readily admit the other fellow knows more about this than me, but
>> I need more convincing :-)
>> Can anyone explain this to me.
>> Thanks, Mike
>>
>>
>>
> Hi,
> The eq. seems right. Folded dipole is basically a loop.
> Usually we use 300 Ohm feeder.
> Tony
> VE6CGX
Hi,
And you can use a tranformer 300 Ohm to 75 Ohm to use coax if need.
It becomes a from 300 Ohm balaanced to 75 Ohm unbalanced feed.

3050. Re: Folded Dipole Calculator Help

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-14 18:36:51 UTC
From: Tim Wescott <tim@seemywebsite.com>
Message-ID: <DKKdndPN5qZeZWPXnZ2dnUVZ_gli4p2d@web-ster.com>
Source record: 12062
Cross-posted to: rec.radio.amateur.antenna,alt.internet.wireless,sci.electronics.design

On Sat, 14 Nov 2009 12:05:21 -0600, amdx wrote:

> Hi All,
> I'm having a disagreement about the use of this folded dipole
> calculator
> impedance calculator.
> http://www.k7mem.150m.com/Electronic_Notebook/antennas/
folded_dipole.html
> We are using it to calculate the impedance of folded dipoles to drive a
> yagi.
> When entering data it asks for "Simple dipole feed impedance (ohms)"
> Default is 72 ohms. This assumes a 1/2 wave dipole.
> The fellow I'm disagreeing with say's,
> "the reason that the variable in the calculator for the "dipole feed
> impedance"
> could be if you want to transform the z to something else, such as 50
> ohms."
> I don't even understand what he means.
> I can only think of one reason to alter the 72 ohms, that would be if
> you use a a different length folded dipole.
> I'll readily admit the other fellow knows more about this than me, but
> I need more convincing :-)
> Can anyone explain this to me.
> Thanks, Mike

The way I read it is that you put in the feed impedance that a similar-
length plain-ol' dipole in the same situation would have. In a Yagi this
can be significantly lower than 72 ohms, which is the whole reason you're
considering a folded dipole.

Does the author have contact information? Perhaps you could ask the
source?

--
www.wescottdesign.com

3051. Re: Folded Dipole Calculator Help

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-14 18:49:40 UTC
From: amdx <amdx@knology.net>
Message-ID: <d03e8$4afefd89$18ec6dd7$14599@KNOLOGY.NET>
Source record: 12063
Cross-posted to: rec.radio.amateur.antenna,alt.internet.wireless,sci.electronics.design

"Tony Hwang" <dragon40@shaw.ca> wrote in message
news:hACLm.21858$de6.6577@newsfe21.iad...
> amdx wrote:
>> Hi All,
>> I'm having a disagreement about the use of this folded dipole
>> calculator
>> impedance calculator.
>> http://www.k7mem.150m.com/Electronic_Notebook/antennas/folded_dipole.html
>> We are using it to calculate the impedance of folded dipoles to drive a
>> yagi.
>> When entering data it asks for "Simple dipole feed impedance (ohms)"
>> Default is 72 ohms. This assumes a 1/2 wave dipole.
>> The fellow I'm disagreeing with say's,
>> "the reason that the variable in the calculator for the "dipole feed
>> impedance"
>> could be if you want to transform the z to something else, such as 50
>> ohms."
>> I don't even understand what he means.
>> I can only think of one reason to alter the 72 ohms, that would be if you
>> use a a different length folded dipole.
>> I'll readily admit the other fellow knows more about this than me, but
>> I need more convincing :-)
>> Can anyone explain this to me.
>> Thanks, Mike
>>
>>
>>
> Hi,
> The eq. seems right. Folded dipole is basically a loop.
> Usually we use 300 Ohm feeder.
> Tony
> VE6CGX

In what case would I alter the 72 ohms?
Mike

3052. Re: Folded Dipole Calculator Help

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-14 18:57:07 UTC
From: amdx <amdx@knology.net>
Message-ID: <c7b5a$4afefd8f$18ec6dd7$391@KNOLOGY.NET>
Source record: 12064
Cross-posted to: rec.radio.amateur.antenna,alt.internet.wireless,sci.electronics.design

"Tony Hwang" <dragon40@shaw.ca> wrote in message
news:hACLm.21858$de6.6577@newsfe21.iad...
> amdx wrote:
>> Hi All,
>> I'm having a disagreement about the use of this folded dipole
>> calculator
>> impedance calculator.
>> http://www.k7mem.150m.com/Electronic_Notebook/antennas/folded_dipole.html
>> We are using it to calculate the impedance of folded dipoles to drive a
>> yagi.
>> When entering data it asks for "Simple dipole feed impedance (ohms)"
>> Default is 72 ohms. This assumes a 1/2 wave dipole.
>> The fellow I'm disagreeing with say's,
>> "the reason that the variable in the calculator for the "dipole feed
>> impedance"
>> could be if you want to transform the z to something else, such as 50
>> ohms."
>> I don't even understand what he means.
>> I can only think of one reason to alter the 72 ohms, that would be if you
>> use a a different length folded dipole.
>> I'll readily admit the other fellow knows more about this than me, but
>> I need more convincing :-)
>> Can anyone explain this to me.
>> Thanks, Mike
>>
>>
>>
> Hi,
> The eq. seems right. Folded dipole is basically a loop.
> Usually we use 300 Ohm feeder.
> Tony
> VE6CGX

In what case would I alter the 72 ohms?
Mike

3053. Re: Folded Dipole Calculator Help

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-14 20:06:05 UTC
From: Tim Wescott <tim@seemywebsite.com>
Message-ID: <3c2dnT8fr54wkGLXnZ2dnUVZ_j1i4p2d@web-ster.com>
Source record: 12065
Cross-posted to: rec.radio.amateur.antenna,alt.internet.wireless,sci.electronics.design

On Sat, 14 Nov 2009 12:05:21 -0600, amdx wrote:

> Hi All,
> I'm having a disagreement about the use of this folded dipole
> calculator
> impedance calculator.
> http://www.k7mem.150m.com/Electronic_Notebook/antennas/
folded_dipole.html
> We are using it to calculate the impedance of folded dipoles to drive a
> yagi.
> When entering data it asks for "Simple dipole feed impedance (ohms)"
> Default is 72 ohms. This assumes a 1/2 wave dipole.
> The fellow I'm disagreeing with say's,
> "the reason that the variable in the calculator for the "dipole feed
> impedance"
> could be if you want to transform the z to something else, such as 50
> ohms."
> I don't even understand what he means.
> I can only think of one reason to alter the 72 ohms, that would be if
> you use a a different length folded dipole.
> I'll readily admit the other fellow knows more about this than me, but
> I need more convincing :-)
> Can anyone explain this to me.
> Thanks, Mike

I've seen older Yagis that use folded dipoles, but the newer ones seem to lean more toward gamma or T matches. You get more latitude for adjusting impedance, in the gamma case you get a kinda sorta good match to coax without a balun, and if you're employing plumber's delight construction it's no more difficult to fabricate than a folded dipole.

So why a folded dipole, pray tell?

--
www.wescottdesign.com

3054. re:folded dipole calculator help

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-14 20:56:40 UTC
From: Cyclone651 <rollie@iowatelecom.net>
Message-ID: <hdn5i9$5v4$1@news.netins.net>
Source record: 12066

Your statement:
The fellow I'm disagreeing with say's,
"the reason that the variable in the calculator for the "dipole feed
impedance"
could be if you want to transform the z to something else, such as 50 ohms."
I don't even understand what he means.

My thoughts: My radio output impedance is 50 ohms, for a feed line I use
RG-8 and other 50 ohm impedenance coax.
If I were to use a folded dipole antenna I think I would prefer one that had
a 50 ohm feedpoint.

Nuff said, KD0FGX

3055. Re: Folded Dipole Calculator Help

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-14 21:05:15 UTC
From: Paul Keinanen <keinanen@sci.fi>
Message-ID: <qb6uf5djdffineb2u5eiuaov51hik3ti1v@4ax.com>
Source record: 12067
Cross-posted to: rec.radio.amateur.antenna,alt.internet.wireless,sci.electronics.design

On Sat, 14 Nov 2009 12:05:21 -0600, "amdx" <amdx@knology.net> wrote:

> Hi All,
> I'm having a disagreement about the use of this folded dipole calculator
>impedance calculator.
>http://www.k7mem.150m.com/Electronic_Notebook/antennas/folded_dipole.html
> We are using it to calculate the impedance of folded dipoles to drive a
>yagi.

Excuse me, but what does such simple dipole calculator have to do with the calculations for a Yagi feed element ?

Even assuming a single element feed element antenna, playing with the tube diameter (upper and lower bars) or the number of bars in a folded dipole will radically change the feed impedance.

Paul

3056. Re: Folded Dipole Calculator Help

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-14 21:39:48 UTC
From: amdx <amdx@knology.net>
Message-ID: <e9206$4aff23af$18ec6dd7$18962@KNOLOGY.NET>
Source record: 12068
Cross-posted to: rec.radio.amateur.antenna,alt.internet.wireless,sci.electronics.design

"Paul Keinanen" <keinanen@sci.fi> wrote in message
news:qb6uf5djdffineb2u5eiuaov51hik3ti1v@4ax.com...
> On Sat, 14 Nov 2009 12:05:21 -0600, "amdx" <amdx@knology.net> wrote:
>
>> Hi All,
>> I'm having a disagreement about the use of this folded dipole calculator
>>impedance calculator.
>>http://www.k7mem.150m.com/Electronic_Notebook/antennas/folded_dipole.html
>> We are using it to calculate the impedance of folded dipoles to drive a
>>yagi.
>
> Excuse me, but what does such simple dipole calculator have to do with
> the calculations for a Yagi feed element ?

I think it all started with the MFJ-1800 that uses a folded dipole, but
there
are many yagis that use a folded dipole as the driven element.
But, I think (now) I understand enough to know why you ask the question.
I think your point is the impedance of dipole feed on a yagi is highly
modified
by the reflector and directors.

> Even assuming a single element feed element antenna, playing with the
> tube diameter (upper and lower bars) or the number of bars in a folded
> dipole will radically change the feed impedance.
>
> Paul
>

I excerpted this from my latest email to my friend I'm having the
disagreement with. (Might
not even be a disagreement, it could be a miscommunication.)
Excerpt;
"The online calculator takes the (Impedance of a dipole x Ratio). This
gives you the impedance
after folding the dipole.
We still have no idea what the impedance of a dipole is when surrounded by
the reflector and
director. We do know how to change the transformation ratio once we know
what the impedance
of dipole would be in that surrounding."
Mike

3057. Re: re:folded dipole calculator help

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-14 21:49:44 UTC
From: amdx <amdx@knology.net>
Message-ID: <4ee65$4aff2604$18ec6dd7$806@KNOLOGY.NET>
Source record: 12069

"Cyclone651" <rollie@iowatelecom.net> wrote in message
news:hdn5i9$5v4$1@news.netins.net...
> Your statement:
> The fellow I'm disagreeing with say's,
> "the reason that the variable in the calculator for the "dipole feed
> impedance"
> could be if you want to transform the z to something else, such as 50
> ohms."
> I don't even understand what he means.
>
> My thoughts: My radio output impedance is 50 ohms, for a feed line I use
> RG-8 and other 50 ohm impedenance coax.
> If I were to use a folded dipole antenna I think I would prefer one that
> had a 50 ohm feedpoint.
>
> Nuff said, KD0FGX
Ya no doubt we all want a match.
I don't think you looked at the calculator.
I think he wants to put 50 into the data input line labeled
>Simple Dipole Feed Impedance (Ohms)<
and thinks it somehow affects the folded dipole.
I think it is just a number that is multiplied by the
calculated ratio.
Mike

3058. Re: an ontopic post about code

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-14 22:09:54 UTC
From: kb9rqz@yahoooo.com
Message-ID: <flauf59jildio7vr341kd85pu4ff9mp859@4ax.com>
Source record: 12070
Cross-posted to: alt.ham-radio.vhf-uhf,rec.radio.amateur.policy,rec.radio.amateur.antenna

On Fri, 01 Dec 2006 09:36:47 -0800, John Smith
<assemblywizard@gmail.com> wrote:

>K4YZ wrote:
>> Nope.
>>
>> The IP Address and servers are complete proof that I do NOT share
>> any annonymous character's "address".
>>
>> Sounds like Lennie, to me....
>>
>> Steve, K4YZ
>>
>
>To anyone with even an elementary understanding of anonymous proxies,
>anonymous remailers, zombie backdoors, etc., the ability to change ones
>IP address and header details is simplistic, indeed, with little time
>spent anyone can appear to be "coming" from anywhere in the world.
>
>You waste my time. Worse, you think us all idiots here. You remind me
>of the "street smart" prosecutors and defense attorneys who stack jurys
>with members of little or no technical knowledge and then call in
>"expert witnesses" and propose arguments of technical details to boggle
>their minds.
>
>You have only proven that you, yourself are either ignorant to such
>technical details, or else you are indeed street smart, I favor the
>latter in this case (however, if you in the dark about such things, 15
>minutes on google will enlighten you.)
>
>JS

"one useless man is disgrace 2 become a law firm 3 or more become a congress"
adams

woger you are a Congress all in your own head
"http://www.3ix.org/sys/aff.php?aff=7439" target="_blank"

altopia is never used by KB9RQZ
http://kb9rqz.cc.cc
http://kd8ctl.com
nor is Konstans@hotmail.com ever
btw i can be found at
17366 N River Rd

Chassel Mi

but the cowards asking lack the gut to act

3059. Re: Folded Dipole Calculator Help

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-14 22:49:39 UTC
From: Baron <baron.nospam@linuxmaniac.nospam.net>
Message-ID: <hdnc64$e1l$1@news.eternal-september.org>
Source record: 12071
Cross-posted to: rec.radio.amateur.antenna,alt.internet.wireless,sci.electronics.design

amdx wrote:

>
> "Paul Keinanen" <keinanen@sci.fi> wrote in message
> news:qb6uf5djdffineb2u5eiuaov51hik3ti1v@4ax.com...
>> On Sat, 14 Nov 2009 12:05:21 -0600, "amdx" <amdx@knology.net> wrote:
>>
>>> Hi All,
>>> I'm having a disagreement about the use of this folded dipole
>>> calculator
>>>impedance calculator.
>>>http://www.k7mem.150m.com/Electronic_Notebook/antennas/folded_dipole.html
>>> We are using it to calculate the impedance of folded dipoles to
>>> drive a
>>>yagi.
>>
>> Excuse me, but what does such simple dipole calculator have to do
>> with the calculations for a Yagi feed element ?
>
> I think it all started with the MFJ-1800 that uses a folded dipole,
> but
> there
> are many yagis that use a folded dipole as the driven element.
> But, I think (now) I understand enough to know why you ask the
> question.
> I think your point is the impedance of dipole feed on a yagi is highly
> modified
> by the reflector and directors.
>
>> Even assuming a single element feed element antenna, playing with the
>> tube diameter (upper and lower bars) or the number of bars in a
>> folded dipole will radically change the feed impedance.
>>
>> Paul
>>
>
> I excerpted this from my latest email to my friend I'm having the
> disagreement with. (Might
> not even be a disagreement, it could be a miscommunication.)
> Excerpt;
> "The online calculator takes the (Impedance of a dipole x Ratio).
> This
> gives you the impedance

> after folding the dipole.
> We still have no idea what the impedance of a dipole is when
> surrounded by
> the reflector and
> director. We do know how to change the transformation ratio once we
> know what the impedance
> of dipole would be in that surrounding."
> Mike

The nominal impedance of a dipole in free space is approximately 72 ohms. If it is part of a system its impedance will be influenced by that system causing it to change from nominal.

Folding the dipole allows it to behave as a transformer ! Thus the nominal dipole impedance can be altered to a value that can more easily be matched to the feed line.

Commonly the impedance of a dipole that is part of a system. ie "Yagi" falls to a much lower value. Under these conditions the folded dipole can be used to raise the impedance seen at the feed point to a more usable value.

Someone mentioned "Gama match". Whilst symmetrical gamma matches can be used, single ended is popular because it is inherently unbalanced and can be easily matched to a co-axial feedline.

--
Best Regards:
Baron.

3060. Re: Folded Dipole Calculator Help

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-14 23:21:18 UTC
From: Tony Hwang <dragon40@shaw.ca>
Message-ID: <SXGLm.11714$Sw5.4207@newsfe16.iad>
Source record: 12072
Cross-posted to: rec.radio.amateur.antenna,alt.internet.wireless,sci.electronics.design

amdx wrote:
> "Tony Hwang"<dragon40@shaw.ca> wrote in message
> news:hACLm.21858$de6.6577@newsfe21.iad...
>> amdx wrote:
>>> Hi All,
>>> I'm having a disagreement about the use of this folded dipole
>>> calculator
>>> impedance calculator.
>>> http://www.k7mem.150m.com/Electronic_Notebook/antennas/folded_dipole.html
>>> We are using it to calculate the impedance of folded dipoles to drive a
>>> yagi.
>>> When entering data it asks for "Simple dipole feed impedance (ohms)"
>>> Default is 72 ohms. This assumes a 1/2 wave dipole.
>>> The fellow I'm disagreeing with say's,
>>> "the reason that the variable in the calculator for the "dipole feed
>>> impedance"
>>> could be if you want to transform the z to something else, such as 50
>>> ohms."
>>> I don't even understand what he means.
>>> I can only think of one reason to alter the 72 ohms, that would be if you
>>> use a a different length folded dipole.
>>> I'll readily admit the other fellow knows more about this than me, but
>>> I need more convincing :-)
>>> Can anyone explain this to me.
>>> Thanks, Mike
>>>
>>>
>>>
>> Hi,
>> The eq. seems right. Folded dipole is basically a loop.
>> Usually we use 300 Ohm feeder.
>> Tony
>> VE6CGX
>
> In what case would I alter the 72 ohms?
> Mike
>
>
>
Hi,
Feed point impedance becomes near that when it is just a dipole(not
folded). On a haf wave element at center feed point the current and
voltage phase is such that the impedance is near that figure.

If it is vertical uater wave whip, the other half mirror image is prjected into the ground forming dipole and in that case feed point impedance at the bottom is around 50 Ohm. I am old dinosaur EE(class of 60), my brain is not as bright as it used to, LOL!

3061. Re: Folded Dipole Calculator Help

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-14 23:22:42 UTC
From: Tony Hwang <dragon40@shaw.ca>
Message-ID: <aZGLm.11715$Sw5.1949@newsfe16.iad>
Source record: 12073
Cross-posted to: rec.radio.amateur.antenna,alt.internet.wireless,sci.electronics.design

Tim Wescott wrote:
> On Sat, 14 Nov 2009 12:05:21 -0600, amdx wrote:
>
>> Hi All,
>> I'm having a disagreement about the use of this folded dipole
>> calculator
>> impedance calculator.
>> http://www.k7mem.150m.com/Electronic_Notebook/antennas/
> folded_dipole.html
>> We are using it to calculate the impedance of folded dipoles to drive a
>> yagi.
>> When entering data it asks for "Simple dipole feed impedance (ohms)"
>> Default is 72 ohms. This assumes a 1/2 wave dipole.
>> The fellow I'm disagreeing with say's,
>> "the reason that the variable in the calculator for the "dipole feed
>> impedance"
>> could be if you want to transform the z to something else, such as 50
>> ohms."
>> I don't even understand what he means.
>> I can only think of one reason to alter the 72 ohms, that would be if
>> you use a a different length folded dipole.
>> I'll readily admit the other fellow knows more about this than me, but
>> I need more convincing :-)
>> Can anyone explain this to me.
>> Thanks, Mike
>
> I've seen older Yagis that use folded dipoles, but the newer ones seem to
> lean more toward gamma or T matches. You get more latitude for adjusting
> impedance, in the gamma case you get a kinda sorta good match to coax
> without a balun, and if you're employing plumber's delight construction
> it's no more difficult to fabricate than a folded dipole.
>
> So why a folded dipole, pray tell?
>
Hi,
Also folded dipole tends to have broader b/w compared to dipole.

3062. Re: Folded Dipole Calculator Help

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-14 23:24:34 UTC
From: Tony Hwang <dragon40@shaw.ca>
Message-ID: <W_GLm.11717$Sw5.10850@newsfe16.iad>
Source record: 12074
Cross-posted to: rec.radio.amateur.antenna,alt.internet.wireless,sci.electronics.design

amdx wrote:
> "Paul Keinanen"<keinanen@sci.fi> wrote in message
> news:qb6uf5djdffineb2u5eiuaov51hik3ti1v@4ax.com...
>> On Sat, 14 Nov 2009 12:05:21 -0600, "amdx"<amdx@knology.net> wrote:
>>
>>> Hi All,
>>> I'm having a disagreement about the use of this folded dipole calculator
>>> impedance calculator.
>>> http://www.k7mem.150m.com/Electronic_Notebook/antennas/folded_dipole.html
>>> We are using it to calculate the impedance of folded dipoles to drive a
>>> yagi.
>>
>> Excuse me, but what does such simple dipole calculator have to do with
>> the calculations for a Yagi feed element ?
>
> I think it all started with the MFJ-1800 that uses a folded dipole, but
> there
> are many yagis that use a folded dipole as the driven element.
> But, I think (now) I understand enough to know why you ask the question.
> I think your point is the impedance of dipole feed on a yagi is highly
> modified
> by the reflector and directors.
>
>> Even assuming a single element feed element antenna, playing with the
>> tube diameter (upper and lower bars) or the number of bars in a folded
>> dipole will radically change the feed impedance.
>>
>> Paul
>>
>
> I excerpted this from my latest email to my friend I'm having the
> disagreement with. (Might
> not even be a disagreement, it could be a miscommunication.)
> Excerpt;
> "The online calculator takes the (Impedance of a dipole x Ratio). This
> gives you the impedance
> after folding the dipole.
> We still have no idea what the impedance of a dipole is when surrounded by
> the reflector and
> director. We do know how to change the transformation ratio once we know
> what the impedance
> of dipole would be in that surrounding."
> Mike

>
>
Hi,
Even now Yagi-Uda antenna design is empirical business tinkering with it
in the antenna range based on theory plus actual field result.

3063. Re: Folded Dipole Calculator Help

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-14 23:44:31 UTC
From: Baron <baron.nospam@linuxmaniac.nospam.net>
Message-ID: <hdnfcv$2v8$1@news.eternal-september.org>
Source record: 12075
Cross-posted to: rec.radio.amateur.antenna,alt.internet.wireless,sci.electronics.design

Tony Hwang wrote:

> Tim Wescott wrote:
>> On Sat, 14 Nov 2009 12:05:21 -0600, amdx wrote:
>>
>>> Hi All,
>>> I'm having a disagreement about the use of this folded dipole
>>> calculator
>>> impedance calculator.
>>> http://www.k7mem.150m.com/Electronic_Notebook/antennas/
>> folded_dipole.html
>>> We are using it to calculate the impedance of folded dipoles to
>>> drive a
>>> yagi.
>>> When entering data it asks for "Simple dipole feed impedance (ohms)"
>>> Default is 72 ohms. This assumes a 1/2 wave dipole.
>>> The fellow I'm disagreeing with say's,
>>> "the reason that the variable in the calculator for the "dipole feed
>>> impedance"
>>> could be if you want to transform the z to something else, such as
>>> 50 ohms."
>>> I don't even understand what he means.
>>> I can only think of one reason to alter the 72 ohms, that would be
>>> if you use a a different length folded dipole.
>>> I'll readily admit the other fellow knows more about this than me,
>>> but
>>> I need more convincing :-)
>>> Can anyone explain this to me.
>>> Thanks, Mike
>>
>> I've seen older Yagis that use folded dipoles, but the newer ones
>> seem to
>> lean more toward gamma or T matches. You get more latitude for
>> adjusting impedance, in the gamma case you get a kinda sorta good
>> match to coax without a balun, and if you're employing plumber's
>> delight construction it's no more difficult to fabricate than a
>> folded dipole.
>>
>> So why a folded dipole, pray tell?
>>
> Hi,
> Also folded dipole tends to have broader b/w compared to dipole.

Due to the transformer effect of folding it.

--
Best Regards:
Baron.

3064. Re: Genius

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-15 02:12:35 UTC
From: christofire <christofire@btinternet.com>
Message-ID: <ZcmdnSPh8_4F_mLXnZ2dnUVZ8vSdnZ2d@bt.com>
Source record: 12076

"Bill" <k4wge@arrl.net> wrote in message
news:01414592-918d-464e-9961-1e087bd9b6e7@r5g2000yqb.googlegroups.com...
On Nov 11, 3:12 pm, Art Unwin <arthurun...@gmail.com> wrote:

>
> It is better to ask for forgiveness than requesting permission-
>

http://unwinantennas.com/ appears to be gone. That is a good
start :-)

* No, it's back!

Chris

3065. Re: Genius

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-15 03:10:20 UTC
From: JIMMIE <JIMMIEDEE123@YAHOO.COM>
Message-ID: <fb6cfd05-4543-4cf3-ba13-61637b65915c@37g2000yqm.googlegroups.com>
Source record: 12077

On Nov 14, 9:12 pm, "christofire" <christof...@btinternet.com> wrote:
> "Bill" <k4...@arrl.net> wrote in message
>
> news:01414592-918d-464e-9961-1e087bd9b6e7@r5g2000yqb.googlegroups.com...
> On Nov 11, 3:12 pm, Art Unwin <arthurun...@gmail.com> wrote:
>
>
>
> > It is better to ask for forgiveness than requesting permission-
>
> http://unwinantennas.com/appears to be gone. That is a good
> start :-)
>
> * No, it's back!
>
> Chris

Its true the sun runs on coal, English coal no doubt of the finest
grade.

Jimmie

3066. Causes of Distrust of NEC and Mininec programs

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-15 06:23:05 UTC
From: Art Unwin <arthurunwin@gmail.com>
Message-ID: <6fafa871-564c-4e5b-9f90-c8aedd4c6606@n35g2000yqm.googlegroups.com>
Source record: 12078

Cebic found when comparing different style programs that some behaved
well in certain circumstance where others did not. Yet all antenna
programs
are based on the use of Maxwells equations where all programs should
have the same results, after all Maxwells equations are exact and not
fudged. One of the reasons is that since Maxwells laws are exact
radiators used must be resonant at repeatable points designated as a
period.
Fact is that most users use fractional wavelength designs, usually
a half wavelength, that is not resonant at repeatable points where
the area around the datum line of a sine wave is never equal when
generated around a tank circuit.
The reason for this is "voltage over shoot" which gets smaller
with every cycle but never disappears. Thus when programs are used
based on fractional wavelength radiators the results will never show
100% accountability and in fact efficiencies derived will be in the
order of 92%!
If the radiator is of a wavelength then one is not using a "fudge"
figure
in the calculations and then becomes possible to attain total
accountability with efficiency of 100%. regardles of what type program
is used.
If one is to use exact equations, as are Maxwell equations, then
one must also use measurements that are also exact and repeatable and
that is definitely not fractional wavelengths!
What one gains from this aproach is that any radiator of any shape,
size or elevation can provide figures in the order of 100% as long as
the radiator is a multiple of a wavelength where it is resonant at
exact and repeatable measurements.
If anybody can give pointers that refute the accuracy of the above I
would be very interested in hearing them

3067. Re: Causes of Distrust of NEC and Mininec programs

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-15 07:16:19 UTC
From: "Helmut Wabnig"
Message-ID: <9havf5pioeibjenbq8849hep3d998a0g2r@4ax.com>
Source record: 12079

On Sat, 14 Nov 2009 22:23:05 -0800 (PST), Art Unwin
<arthurunwin@gmail.com> wrote:

>Cebic found when comparing different style programs that some behaved
>well in certain circumstance where others did not. Yet all antenna
>programs
>are based on the use of Maxwells equations where all programs should
>have the same results, after all Maxwells equations are exact and not
>fudged. One of the reasons is that since Maxwells laws are exact
>radiators used must be resonant at repeatable points designated as a
>period.
> Fact is that most users use fractional wavelength designs, usually
>a half wavelength, that is not resonant at repeatable points where
>the area around the datum line of a sine wave is never equal when
>generated around a tank circuit.
> The reason for this is "voltage over shoot" which gets smaller
>with every cycle but never disappears. Thus when programs are used
>based on fractional wavelength radiators the results will never show
>100% accountability and in fact efficiencies derived will be in the
>order of 92%!
> If the radiator is of a wavelength then one is not using a "fudge"
>figure
>in the calculations and then becomes possible to attain total
>accountability with efficiency of 100%. regardles of what type program
>is used.
> If one is to use exact equations, as are Maxwell equations, then
>one must also use measurements that are also exact and repeatable and
>that is definitely not fractional wavelengths!
> What one gains from this aproach is that any radiator of any shape,
> size or elevation can provide figures in the order of 100% as long as
>the radiator is a multiple of a wavelength where it is resonant at
>exact and repeatable measurements.
>If anybody can give pointers that refute the accuracy of the above I
>would be very interested in hearing them

How do I simulate a sheet metal or other metal structure in NEC,
when the software only knows (infinitesimally thin) "wires"

w.

3068. Re: Causes of Distrust of NEC and Mininec programs

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-15 12:18:14 UTC
From: Dave <k1ttt@arrl.net>
Message-ID: <c4861282-24f9-43cd-bdda-46421da05d24@b2g2000yqi.googlegroups.com>
Source record: 12080

On Nov 15, 6:23 am, Art Unwin <arthurun...@gmail.com> wrote:
> Cebic found when comparing different style programs that some behaved
> well in certain circumstance where others did not. Yet all antenna
> programs
> are based on the use of Maxwells equations where all programs should
> have the same results, after all Maxwells equations are exact and not
> fudged. One of the reasons is that since Maxwells laws are exact
> radiators used must be resonant at repeatable points designated as a
> period.
>   Fact is that most users use fractional wavelength designs, usually
> a half wavelength, that is not resonant at repeatable points where
> the area around the datum line of a sine wave is never equal when
> generated around a tank circuit.
>   The reason for this is "voltage over shoot" which gets smaller
> with every cycle but never disappears. Thus when programs are used
> based on fractional wavelength radiators the results will never show
> 100% accountability and in fact efficiencies derived will be in the
> order of 92%!
>   If the radiator is of a wavelength then one is not using a "fudge"
> figure
> in the calculations and then becomes possible to attain total
> accountability with efficiency of 100%. regardles of what type program
> is used.
>   If one is to use exact equations, as are Maxwell equations, then
> one must also use measurements that are also exact and repeatable and
> that is definitely not fractional wavelengths!
> What one gains from this aproach is that any radiator of any shape,
> size or elevation can provide figures in the order of 100% as long as
> the radiator is a multiple of a wavelength where it is resonant at
> exact and repeatable measurements.
> If anybody can give pointers that refute the accuracy of the above I
> would be very interested in hearing them

the key is that while all the programs are based on maxwell's
equations, it is impossible to implement maxwell's equations with 100%
accuracy on a digital computer. this is true of any and all
simulation and modeling programs for electrical or mechanical design.
all such programs make approximations and take shortcuts to reduce
calculation time while maintaining some minimum level of accuracy and
precision. it is important to understand the assumptions and
simplifications that have been made in order to make proper use of the
programs. typical traps in antenna simulations are that they don't
like very small or very large length/diameter ratios... so using them
for extrement long or short wires or very fat or very thin wires may

produce results that aren't realistic. many of them also don't like very small spacing between wires, this is where most optimizer programs fall apart, they start moving wires close together and get strange results like super gain or unrealizable narrow beam patterns, often accompanied by a very low feedpoint impedance.

most reputable programs like NEC have been validated very diligently over many years and their accuracy is well documented... as are the restrictions and assumptions that apply, but you have to read ALL the documentation, not just the quick start guide. Other programs like mininec, ao, yo, yagimax, and others make even more simplifications and therefore added restrictions so they can run on a desktop relatively quickly. unfortunately they don't always document the limitations as well as the professional level products. after all the professionals have millions of dollars riding on the accuracy of designs, hams have only pennies, so it just doesn't pay to write lots of documentation or do lots of testing that won't be read for ham users.

so, while all the programs must be based on the same equations, the results they generate, especially in the fringe cases, may be vastly different. remember two maxims... 'garbage in - garbage out', and 'you get what you pay for'.

3069. Re: Genius

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-15 12:27:54 UTC
From: Dave <k1ttt@arrl.net>
Message-ID: <c1a6762c-6cfb-43fd-b64b-03d7029d83e8@j4g2000yqe.googlegroups.com>
Source record: 12081

On Nov 15, 3:10 am, JIMMIE <JIMMIEDEE...@YAHOO.COM> wrote:
> On Nov 14, 9:12 pm, "christofire" <christof...@btinternet.com> wrote:
>
> > "Bill" <k4...@arrl.net> wrote in message
>
> >news:01414592-918d-464e-9961-1e087bd9b6e7@r5g2000yqb.googlegroups.com...
> > On Nov 11, 3:12 pm, Art Unwin <arthurun...@gmail.com> wrote:
>
> > > It is better to ask for forgiveness than requesting permission-
>
> >http://unwinantennas.com/appearsto be gone. That is a good
> > start :-)
>
> > * No, it's back!
>
> > Chris
>
> Its true the sun runs on coal, English coal no doubt of the finest
> grade.
>
> Jimmie

that is either poorly written satire, or a result of todays education
system... either way its 99.9% wrong... he did get the first 5 words
correct, and that English was not Einsteins native language. His
citing of Gauss's law in one of the patent claims is rather unique, as
is the inclusion of the weak force in the other... obviously a result
of too many google snippets and not enough in depth study.

3070. Re: Causes of Distrust of NEC and Mininec programs

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-15 12:47:46 UTC
From: Richard Fry <rfry@adams.net>
Message-ID: <570c1a5a-64e7-4485-83ab-8ad29108443d@j19g2000yqk.googlegroups.com>
Source record: 12082

On Nov 15, 12:23 am, Art Unwin <arthurun...@gmail.com> wrote:

> What one gains from this aproach is that any radiator of any shape,
> size or elevation can provide figures in the order of 100% as long as
> the radiator is a multiple of a wavelength where it is resonant at
> exact and repeatable measurements.

"Figures in the order or 100%" of what?

All radiators of all sizes and shapes will radiate on the order of 100% of all the r-f energy that can be coupled into them through their input terminals, whether or not those conductor sizes/shapes are naturally resonant at the applied frequency.

But the fact remains that natural resonance does not occur in electrically small radiators -- while their radiation resistance is very small, and their feedpoint is very reactive. These realities make it very difficult to supply r-f power to such a radiator without relatively high losses.

As a consequence, the efficiency of the transmitter SYSTEM (transmitter + radiator + matching network, + r-f ground loss in the case of monopoles) can be very low.

To illustrate, the link below leads to a calculation of the performance of a 3-meter monopole system on 1500 kHz. Due to the low radiation resistance and system losses, and even though the short monopole itself is nearly 100% efficient at radiating the power across its feedpoint, that radiator receives only about 0.37% of the power available from the transmitter. So the system efficiency is very poor.

Such an electrically short radiator (no matter what its shape) is not very useful compared to a naturally resonant 1/4-wave monopole or 1/2-wave dipole -- both of which can radiate nearly 100% of the available power.

The calculations in the link below were made using standard equations, in a spreadsheet format to make it easy to follow and confirm. Properly constructed/used NEC models will verify the spreadsheet calculation, and the statements about the dipoles mentioned above.

There is no cause to distrust NEC when it is properly understood and properly used.

http://i62.photobucket.com/albums/h85/rfry-100/Part15on1500kHz.gif

RF

3071. Re: Causes of Distrust of NEC and Mininec programs

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-15 16:03:01 UTC
From: Art Unwin <arthurunwin@gmail.com>
Message-ID: <c71222fa-397a-4811-82fa-d49e75b0fe58@t2g2000yqn.googlegroups.com>
Source record: 12083

On Nov 15, 1:16 am, Helmut Wabnig <hwabnig@ .- --- -. dotat> wrote:
> On Sat, 14 Nov 2009 22:23:05 -0800 (PST), Art Unwin
>
>
>
> <arthurun...@gmail.com> wrote:
> >Cebic found when comparing different style programs that some behaved
> >well in certain circumstance where others did not. Yet all antenna
> >programs
> >are based on the use of Maxwells equations where all programs should
> >have the same results, after all Maxwells equations are exact and not
> >fudged. One of the reasons is that since Maxwells laws are exact
> >radiators used must be resonant at repeatable points designated as a
> >period.
> > Fact is that most users use fractional wavelength designs, usually
> >a half wavelength, that is not resonant at repeatable points where
> >the area around the datum line of a sine wave is never equal when
> >generated around a tank circuit.
> >   The reason for this is "voltage over shoot" which gets smaller
> >with every cycle but never disappears. Thus when programs are used
> >based on fractional wavelength radiators the results will never show
> >100% accountability and in fact efficiencies derived will be in the
> >order of 92%!
> > If the radiator is of a wavelength then one is not using a "fudge"
> >figure
> >in the calculations and then becomes possible to attain total
> >accountability with efficiency of 100%. regardles of what type program
> >is used.
> > If one is to use exact equations, as are Maxwell equations, then
> >one must also use measurements that are also exact and repeatable and
> >that is definitely not fractional wavelengths!
> > What one gains from this aproach is that any radiator of any shape,
> > size or elevation can provide figures in the order of 100% as long as
> >the radiator is a multiple of a wavelength where it is resonant at
> >exact and repeatable measurements.
> >If anybody can give pointers that refute the accuracy of the above I
> >would be very interested in hearing them
>
> How do I simulate a sheet metal or other metal structure in NEC,
> when the software only knows (infinitesimally thin) "wires"
>
> w.

For total accuracy you MUST take account of voltage overshoot which is
neglected, so that
something other than a "period:" of a cycle will provide repeatability
of the half wave intersection with respect to resistance.
Note, "infinitesimally" is not "finite", Maxwell's equation are of
finite metrics and not close enough as in horse shoes!

3072. Re: Causes of Distrust of NEC and Mininec programs

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-15 16:14:37 UTC
From: Art Unwin <arthurunwin@gmail.com>
Message-ID: <212c5623-bb3e-40b4-b914-4210561f3477@r5g2000yqb.googlegroups.com>
Source record: 12084

On Nov 15, 6:18 am, Dave <k1...@arrl.net> wrote:
> On Nov 15, 6:23 am, Art Unwin <arthurun...@gmail.com> wrote:
>
>
>
> > Cebic found when comparing different style programs that some behaved
> > well in certain circumstance where others did not. Yet all antenna
> > programs
> > are based on the use of Maxwells equations where all programs should
> > have the same results, after all Maxwells equations are exact and not
> > fudged. One of the reasons is that since Maxwells laws are exact
> > radiators used must be resonant at repeatable points designated as a
> > period.
> >   Fact is that most users use fractional wavelength designs, usually
> > a half wavelength, that is not resonant at repeatable points where
> > the area around the datum line of a sine wave is never equal when
> > generated around a tank circuit.
> >   The reason for this is "voltage over shoot" which gets smaller
> > with every cycle but never disappears. Thus when programs are used
> > based on fractional wavelength radiators the results will never show
> > 100% accountability and in fact efficiencies derived will be in the
> > order of 92%!
> >   If the radiator is of a wavelength then one is not using a "fudge"
> > figure
> > in the calculations and then becomes possible to attain total
> > accountability with efficiency of 100%. regardles of what type program
> > is used.
> >   If one is to use exact equations, as are Maxwell equations, then
> > one must also use measurements that are also exact and repeatable and
> > that is definitely not fractional wavelengths!
> > What one gains from this aproach is that any radiator of any shape,
> > size or elevation can provide figures in the order of 100% as long as
> > the radiator is a multiple of a wavelength where it is resonant at
> > exact and repeatable measurements.
> > If anybody can give pointers that refute the accuracy of the above I
> > would be very interested in hearing them
>
> the key is that while all the programs are based on maxwell's
> equations, it is impossible to implement maxwell's equations with 100%
> accuracy on a digital computer. this is true of any and all
> simulation and modeling programs for electrical or mechanical design.
> all such programs make approximations and take shortcuts to reduce
> calculation time while maintaining some minimum level of accuracy and
> precision. it is important to understand the assumptions and

> simplifications that have been made in order to make proper use of the
> programs. typical traps in antenna simulations are that they don't
> like very small or very large length/diameter ratios... so using them
> for extrement long or short wires or very fat or very thin wires may
> produce results that aren't realistic. many of them also don't like
> very small spacing between wires, this is where most optimizer
> programs fall apart, they start moving wires close together and get
> strange results like super gain or unrealizable narrow beam patterns,
> often accompanied by a very low feedpoint impedance.
>
> most reputable programs like NEC have been validated very diligently
> over many years and their accuracy is well documented... as are the
> restrictions and assumptions that apply, but you have to read ALL the
> documentation, not just the quick start guide. Other programs like
> mininec, ao, yo, yagimax, and others make even more simplifications
> and therefore added restrictions so they can run on a desktop
> relatively quickly. unfortunately they don't always document the
> limitations as well as the professional level products. after all the
> professionals have millions of dollars riding on the accuracy of
> designs, hams have only pennies, so it just doesn't pay to write lots
> of documentation or do lots of testing that won't be read for ham
> users.
>
> so, while all the programs must be based on the same equations, the
> results they generate, especially in the fringe cases, may be vastly
> different. remember two maxims... 'garbage in - garbage out', and
> 'you get what you pay for'.

Exactly.
If one uses a "period" of a cycle or a full wave instead of fractional
wavelengths
Maxwell's equations can be used in antenna programs to achieve 100%
accountability
or efficiency Where as the fudge figure of fractional wavelengths can
only achieve efficiencies in the lower 90s unless voltage over shoot
is accounted for.
Programs with optimizers recognize over shoot by providing radiators
that are all multiples of a wavelength and resonant so that the array
is also resonant as a whole.

3073. Re: SMS?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-15 16:20:54 UTC
From: Wayne <mygarbagecan@verizon.net>
Message-ID: <hdp9p8$ar0$1@news.eternal-september.org>
Source record: 12085

"Cecil Moore" <nospam@w5dxp.com> wrote in message
news:LfKKm.25452$Xf2.2542@newsfe12.iad...
> Wayne wrote:
>> "Cecil Moore" <nospam@w5dxp.com> wrote in message
>>> Can't be - there are only two dahs.
>
>> I copy "VTTS" also.
>
> There must be more than one version of that
> commercial. On the one I viewed, there were
> only two dahs.
> --
> 73, Cecil, IEEE, OOTC, http://www.w5dxp.com
-
In whatever case ....on CBS "Sunday Morning" today, I heard the commercial
with the corrected morse. It now says "S O S", with word spacing
between the characters. Wonder if they got "helpful feedback" from the ham
community. :)
--Wayne

3074. Re: Causes of Distrust of NEC and Mininec programs

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-15 16:36:42 UTC
From: Art Unwin <arthurunwin@gmail.com>
Message-ID: <de1f740e-58f3-4720-90eb-0913043d048d@k19g2000yqc.googlegroups.com>
Source record: 12086

On Nov 15, 6:47 am, Richard Fry <r...@adams.net> wrote:
> On Nov 15, 12:23 am, Art Unwin <arthurun...@gmail.com> wrote:
>
> > What one gains from this aproach is that any radiator of any shape,
> > size or elevation can provide figures in the order of 100% as long as
> > the radiator is a multiple of a wavelength where it is resonant at
> > exact and repeatable measurements.
>
> "Figures in the order or 100%" of what?
>
> All radiators of all sizes and shapes will radiate on the order of
> 100% of all the r-f energy that can be coupled into them through their
> input terminals, whether or not those conductor sizes/shapes are
> naturally resonant at the applied frequency.
>
> But the fact remains that natural resonance does not occur in
> electrically small radiators -- while their radiation resistance is
> very small, and their feedpoint is very reactive. These realities
> make it very difficult to supply r-f power to such a radiator without
> relatively high losses.
>
> As a consequence, the efficiency of the transmitter SYSTEM
> (transmitter + radiator + matching network, + r-f ground loss in the
> case of monopoles) can be very low.
>
> To illustrate, the link below leads to a calculation of the
> performance of a 3-meter monopole system on 1500 kHz. Due to the low
> radiation resistance and system losses, and even though the short
> monopole itself is nearly 100% efficient at radiating the power across
> its feedpoint, that radiator receives only about 0.37% of the power
> available from the transmitter. So the system efficiency is very
> poor.
>
> Such an electrically short radiator (no matter what its shape) is not
> very useful compared to a naturally resonant 1/4-wave monopole or 1/2-
> wave dipole -- both of which can radiate nearly

The use of the term "nearly" does not imply total accuracy.
To use Maxwell's equations for accuracy one cannot introduce metrics
that are not absolute.
1/4 or 1/2 wave radiators cannot supplant the "period" of a wave form
and thus introduce inaccuracies. The use of different algarithums in
programing accentuate or minimise the effect of these inaccuracies
thus providing different results. Same goes for close spaced wires

where the use of "near" accurate capacitances by avoidance of all
other proximety effects again take away from the accuracy of Maxwell's
equations. An accurate measurement of resonance of a mesh as I have
shown on my web page need not be dissed because of the presence of a
computer program.

100% of the available
> power.
>
> The calculations in the link below were made using standard equations,
> in a spreadsheet format to make it easy to follow and confirm.
> Properly constructed/used NEC models will verify the spreadsheet
> calculation, and the statements about the dipoles mentioned above.
>
> There is no cause to distrust NEC when it is properly understood and
> properly used.
>
> http://i62.photobucket.com/albums/h85/rfry-100/Part15on1500kHz.gif
>
> RF

3075. Re: Genius

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-15 16:50:25 UTC
From: Art Unwin <arthurunwin@gmail.com>
Message-ID: <9b8a3744-b1e3-424c-bc2f-1a8f353a6942@s15g2000yqs.googlegroups.com>
Source record: 12087

On Nov 15, 6:27 am, Dave <k1...@arrl.net> wrote:
> On Nov 15, 3:10 am, JIMMIE <JIMMIEDEE...@YAHOO.COM> wrote:
>
>
>
> > On Nov 14, 9:12 pm, "christofire" <christof...@btinternet.com> wrote:
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> > > "Bill" <k4...@arrl.net> wrote in message
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> > >news:01414592-918d-464e-9961-1e087bd9b6e7@r5g2000yqb.googlegroups.com...
> > > On Nov 11, 3:12 pm, Art Unwin <arthurun...@gmail.com> wrote:
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> > > > It is better to ask for forgiveness than requesting permission-
>
> > >http://unwinantennas.com/appearstobe gone. That is a good
> > > start :-)
>
> > > * No, it's back!
>
> > > Chris
>
> > Its true the sun runs on coal, English coal no doubt of the finest
> > grade.
>
> > Jimmie
>
> that is either poorly written satire, or a result of todays education
> system... either way its 99.9% wrong... he did get the first 5 words
> correct, and that English was not Einsteins native language. His
> citing of Gauss's law in one of the patent claims is rather unique, as
> is the inclusion of the weak force in the other... obviously a result
> of too many google snippets and not enough in depth study.

This is only true if one demands total adherence to the teachings of
the books.
Many are just theories that have been expanded upon via the use of
constants to account for the unknown and often most collapse over time
due to misinterpretation by humans.
In the case of making the static situation into a dynamic system the
mathematics are the duplication of Maxwell's laws for radiation. This
is why the use of full wave radiators satisfy equilibrium laws such
that 100% efficiencies are obtained that satisfy the teachings of
other sciences that particles and not waves are the carriers of
radiation.

3076. Re: SMS?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-15 17:04:27 UTC
From: Jack in Brighton <Jack.in.Brighton.545ec40@radiobanter.com>
Message-ID: <Jack.in.Brighton.545ec40@radiobanter.com>
Source record: 12088

'Cecil Moore[_2_ Wrote:
> ;692592']Has anyone else noticed that the Prudential commercial
> on TV is sending SMS instead of SOS?
> --
> 73, Cecil, IEEE, OOTC, http://www.w5dxp.com

Yes, and I was watching the talking heads this morning when the
Prudential commercial came on with the *_corrected_* SOS audio.

I started laughing when I saw/heard the correction and said to my wife
"I wonder if anyone else notices the error, and now the correction?"

I did a google search which led me here. LOL

--
Jack in Brighton

3077. Re: Genius

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-15 17:13:50 UTC
From: Art Unwin <arthurunwin@gmail.com>
Message-ID: <f47ed391-020a-41c1-8c10-be1159e26016@j4g2000yqe.googlegroups.com>
Source record: 12089

On Nov 11, 10:41 am, Bill <k4...@arrl.net> wrote:
> fromhttp://unwinantennas.com/:
>
> "The Sun is very hot because it is burning. Burning as we know it
> produces soot and other by products in abundance that when these
> particles collect in the air they become visual to the eye as smoke
> even tho the particles themselves are invisible to the eye unless
> there is a contrast in light as with particles passing thru a shaft of
> light thru a window."
>
> Does the author not understand the difference between fusion and
> combustion? Why would anyone pay attention to such an ignoramus when
> he writes about antenna theory?

The term "soot" defines the presence of particles that still contain
energy when dispelled from a chemical exchange process. In the case of
escape from the Sun's internal processes it must be recognized that
ejected particles still contain energy in nuclear form as well as
vector forces applied by the boundary equilibrium breaking form of a
leverage action.
The mechanics of what happens within the Sun's boundary is not as
important as the recognition of the equilibrium breaking vectors when
reviewing what I see as the initial carrier of radiation in the form
of an "accelerated charge". True, my spelling is not in accordance
with the rules of the english language but languages used other than
english
cannot be automatically dismissed as drivel unless correctly
translated as such.

3078. Re: Causes of Distrust of NEC and Mininec programs

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-15 17:40:49 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <a3XLm.31484$Xf2.12939@newsfe12.iad>
Source record: 12090

Helmut Wabnig wrote:
> How do I simulate a sheet metal or other metal structure in NEC,
> when the software only knows (infinitesimally thin) "wires"

One creates a mesh using wires. The openings in the
mesh must be small compared to a wavelength. Here's
how I modeled my pickup - don't know how accurate
it might be.

http://www.w5dxp.com/SHOOTOUT.EZ
--
73, Cecil, IEEE, OOTC, http://www.w5dxp.com

3079. Re: SMS?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-15 17:51:36 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <idXLm.31485$Xf2.24201@newsfe12.iad>
Source record: 12091

Wayne wrote:
> In whatever case ....on CBS "Sunday Morning" today, I heard the commercial
> with the corrected morse. It now says "S O S", with word spacing
> between the characters. Wonder if they got "helpful feedback" from the ham
> community. :)

I received an email from a ham saying that he had
contacted Prudential and they had promised to correct
the Morse code S O S sounds. Is the following true?

SOS is usually sent as a prosign, i.e. a single dit
between tones?
--
73, Cecil, IEEE, OOTC, http://www.w5dxp.com

3080. Re: Causes of Distrust of NEC and Mininec programs

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-15 18:02:34 UTC
From: Art Unwin <arthurunwin@gmail.com>
Message-ID: <fdbe7fce-9260-479c-80c6-2022bf22efa5@a31g2000yqn.googlegroups.com>
Source record: 12092

On Nov 15, 11:40 am, Cecil Moore <nos...@w5dxp.com> wrote:
> Helmut Wabnig wrote:
> > How do I simulate a sheet metal or other metal structure in NEC,
> > when the software only knows (infinitesimally thin) "wires"
>
> One creates a mesh using wires. The openings in the
> mesh must be small compared to a wavelength. Here's
> how I modeled my pickup - don't know how accurate
> it might be.
>
> http://www.w5dxp.com/SHOOTOUT.EZ
> --
> 73, Cecil, IEEE, OOTC, http://www.w5dxp.com

Correct Cecil, note that you are refering to a wavelength and not a
fractional WL
This is the foundation of a Faraday cage which is the very essence of
a passive radiator. In a mesh the current applied is straight but
broken up into segments
so that the displacement current is also broken up by encircling the
holes. The holes consist of a capacitor or a field that when
intersected by the initial current field produces acceleration to
applied particles while within the confines of the intersection. This
mechanism provides the maximum acceleration possible within the
Universe per Einstein where the particle achieves the same properties
as that exhibited by light and other non visible phenomina such as x
rays etc

3081. Re: SMS?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-15 18:04:13 UTC
From: Wayne <mygarbagecan@verizon.net>
Message-ID: <hdpfqvlj1@news.eternal-september.org>
Source record: 12093

"Cecil Moore" <nospam@w5dxp.com> wrote in message
news:idXLm.31485$Xf2.24201@newsfe12.iad...
> Wayne wrote:
>> In whatever case ....on CBS "Sunday Morning" today, I heard the
>> commercial with the corrected morse. It now says "S O S", with word
>> spacing between the characters. Wonder if they got "helpful feedback"
>> from the ham community. :)
>
> I received an email from a ham saying that he had
> contacted Prudential and they had promised to correct
> the Morse code S O S sounds. Is the following true?
> ___
> SOS is usually sent as a prosign, i.e. a single dit
> between tones?
> --
> 73, Cecil, IEEE, OOTC, http://www.w5dxp.com
-
I have never heard that is was sent as a prosign, but IMHO it would sound
weird.
--Wayne

3082. Re: Causes of Distrust of NEC and Mininec programs

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-15 18:29:39 UTC
From: Richard Fry <rfry@adams.net>
Message-ID: <629457ec-4f3d-434c-9458-766a6bde82e1@j24g2000yqa.googlegroups.com>
Source record: 12094

Art Unwin <arthurun...@gmail.com> wrote:

>> What one gains from this aproach is that any radiator
>> of any shape, size or elevation can provide figures in
>> the order of 100% as long as the radiator is a multiple
>> of a wavelength where it is resonant at exact and
>> repeatable measurements.

then Art wrote:

>The use of the term "nearly" does not imply total accuracy.

Note that your use of the phrase "in the order of" does not
imply total accuracy, either -- even for radiators meeting
your criteria.

>To use Maxwell's equations for accuracy one cannot introduce
>metrics that are not absolute. 1/4 or 1/2 wave radiators cannot
>supplant the "period" of a wave form and thus introduce
>inaccuracies.

Apparently you believe that only full-wave radiators are
"perfect" (exactly 100% efficient).

However a full-wave, center-fed dipole has a radiation resistance of
about 2,000 ohms, and a feedpoint reactance exceeding 1,000 ohms
(capacitive). That impedance would present a very high VSWR to a
normal transmitter unless some kind of matching network was used.

Even if there was no matching or transmission line loss (or r-f ground
loss in the case of a monopole), that full-wave radiator still would
not be 100% efficient because of the ohmic losses encountered by the r-
f current flowing along the radiating structure (NOT the radiation
resistance).

RF

3083. Re: Genius

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-15 18:45:56 UTC
From: Dave <k1ttt@arrl.net>
Message-ID: <4bb6e53e-8f2d-4fc3-adc7-80602f6056f6@k4g2000yqb.googlegroups.com>
Source record: 12095

On Nov 15, 4:50 pm, Art Unwin <arthurun...@gmail.com> wrote:
> On Nov 15, 6:27 am, Dave <k1...@arrl.net> wrote:
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> > On Nov 15, 3:10 am, JIMMIE <JIMMIEDEE...@YAHOO.COM> wrote:
>
> > > On Nov 14, 9:12 pm, "christofire" <christof...@btinternet.com> wrote:
>
> > > > "Bill" <k4...@arrl.net> wrote in message
>
> > > >news:01414592-918d-464e-9961-1e087bd9b6e7@r5g2000yqb.googlegroups.com...
> > > > On Nov 11, 3:12 pm, Art Unwin <arthurun...@gmail.com> wrote:
>
> > > > > It is better to ask for forgiveness than requesting permission-
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> > > >http://unwinantennas.com/appearstobegone. That is a good
> > > > start :-)
>
> > > > * No, it's back!
>
> > > > Chris
>
> > > Its true the sun runs on coal, English coal no doubt of the finest
> > > grade.
>
> > > Jimmie
>
> > that is either poorly written satire, or a result of todays education
> > system... either way its 99.9% wrong... he did get the first 5 words
> > correct, and that English was not Einsteins native language. His
> > citing of Gauss's law in one of the patent claims is rather unique, as
> > is the inclusion of the weak force in the other... obviously a result
> > of too many google snippets and not enough in depth study.
>
> This is only true if one demands total adherence to the teachings of
> the books.
> Many are just theories that have been expanded upon via the use of
> constants to account for the unknown and often most collapse over time
> due to misinterpretation by humans.
> In the case of making the static situation into a dynamic system the
> mathematics are the duplication of Maxwell's laws for radiation. This

> is why the use of full wave radiators satisfy equilibrium laws such
> that 100% efficiencies are obtained that satisfy the teachings of
> other sciences that particles and not waves are the carriers of
> radiation.- Hide quoted text -
>
> - Show quoted text -

i don't demand adherence to the books, but since the books i learned from haven't been proven false in the last 30 years i am inclined to keep believing them. particles or waves depend on your preference, however when computing from currents in conductors it is easiest to use waves, when working at higher energies and when studying electron or nuclear interactions it is often easier to use particles. i don't see how using full waves helps since 1/2 wave antennas are self resonant, and there is no equilibrium in radiating systems... maybe if you consider perfectly conducting and lossless closed systems like waveguides or coax stubs, but once you add a radiating element energy must flow out of the system so there can't be equilibrium.

3084. Re: Causes of Distrust of NEC and Mininec programs

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-15 18:59:06 UTC
From: Dave <k1ttt@arrl.net>
Message-ID: <55abf8e5-7c79-4b58-b20e-83fad28ebe03@j4g2000yqe.googlegroups.com>
Source record: 12096

On Nov 15, 4:14 pm, Art Unwin <arthurun...@gmail.com> wrote:
> On Nov 15, 6:18 am, Dave <k1...@arrl.net> wrote:
>
>
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>
>
> > On Nov 15, 6:23 am, Art Unwin <arthurun...@gmail.com> wrote:
>
> > > Cebic found when comparing different style programs that some behaved
> > > well in certain circumstance where others did not. Yet all antenna
> > > programs
> > > are based on the use of Maxwells equations where all programs should
> > > have the same results, after all Maxwells equations are exact and not
> > > fudged. One of the reasons is that since Maxwells laws are exact
> > > radiators used must be resonant at repeatable points designated as a
> > > period.
> > >   Fact is that most users use fractional wavelength designs, usually
> > > a half wavelength, that is not resonant at repeatable points where
> > > the area around the datum line of a sine wave is never equal when
> > > generated around a tank circuit.
> > >   The reason for this is "voltage over shoot" which gets smaller
> > > with every cycle but never disappears. Thus when programs are used
> > > based on fractional wavelength radiators the results will never show
> > > 100% accountability and in fact efficiencies derived will be in the
> > > order of 92%!
> > >   If the radiator is of a wavelength then one is not using a "fudge"
> > > figure
> > > in the calculations and then becomes possible to attain total
> > > accountability with efficiency of 100%. regardles of what type program
> > > is used.
> > >   If one is to use exact equations, as are Maxwell equations, then
> > > one must also use measurements that are also exact and repeatable and
> > > that is definitely not fractional wavelengths!
> > > What one gains from this aproach is that any radiator of any shape,
> > > size or elevation can provide figures in the order of 100% as long as
> > > the radiator is a multiple of a wavelength where it is resonant at
> > > exact and repeatable measurements.
> > > If anybody can give pointers that refute the accuracy of the above I
> > > would be very interested in hearing them
>
> > the key is that while all the programs are based on maxwell's
> > equations, it is impossible to implement maxwell's equations with 100%
> > accuracy on a digital computer. this is true of any and all

> > simulation and modeling programs for electrical or mechanical design.
> > all such programs make approximations and take shortcuts to reduce
> > calculation time while maintaining some minimum level of accuracy and
> > precision. it is important to understand the assumptions and
> > simplifications that have been made in order to make proper use of the
> > programs. typical traps in antenna simulations are that they don't
> > like very small or very large length/diameter ratios... so using them
> > for extrement long or short wires or very fat or very thin wires may
> > produce results that aren't realistic. many of them also don't like
> > very small spacing between wires, this is where most optimizer
> > programs fall apart, they start moving wires close together and get
> > strange results like super gain or unrealizable narrow beam patterns,
> > often accompanied by a very low feedpoint impedance.
>
> > most reputable programs like NEC have been validated very diligently
> > over many years and their accuracy is well documented... as are the
> > restrictions and assumptions that apply, but you have to read ALL the
> > documentation, not just the quick start guide. Other programs like
> > mininec, ao, yo, yagimax, and others make even more simplifications
> > and therefore added restrictions so they can run on a desktop
> > relatively quickly. unfortunately they don't always document the
> > limitations as well as the professional level products. after all the
> > professionals have millions of dollars riding on the accuracy of
> > designs, hams have only pennies, so it just doesn't pay to write lots
> > of documentation or do lots of testing that won't be read for ham
> > users.
>
> > so, while all the programs must be based on the same equations, the
> > results they generate, especially in the fringe cases, may be vastly
> > different. remember two maxims... 'garbage in - garbage out', and
> > 'you get what you pay for'.
>
> Exactly.
> If one uses a "period" of a cycle or a full wave instead of fractional
> wavelengths
> Maxwell's equations can be used in antenna programs to achieve 100%
> accountability
> or efficiency Where as the fudge figure of fractional wavelengths can
> only achieve efficiencies in the lower 90s unless voltage over shoot
> is accounted for.
> Programs with optimizers recognize over shoot by providing radiators
> that are all multiples of a wavelength and resonant so that the array
> is also resonant as a whole.- Hide quoted text -
>
> - Show quoted text -

what exactly is 'voltage overshoot' and why does it affect modeling
programs? you can model an antenna without ever calculating a
voltage. all that is needed is current, which is usually much easier
to track. all voltages can be calculated from the current after the

fact if needed for figuring insulation requirements.

3085. Re: Genius

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-15 19:41:45 UTC
From: Art Unwin <arthurunwin@gmail.com>
Message-ID: <34939f89-638c-43cd-8490-ccfdaf06d4fc@r24g2000yqd.googlegroups.com>
Source record: 12097

On Nov 15, 12:45 pm, Dave <k1...@arrl.net> wrote:
> On Nov 15, 4:50 pm, Art Unwin <arthurun...@gmail.com> wrote:
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> > On Nov 15, 6:27 am, Dave <k1...@arrl.net> wrote:
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> > > On Nov 15, 3:10 am, JIMMIE <JIMMIEDEE...@YAHOO.COM> wrote:
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> > > > On Nov 14, 9:12 pm, "christofire" <christof...@btinternet.com> wrote:
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> > > > > "Bill" <k4...@arrl.net> wrote in message
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> > > > >news:01414592-918d-464e-9961-1e087bd9b6e7@r5g2000yqb.googlegroups.com...
> > > > > On Nov 11, 3:12 pm, Art Unwin <arthurun...@gmail.com> wrote:
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> > > > > > It is better to ask for forgiveness than requesting permission-
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> > > > >http://unwinantennas.com/appearstobegone. That is a good
> > > > > start :-)
>
> > > > > * No, it's back!
>
> > > > > Chris
>
> > > > Its true the sun runs on coal, English coal no doubt of the finest
> > > > grade.
>
> > > > Jimmie
>
> > > that is either poorly written satire, or a result of todays education
> > > system... either way its 99.9% wrong... he did get the first 5 words
> > > correct, and that English was not Einsteins native language. His
> > > citing of Gauss's law in one of the patent claims is rather unique, as
> > > is the inclusion of the weak force in the other... obviously a result
> > > of too many google snippets and not enough in depth study.
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> > This is only true if one demands total adherence to the teachings of
> > the books.
> > Many are just theories that have been expanded upon via the use of
> > constants to account for the unknown and often most collapse over time
> > due to misinterpretation by humans.
> > In the case of making the static situation into a dynamic system the
> > mathematics are the duplication of Maxwell's laws for radiation. This

> > is why the use of full wave radiators satisfy equilibrium laws such
> > that 100% efficiencies are obtained that satisfy the teachings of
> > other sciences that particles and not waves are the carriers of
> > radiation.- Hide quoted text -
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> > - Show quoted text -
>
> i don't demand adherence to the books, but since the books i learned
> from haven't been proven false in the last 30 years i am inclined to
> keep believing them. particles or waves depend on your preference,
> however when computing from currents in conductors it is easiest to
> use waves, when working at higher energies and when studying electron
> or nuclear interactions it is often easier to use particles. i don't
> see how using full waves helps since 1/2 wave antennas are self
> resonant, and there is no equilibrium in radiating systems... maybe if
> you consider perfectly conducting and lossless closed systems like
> waveguides or coax stubs, but once you add a radiating element energy
> must flow out of the system so there can't be equilibrium.

1/2 waves are not resonant at a constant and repeatable length. The
existance of particles has been proven in other sciences. It is just
in Classical physics where the presence of particle has not been
proved which leaves those that are stubborn to take the approach that
waves can change into particles and vica versa. As for equilibrium,
according to Hawkings it only in existence just PRIOR to the loss of
equilibrium seen as the BIG BANG. It has been billions of years since
that happened such that all surfaces on Earth that are diamagnetic are
covered by particles at rest.(Without assimilation to other mass)
With this condition in existence particles come to a screeching halt
at the magnetic field generated in arbitrary form around the earth
where added extra particles that arrive combine linearly into magnetic
lines. If a particle is accelerated outside our boundary a particle
can enter the equivalent pseudo Faraday shield via the length of
opening between the magnetic lines that allows entrance of a particle
in equilibrium. It is the attraction of such particles between the
Earth's surface and its magnetic field that creates the weather where
updrafts lifts moisture which is diamagnetic upon which the particles
reside until an imbalance occurs with change in temperature such that
particles have nowhere to go except back to Earth when the outer
magnetic field rises to saturation. Remember, the term "waves" is an
adjective whereas a "particle" is a noun and thus has substance or
contains matter. Thus it is ridiculous with respect to physics where
one disappline explains the particle as the carrier of communication
is countered by those who "know" where that the only explanation that
can be provided for the disparity is that they are both one and the
same vis interchangability!
such as particles

3086. Re: Genius

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-15 20:03:34 UTC
From: Dave <k1ttt@arrl.net>
Message-ID: <1911f69d-9b96-4511-b3f4-d4d7acec97e1@k4g2000yqb.googlegroups.com>
Source record: 12098

On Nov 15, 7:41 pm, Art Unwin <arthurun...@gmail.com> wrote:
> On Nov 15, 12:45 pm, Dave <k1...@arrl.net> wrote:
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> > you consider perfectly conducting and lossless closed systems like
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> that happened such that all surfaces on Earth that are diamagnetic are
> covered by particles at rest.(Without assimilation to other mass)
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> can enter the equivalent pseudo Faraday shield via the length of
> opening between the magnetic lines that allows entrance of a particle
> in equilibrium. It is the attraction of such particles between the
> Earth's surface and its magnetic field that creates the weather where
> updrafts lifts moisture which is diamagnetic upon which the particles
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> one disappline explains the particle as the carrier of communication
> is countered by those who "know" where that the only explanation that
> can be provided for the disparity is that they are both one and the
> same vis interchangability!

> such as particles- Hide quoted text -
>
> - Show quoted text -

waves are nouns in my books. and a 1/2 wave dipole is perfectly repeatable when i measure it. maybe you need a new library, or a new bar, i want some of whatever you are drinking.

3087. Re: Causes of Distrust of NEC and Mininec programs

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-15 20:10:33 UTC
From: Art Unwin <arthurunwin@gmail.com>
Message-ID: <d476c3fc-744f-4c1d-960b-7f4df8d52a17@d21g2000yqn.googlegroups.com>
Source record: 12099

On Nov 15, 12:59 pm, Dave <k1...@arrl.net> wrote:
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> > > >   Fact is that most users use fractional wavelength designs, usually
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> > > >   The reason for this is "voltage over shoot" which gets smaller
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> > > simulation and modeling programs for electrical or mechanical design.
> > > all such programs make approximations and take shortcuts to reduce
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> > > strange results like super gain or unrealizable narrow beam patterns,
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> > > most reputable programs like NEC have been validated very diligently
> > > over many years and their accuracy is well documented... as are the
> > > restrictions and assumptions that apply, but you have to read ALL the
> > > documentation, not just the quick start guide. Other programs like
> > > mininec, ao, yo, yagimax, and others make even more simplifications
> > > and therefore added restrictions so they can run on a desktop
> > > relatively quickly. unfortunately they don't always document the
> > > limitations as well as the professional level products. after all the
> > > professionals have millions of dollars riding on the accuracy of
> > > designs, hams have only pennies, so it just doesn't pay to write lots
> > > of documentation or do lots of testing that won't be read for ham
> > > users.
>
> > > so, while all the programs must be based on the same equations, the
> > > results they generate, especially in the fringe cases, may be vastly
> > > different. remember two maxims... 'garbage in - garbage out', and
> > > 'you get what you pay for'.
>
> > Exactly.
> > If one uses a "period" of a cycle or a full wave instead of fractional
> > wavelengths
> > Maxwell's equations can be used in antenna programs to achieve 100%
> > accountability
> > or efficiency Where as the fudge figure of fractional wavelengths can
> > only achieve efficiencies in the lower 90s unless voltage over shoot
> > is accounted for.
> > Programs with optimizers recognize over shoot by providing radiators
> > that are all multiples of a wavelength and resonant so that the array
> > is also resonant as a whole.- Hide quoted text -
>
> > - Show quoted text -
>
> what exactly is 'voltage overshoot' and why does it affect modeling
> programs? you can model an antenna without ever calculating a
> voltage. all that is needed is current, which is usually much easier
> to track. all voltages can be calculated from the current after the

> fact if needed for figuring insulation requirements.

When a energy switching action occurs as with energy exchange between an inductance
and a capacitance a transient spur of voltage is created beyond the point of balance or equilibrium of the circuit. Tho this is only momentary, it delays the return of energy back to the capacitance to a lesser time. The capacitor then returns the energy back to the inductance but with a lesser voltage which again creates a transient spike of a now lesser value than before, such that the amplitude of a balanced "loss less" circuit is lost to one that defines vibration which in the human ear also creates communication. (When delving into the mathematical laws of vibration where the amplitude change and the similarity to vibration can be readily be seen.
Any way, it can be seen that with the amplitude of vibration is ever changing, so must the point where the amplitude is repeatable ie resonant, must also change. Yes, you can model anything without ever considering voltage when you choose to omit the presence of overshoot for easability over accuracy.
Regards
Art
where the amplitude

3088. Re: Genius

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-15 20:21:29 UTC
From: Art Unwin <arthurunwin@gmail.com>
Message-ID: <a0a4923b-47c5-4626-9801-6e53adf9cd86@a21g2000yqc.googlegroups.com>
Source record: 12100

On Nov 15, 2:03 pm, Dave <k1...@arrl.net> wrote:
> On Nov 15, 7:41 pm, Art Unwin <arthurun...@gmail.com> wrote:
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> > On Nov 15, 12:45 pm, Dave <k1...@arrl.net> wrote:
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> > > On Nov 15, 4:50 pm, Art Unwin <arthurun...@gmail.com> wrote:
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> > > > On Nov 15, 6:27 am, Dave <k1...@arrl.net> wrote:
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> > > > > On Nov 15, 3:10 am, JIMMIE <JIMMIEDEE...@YAHOO.COM> wrote:
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> > > > > > On Nov 14, 9:12 pm, "christofire" <christof...@btinternet.com> wrote:
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> > > > > > > "Bill" <k4...@arrl.net> wrote in message
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> > > > > > >news:01414592-918d-464e-9961-1e087bd9b6e7@r5g2000yqb.googlegroups.com...
> > > > > > > On Nov 11, 3:12 pm, Art Unwin <arthurun...@gmail.com> wrote:
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> > > > > > > > It is better to ask for forgiveness than requesting permission-
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> > > > > > >http://unwinantennas.com/appearstobegone. That is a good
> > > > > > > start :-)
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> > > > > > > * No, it's back!
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> > > > > > > Chris
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> > > > > > Its true the sun runs on coal, English coal no doubt of the finest
> > > > > > grade.
>
> > > > > > Jimmie
>
> > > > > that is either poorly written satire, or a result of todays education
> > > > > system... either way its 99.9% wrong... he did get the first 5 words
> > > > > correct, and that English was not Einsteins native language. His
> > > > > citing of Gauss's law in one of the patent claims is rather unique, as
> > > > > is the inclusion of the weak force in the other... obviously a result
> > > > > of too many google snippets and not enough in depth study.
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> > > > This is only true if one demands total adherence to the teachings of
> > > > the books.
> > > > Many are just theories that have been expanded upon via the use of

> > > > constants to account for the unknown and often most collapse over time
> > > > due to misinterpretation by humans.
> > > > In the case of making the static situation into a dynamic system the
> > > > mathematics are the duplication of Maxwell's laws for radiation. This
> > > > is why the use of full wave radiators satisfy equilibrium laws such
> > > > that 100% efficiencies are obtained that satisfy the teachings of
> > > > other sciences that particles and not waves are the carriers of
> > > > radiation.- Hide quoted text -
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> > > i don't demand adherence to the books, but since the books i learned
> > > from haven't been proven false in the last 30 years i am inclined to
> > > keep believing them. particles or waves depend on your preference,
> > > however when computing from currents in conductors it is easiest to
> > > use waves, when working at higher energies and when studying electron
> > > or nuclear interactions it is often easier to use particles. i don't
> > > see how using full waves helps since 1/2 wave antennas are self
> > > resonant, and there is no equilibrium in radiating systems... maybe if
> > > you consider perfectly conducting and lossless closed systems like
> > > waveguides or coax stubs, but once you add a radiating element energy
> > > must flow out of the system so there can't be equilibrium.
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> > 1/2 waves are not resonant at a constant and repeatable length. The
> > existance of particles has been proven in other sciences. It is just
> > in Classical physics where the presence of particle has not been
> > proved which leaves those that are stubborn to take the approach that
> > waves can change into particles and vica versa. As for equilibrium,
> > according to Hawkings it only in existence just PRIOR to the loss of
> > equilibrium seen as the BIG BANG. It has been billions of years since
> > that happened such that all surfaces on Earth that are diamagnetic are
> > covered by particles at rest.(Without assimilation to other mass)
> >   With this condition in existence particles come to a screeching halt
> > at the magnetic field generated in arbitrary form around the earth
> > where added extra particles that arrive combine linearly into magnetic
> > lines. If a particle is accelerated outside our boundary a particle
> > can enter the equivalent pseudo Faraday shield via the length of
> > opening between the magnetic lines that allows entrance of a particle
> > in equilibrium. It is the attraction of such particles between the
> > Earth's surface and its magnetic field that creates the weather where
> > updrafts lifts moisture which is diamagnetic upon which the particles
> > reside until an imbalance occurs with change in temperature such that
> > particles have nowhere to go except back to Earth when the outer
> > magnetic field rises to saturation. Remember, the term "waves" is an
> > adjective whereas a "particle" is a noun and thus has substance or
> > contains matter. Thus it is ridiculous with respect to physics where
> > one disappline explains the particle as the carrier of communication
> > is countered by those who "know" where that the only explanation that
> > can be provided for the disparity is that they are both one and the
> > same vis interchangability!

> > such as particles- Hide quoted text -
>
> > - Show quoted text -
>
> waves are nouns in my books. and a 1/2 wave dipole is perfectly
> repeatable when i measure it. maybe you need a new library, or a new
> bar, i want some of whatever you are drinking.

No, that is a cop out! A half wave length is ever changing. Because
you cannot measure the differences in the lengths does not mean that
you have consistency. You are confusing
infinity with absolute which one tends to regard as the same, to
justify the use of a mathematical step by mathematicians which defies
the position of equilibrium.
The same goes for a yagi where every element re radiates such there is
never enough elements to account for total radiation in beam form.

3089. Re: SMS?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-15 20:24:43 UTC
From: David Ryeburn <ryeburn@sfu.caz>
Message-ID: <ryeburn-A7B10C.12244215112009@morgoth.sfu.ca>
Source record: 11951

In article <hdpfqvlj1@news.eternal-september.org>,
"Wayne" <mygarbagecan@verizon.net> wrote:

> "Cecil Moore" <nospam@w5dxp.com> wrote in message

... snip

> > SOS is usually sent as a prosign, i.e. a single dit
> > between tones?
> > --
> > 73, Cecil, IEEE, OOTC, http://www.w5dxp.com
> -
> I have never heard that is was sent as a prosign, but IMHO it would sound
> weird.
> --Wayne

Back in 1949-1950 when I got my first ticket as W8EZE and became the trustee for the Walnut Hills High School amateur radio club in Cincinnati, the club had one of those World War Two devices to be used in lifeboats, with a crank on top, which you held between your legs while turning the crank. It had an antenna terminal to which we attached a dummy load. It had no other controls or terminals, just the crank and an antenna terminal. I think it only put out a few watts. Listening on 500 kc/s (as we called them, in those days) on I think a BC348 receiver, while turning the crank one heard

. . . _ _ _ . . . (long space) . . . _ _ _ . . . (long space), and on and on, as if you were sending one character with nine components, over and over again. You could write it as

___
SOS

the same way one can write

__
BT

for a double dash, or

__
DN

for a fraction bar (forward slash).

David, ex-W8EZE, who can still picture and and remember hearing the thing -- it was orange

--
David Ryeburn
ryeburn@sfu.caz

To send e-mail, use "ca" instead of "caz".

3090. Re: Genius

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-15 20:37:54 UTC
From: JIMMIE <JIMMIEDEE123@YAHOO.COM>
Message-ID: <61861afb-97b3-4af1-87f7-723dc3cacd19@d5g2000yqm.googlegroups.com>
Source record: 11952

On Nov 15, 3:21 pm, Art Unwin <arthurun...@gmail.com> wrote:
> On Nov 15, 2:03 pm, Dave <k1...@arrl.net> wrote:
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> > repeatable when i measure it. maybe you need a new library, or a new
> > bar, i want some of whatever you are drinking.
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> No, that is a cop out! A half wave length is ever changing. Because
> you cannot measure the differences in the lengths does not mean that
> you have consistency. You are confusing
> infinity with absolute which one tends to regard as the same, to
> justify the use of a mathematical step by mathematicians which defies
> the position of equilibrium.
> The same goes for a yagi where every element re radiates such there is
> never enough elements to account for total radiation in beam form.- Hide quoted text -
>
> - Show quoted text -

I remember meeting some college kids that were messing around with
peyote. I dont think they were this far out.
That includes the one that could only say " Like wow man".

Jimmie

Jimmie

3091. Mercatino radiantistico italian

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-15 20:41:19 UTC
From: ezio <iz4hyz@libero.it>
Message-ID: <f728d67a-4ff9-4e44-adf7-4b2d3e8c5f9d@z41g2000yqz.googlegroups.com>
Source record: 11953

http://www.radioamateur.it/public/mercato/index.php Mercatino dell'usato per radioamatori interamente realizzato da iz4hyz (Ezio Tulli) vuole essere un servizio per permettere l'incontro di tutti quegli appassionati di radio (RADIOAMATORI E NON) che vogliono scambiare materiale radiantistico. Qui puoi vendere, comprare o scambiare: ricetrasmettitori, antenne direttive, verticali, dipoli filari, amplificatori lineari, accordatori d'antenne, alimentatori, componenti elettronici, computer, apparati su 27 Mhz, cavo rg 58, rg8, rg213, metaldetector, valvole, radio a valvole, circuiti stampati, saldatori, notebook o altro materiale elettronico che non utilizzi più.

3092. Re: Causes of Distrust of NEC and Mininec programs

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-15 20:45:16 UTC
From: Art Unwin <arthurunwin@gmail.com>
Message-ID: <54353926-9755-4dd5-9500-48322be73daf@b2g2000yqi.googlegroups.com>
Source record: 11954

On Nov 15, 12:29 pm, Richard Fry <r...@adams.net> wrote:
> Art Unwin <arthurun...@gmail.com> wrote:
> >> What one gains from this aproach is that any radiator
> >> of any shape, size or elevation can provide figures in
> >> the order of 100% as long as the radiator is a multiple
> >> of a wavelength where it is resonant at exact and
> >> repeatable measurements.
> then Art wrote:
> >The use of the term "nearly" does not imply total accuracy.
>
> Note that your use of the phrase "in the order of" does not
> imply total accuracy, either -- even for radiators meeting
> your criteria.
>
> >To use Maxwell's equations for accuracy one cannot introduce
> >metrics that are not absolute. 1/4 or 1/2 wave radiators cannot
> >supplant the "period" of a wave form and thus introduce
> >inaccuracies.
>
> Apparently you believe that only full-wave radiators are
> "perfect" (exactly 100% efficient).
Until antenna programs all of which are based om Maxwell's equations
provide accountability of all forces involved to provide the 100%
efficiency, as shown by the use of
full wave radiators I have no other choice. It is as the catholic
religeon teachings when it says "give me the child and I will give you
the man." Its equivalent in education is to believe
only what the professor tells you that is written in his books as it
is he who determines
who graduates or not. Many of the masters did not have a formal
education such as Greene who had to justify from first principles
himself to determine what was correct and what was not. After serving
most of your years in life by adhering to the books it make no sense
in changing from a follower to a reseacher when the past has satisfied
your need.
As with religeon faith will always overide the tenents of science,
more so as you get older.
>
> However a full-wave, center-fed dipole has a radiation resistance of
> about 2,000 ohms, and a feedpoint reactance exceeding 1,000 ohms
> (capacitive). That impedance would present a very high VSWR to a
> normal transmitter unless some kind of matching network was used.
>
> Even if there was no matching or transmission line loss (or r-f ground

> loss in the case of a monopole), that full-wave radiator still would
> not be 100% efficient because of the ohmic losses encountered by the r-
> f current flowing along the radiating structure (NOT the radiation
> resistance).
>
> RF

3093. Re: Genius

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-15 20:57:26 UTC
From: Dave <k1ttt@arrl.net>
Message-ID: <1f7007d3-218e-4e0b-8d80-9ebdedf0c550@p35g2000yqh.googlegroups.com>
Source record: 11955

On Nov 15, 8:37 pm, JIMMIE <JIMMIEDEE...@YAHOO.COM> wrote:
> On Nov 15, 3:21 pm, Art Unwin <arthurun...@gmail.com> wrote:
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> > infinity with absolute which one tends to regard as the same, to
> > justify the use of a mathematical step by mathematicians which defies
> > the position of equilibrium.
> > The same goes for a yagi where every element re radiates such there is
> > never enough elements to account for total radiation in beam form.- Hide quoted text -
>
> > - Show quoted text -
>
> I remember meeting some college kids that were messing around with
> peyote. I dont think they were this far out.
> That includes the one that could only say " Like wow man".
>
> Jimmie
>
> Jimmie- Hide quoted text -
>
> - Show quoted text -

agreed, after that last reply it seems like he is farther out than i
thought. time to wait till he sobers up a bit, if that ever happens.

3094. Re: Causes of Distrust of NEC and Mininec programs

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-15 21:00:56 UTC
From: Dave <k1ttt@arrl.net>
Message-ID: <8dcbb5a3-925e-4138-a3dc-66779b6a7007@j24g2000yqa.googlegroups.com>
Source record: 11956

On Nov 15, 8:10 pm, Art Unwin <arthurun...@gmail.com> wrote:
> On Nov 15, 12:59 pm, Dave <k1...@arrl.net> wrote:
>
>
>
>
>
> > On Nov 15, 4:14 pm, Art Unwin <arthurun...@gmail.com> wrote:
>
> > > On Nov 15, 6:18 am, Dave <k1...@arrl.net> wrote:
>
> > > > On Nov 15, 6:23 am, Art Unwin <arthurun...@gmail.com> wrote:
>
> > > > > Cebic found when comparing different style programs that some behaved
> > > > > well in certain circumstance where others did not. Yet all antenna
> > > > > programs
> > > > > are based on the use of Maxwells equations where all programs should
> > > > > have the same results, after all Maxwells equations are exact and not
> > > > > fudged. One of the reasons is that since Maxwells laws are exact
> > > > > radiators used must be resonant at repeatable points designated as a
> > > > > period.
> > > > >   Fact is that most users use fractional wavelength designs, usually
> > > > > a half wavelength, that is not resonant at repeatable points where
> > > > > the area around the datum line of a sine wave is never equal when
> > > > > generated around a tank circuit.
> > > > >   The reason for this is "voltage over shoot" which gets smaller
> > > > > with every cycle but never disappears. Thus when programs are used
> > > > > based on fractional wavelength radiators the results will never show
> > > > > 100% accountability and in fact efficiencies derived will be in the
> > > > > order of 92%!
> > > > >   If the radiator is of a wavelength then one is not using a "fudge"
> > > > > figure
> > > > > in the calculations and then becomes possible to attain total
> > > > > accountability with efficiency of 100%. regardles of what type program
> > > > > is used.
> > > > >   If one is to use exact equations, as are Maxwell equations, then
> > > > > one must also use measurements that are also exact and repeatable and
> > > > > that is definitely not fractional wavelengths!
> > > > > What one gains from this aproach is that any radiator of any shape,
> > > > > size or elevation can provide figures in the order of 100% as long as
> > > > > the radiator is a multiple of a wavelength where it is resonant at
> > > > > exact and repeatable measurements.
> > > > > If anybody can give pointers that refute the accuracy of the above I
> > > > > would be very interested in hearing them

>
> > > > the key is that while all the programs are based on maxwell's
> > > > equations, it is impossible to implement maxwell's equations with 100%
> > > > accuracy on a digital computer. this is true of any and all
> > > > simulation and modeling programs for electrical or mechanical design.
> > > > all such programs make approximations and take shortcuts to reduce
> > > > calculation time while maintaining some minimum level of accuracy and
> > > > precision. it is important to understand the assumptions and
> > > > simplifications that have been made in order to make proper use of the
> > > > programs. typical traps in antenna simulations are that they don't
> > > > like very small or very large length/diameter ratios... so using them
> > > > for extrement long or short wires or very fat or very thin wires may
> > > > produce results that aren't realistic. many of them also don't like
> > > > very small spacing between wires, this is where most optimizer
> > > > programs fall apart, they start moving wires close together and get
> > > > strange results like super gain or unrealizable narrow beam patterns,
> > > > often accompanied by a very low feedpoint impedance.
>
> > > > most reputable programs like NEC have been validated very diligently
> > > > over many years and their accuracy is well documented... as are the
> > > > restrictions and assumptions that apply, but you have to read ALL the
> > > > documentation, not just the quick start guide. Other programs like
> > > > mininec, ao, yo, yagimax, and others make even more simplifications
> > > > and therefore added restrictions so they can run on a desktop
> > > > relatively quickly. unfortunately they don't always document the
> > > > limitations as well as the professional level products. after all the
> > > > professionals have millions of dollars riding on the accuracy of
> > > > designs, hams have only pennies, so it just doesn't pay to write lots
> > > > of documentation or do lots of testing that won't be read for ham
> > > > users.
>
> > > > so, while all the programs must be based on the same equations, the
> > > > results they generate, especially in the fringe cases, may be vastly
> > > > different. remember two maxims... 'garbage in - garbage out', and
> > > > 'you get what you pay for'.
>
> > > Exactly.
> > > If one uses a "period" of a cycle or a full wave instead of fractional
> > > wavelengths
> > > Maxwell's equations can be used in antenna programs to achieve 100%
> > > accountability
> > > or efficiency Where as the fudge figure of fractional wavelengths can
> > > only achieve efficiencies in the lower 90s unless voltage over shoot
> > > is accounted for.
> > > Programs with optimizers recognize over shoot by providing radiators
> > > that are all multiples of a wavelength and resonant so that the array
> > > is also resonant as a whole.- Hide quoted text -
>
> > > - Show quoted text -
>

> > what exactly is 'voltage overshoot' and why does it affect modeling
> > programs? you can model an antenna without ever calculating a
> > voltage. all that is needed is current, which is usually much easier
> > to track. all voltages can be calculated from the current after the
> > fact if needed for figuring insulation requirements.
>
> When a energy switching action occurs as with energy exchange between
> an inductance
> and a capacitance a transient spur of voltage is created beyond the
> point of balance or equilibrium of the circuit. Tho this is only
> momentary, it delays the return of energy back to the capacitance to a
> lesser time. The capacitor then returns the energy back to the
> inductance but with a lesser voltage which again creates a transient
> spike of a now lesser value than before, such that the amplitude of a
> balanced "loss less" circuit is lost to one that defines vibration
> which in the human ear also creates communication. (When delving into
> the mathematical laws of vibration where the amplitude change and the
> similarity to vibration can be readily be seen.
>   Any way, it can be seen that with the amplitude of vibration is ever
> changing, so must the point where the amplitude is repeatable ie
> resonant, must also change. Yes, you can model anything without ever
> considering voltage when you choose to omit the presence of overshoot
> for easability over accuracy.
> Regards
> Art
> where the amplitude- Hide quoted text -
>
> - Show quoted text -

yeah, whatever you have been smoking is spiked with something. LC
resonant circuits do not have 'spikes', they have nice sinusoidal
energy transfer... maybe you envision the electrons sloshsing back and
forth like that swill in your glass? sorry, it just don't work that
way. enjoy your own little world, it just got one person smaller.

3095. Re: an ontopic post about code

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-15 21:30:40 UTC
From: kb9rqz@yahoooo.com
Message-ID: <vns0g5deg0fjkg10tsam1n18g92up4uo3l@4ax.com>
Source record: 11957
Cross-posted to: alt.ham-radio.vhf-uhf,rec.radio.amateur.policy,rec.radio.amateur.antenna

On Fri, 01 Dec 2006 09:36:47 -0800, John Smith
<assemblywizard@gmail.com> wrote:

>K4YZ wrote:
>> Nope.
>>
>> The IP Address and servers are complete proof that I do NOT share
>> any annonymous character's "address".
>>
>> Sounds like Lennie, to me....
>>
>> Steve, K4YZ
>>
>
>To anyone with even an elementary understanding of anonymous proxies,
>anonymous remailers, zombie backdoors, etc., the ability to change ones
>IP address and header details is simplistic, indeed, with little time
>spent anyone can appear to be "coming" from anywhere in the world.
>
>You waste my time. Worse, you think us all idiots here. You remind me
>of the "street smart" prosecutors and defense attorneys who stack jurys
>with members of little or no technical knowledge and then call in
>"expert witnesses" and propose arguments of technical details to boggle
>their minds.
>
>You have only proven that you, yourself are either ignorant to such
>technical details, or else you are indeed street smart, I favor the
>latter in this case (however, if you in the dark about such things, 15
>minutes on google will enlighten you.)
>
>JS

"one useless man is disgrace 2 become a law firm 3 or more become a congress"
adams

woger you are a Congress all in your own head
"http://www.3ix.org/sys/aff.php?aff=7439" target="_blank"

altopia is never used by KB9RQZ
http://kb9rqz.cc.cc
http://kd8ctl.com
nor is Konstans@hotmail.com ever
btw i can be found at
17366 N River Rd

Chassel Mi

but the cowards asking lack the gut to act

3096. Re: Genius

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-15 21:36:56 UTC
From: nm5k@wt.net
Message-ID: <3917d9eb-c8b4-4a34-8ccc-98804122ad8a@s15g2000yqs.googlegroups.com>
Source record: 11958

On Nov 15, 11:13 am, Art Unwin <arthurun...@gmail.com> wrote:
> True, my spelling is not in accordance
> with the rules of the english language but languages used other than
> english
> cannot be automatically dismissed as drivel unless correctly
> translated as such.

My cat had mittens, but she lost one while playing with the
possum, who proceeded to roll over and play dead in all
the excitement. :/

3097. Re: Causes of Distrust of NEC and Mininec programs

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-15 21:44:37 UTC
From: JIMMIE <JIMMIEDEE123@YAHOO.COM>
Message-ID: <9dbff964-e438-4e6b-9bba-3a4bbd1fea72@a21g2000yqc.googlegroups.com>
Source record: 11959

On Nov 15, 1:23 am, Art Unwin <arthurun...@gmail.com> wrote:
> Cebic found when comparing different style programs that some behaved
> well in certain circumstance where others did not. Yet all antenna
> programs
> are based on the use of Maxwells equations where all programs should
> have the same results, after all Maxwells equations are exact and not
> fudged. One of the reasons is that since Maxwells laws are exact
> radiators used must be resonant at repeatable points designated as a
> period.
>   Fact is that most users use fractional wavelength designs, usually
> a half wavelength, that is not resonant at repeatable points where
> the area around the datum line of a sine wave is never equal when
> generated around a tank circuit.
>   The reason for this is "voltage over shoot" which gets smaller
> with every cycle but never disappears. Thus when programs are used
> based on fractional wavelength radiators the results will never show
> 100% accountability and in fact efficiencies derived will be in the
> order of 92%!
>   If the radiator is of a wavelength then one is not using a "fudge"
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> in the calculations and then becomes possible to attain total
> accountability with efficiency of 100%. regardles of what type program
> is used.
>   If one is to use exact equations, as are Maxwell equations, then
> one must also use measurements that are also exact and repeatable and
> that is definitely not fractional wavelengths!
> What one gains from this aproach is that any radiator of any shape,
> size or elevation can provide figures in the order of 100% as long as
> the radiator is a multiple of a wavelength where it is resonant at
> exact and repeatable measurements.
> If anybody can give pointers that refute the accuracy of the above I
> would be very interested in hearing them

How about giving some pointers as to where you got this BS. Sounds
like you just made a bunch of stuff up.

Jimmie

3098. Re: Genius

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-15 21:53:16 UTC
From: Art Unwin <arthurunwin@gmail.com>
Message-ID: <24f42ce0-a0f2-4d44-a3b0-7ef268c0d733@m26g2000yqb.googlegroups.com>
Source record: 11960

On Nov 15, 2:57 pm, Dave <k1...@arrl.net> wrote:
> On Nov 15, 8:37 pm, JIMMIE <JIMMIEDEE...@YAHOO.COM> wrote:
>
>
>
> > On Nov 15, 3:21 pm, Art Unwin <arthurun...@gmail.com> wrote:
>
> > > On Nov 15, 2:03 pm, Dave <k1...@arrl.net> wrote:
>
> > > > On Nov 15, 7:41 pm, Art Unwin <arthurun...@gmail.com> wrote:
>
> > > > > On Nov 15, 12:45 pm, Dave <k1...@arrl.net> wrote:
>
> > > > > > On Nov 15, 4:50 pm, Art Unwin <arthurun...@gmail.com> wrote:
>
> > > > > > > On Nov 15, 6:27 am, Dave <k1...@arrl.net> wrote:
>
> > > > > > > > On Nov 15, 3:10 am, JIMMIE <JIMMIEDEE...@YAHOO.COM> wrote:
>
> > > > > > > > > On Nov 14, 9:12 pm, "christofire" <christof...@btinternet.com> wrote:
>
> > > > > > > > > > "Bill" <k4...@arrl.net> wrote in message
>
> > > > > > > > > >
>news:01414592-918d-464e-9961-1e087bd9b6e7@r5g2000yqb.googlegroups.com...
> > > > > > > > > > On Nov 11, 3:12 pm, Art Unwin <arthurun...@gmail.com> wrote:
>
> > > > > > > > > > > It is better to ask for forgiveness than requesting permission-
>
> > > > > > > > > > >http://unwinantennas.com/appearstobegone. That is a good
> > > > > > > > > > start :-)
>
> > > > > > > > > > * No, it's back!
>
> > > > > > > > > > Chris
>
> > > > > > > > > > Its true the sun runs on coal, English coal no doubt of the finest
> > > > > > > > > > grade.
>
> > > > > > > > > > Jimmie
>
> > > > > > > > > > that is either poorly written satire, or a result of todays education
> > > > > > > > > > system... either way its 99.9% wrong... he did get the first 5 words
> > > > > > > > > > correct, and that English was not Einsteins native language. His

> > > > > > > > citing of Gauss's law in one of the patent claims is rather unique, as
> > > > > > > > > is the inclusion of the weak force in the other... obviously a result
> > > > > > > > > of too many google snippets and not enough in depth study.
>
> > > > > > > > This is only true if one demands total adherence to the teachings of
> > > > > > > > the books.
> > > > > > > > Many are just theories that have been expanded upon via the use of
> > > > > > > > constants to account for the unknown and often most collapse over time
> > > > > > > > due to misinterpretation by humans.
> > > > > > > > In the case of making the static situation into a dynamic system the
> > > > > > > > mathematics are the duplication of Maxwell's laws for radiation. This
> > > > > > > > is why the use of full wave radiators satisfy equilibrium laws such
> > > > > > > > that 100% efficiencies are obtained that satisfy the teachings of
> > > > > > > > other sciences that particles and not waves are the carriers of
> > > > > > > > radiation.- Hide quoted text -
>
> > > > > > > > - Show quoted text -
>
> > > > > > > i don't demand adherence to the books, but since the books i learned
> > > > > > > from haven't been proven false in the last 30 years i am inclined to
> > > > > > > keep believing them. particles or waves depend on your preference,
> > > > > > > however when computing from currents in conductors it is easiest to
> > > > > > > use waves, when working at higher energies and when studying electron
> > > > > > > or nuclear interactions it is often easier to use particles. i don't
> > > > > > > see how using full waves helps since 1/2 wave antennas are self
> > > > > > > resonant, and there is no equilibrium in radiating systems... maybe if
> > > > > > > you consider perfectly conducting and lossless closed systems like
> > > > > > > waveguides or coax stubs, but once you add a radiating element energy
> > > > > > > must flow out of the system so there can't be equilibrium.
>
> > > > > > 1/2 waves are not resonant at a constant and repeatable length. The
> > > > > > existance of particles has been proven in other sciences. It is just
> > > > > > in Classical physics where the presence of particle has not been
> > > > > > proved which leaves those that are stubborn to take the approach that
> > > > > > waves can change into particles and vica versa. As for equilibrium,
> > > > > > according to Hawkings it only in existence just PRIOR to the loss of
> > > > > > equilibrium seen as the BIG BANG. It has been billions of years since
> > > > > > that happened such that all surfaces on Earth that are diamagnetic are
> > > > > > covered by particles at rest.(Without assimilation to other mass)
> > > > > >   With this condition in existence particles come to a screeching halt
> > > > > > at the magnetic field generated in arbitrary form around the earth
> > > > > > where added extra particles that arrive combine linearly into magnetic
> > > > > > lines. If a particle is accelerated outside our boundary a particle
> > > > > > can enter the equivalent pseudo Faraday shield via the length of
> > > > > > opening between the magnetic lines that allows entrance of a particle
> > > > > > in equilibrium. It is the attraction of such particles between the
> > > > > > Earth's surface and its magnetic field that creates the weather where
> > > > > > updrafts lifts moisture which is diamagnetic upon which the particles
> > > > > > reside until an imbalance occurs with change in temperature such that
> > > > > > particles have nowhere to go except back to Earth when the outer

> > > > > magnetic field rises to saturation. Remember, the term "waves" is an
> > > > > adjective whereas a "particle" is a noun and thus has substance or
> > > > > contains matter. Thus it is ridiculous with respect to physics where
> > > > > one disappline explains the particle as the carrier of communication
> > > > > is countered by those who "know" where that the only explanation that
> > > > > can be provided for the disparity is that they are both one and the
> > > > > same vis interchangability!
> > > > > such as particles- Hide quoted text -
>
> > > > > - Show quoted text -
>
> > > > waves are nouns in my books. and a 1/2 wave dipole is perfectly
> > > > repeatable when i measure it. maybe you need a new library, or a new
> > > > bar, i want some of whatever you are drinking.
>
> > > No, that is a cop out! A half wave length is ever changing. Because
> > > you cannot measure the differences in the lengths does not mean that
> > > you have consistency. You are confusing
> > > infinity with absolute which one tends to regard as the same, to
> > > justify the use of a mathematical step by mathematicians which defies
> > > the position of equilibrium.
> > > The same goes for a yagi where every element re radiates such there is
> > > never enough elements to account for total radiation in beam form.- Hide quoted text
-
>
> > > - Show quoted text -
>
> > I remember meeting some college kids that were messing around with
> > peyote. I dont think they were this far out.
> > That includes the one that could only say " Like wow man".
>
> > Jimmie
>
> > Jimmie- Hide quoted text -
>
> > - Show quoted text -
>
> agreed, after that last reply it seems like he is farther out than i
> thought. time to wait till he sobers up a bit, if that ever happens.

David, your cop out is very understandable in any debate. One who has
trust in himself is willing to agree that both sides can disagree
until more information is achieved so that discussion or debate can
proceed. On the other hand those that are programed to rely on the
teachings of others as with a priest develops anger towards those
who apparently is treating his faith with disdain, by showing anger
towards those whose debate has not come to an end which does occurs
with those who deal only on faith. So yes it is not unusual for debate
to end with barbs thrown at the other debater. In your case you
entered the debate with acceptance that only a program that dealt with

full wave radiators can achieve 100% accountability of all forces.This change in direction from faith has led you into the position of providing proof that a half wave radiator can achieve 100% efficiency ONLY by finding a way where overshoot is included , indeed a heavy task that extends beyond faith.
Cheers
Art

3099. Re: Causes of Distrust of NEC and Mininec programs

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-15 22:17:33 UTC
From: Art Unwin <arthurunwin@gmail.com>
Message-ID: <2afa7bb4-311e-4454-9559-2e65569eb06b@r5g2000yqb.googlegroups.com>
Source record: 11961

On Nov 15, 3:44 pm, JIMMIE <JIMMIEDEE...@YAHOO.COM> wrote:
> On Nov 15, 1:23 am, Art Unwin <arthurun...@gmail.com> wrote:
>
>
>
> > Cebic found when comparing different style programs that some behaved
> > well in certain circumstance where others did not. Yet all antenna
> > programs
> > are based on the use of Maxwells equations where all programs should
> > have the same results, after all Maxwells equations are exact and not
> > fudged. One of the reasons is that since Maxwells laws are exact
> > radiators used must be resonant at repeatable points designated as a
> > period.
> >   Fact is that most users use fractional wavelength designs, usually
> > a half wavelength, that is not resonant at repeatable points where
> > the area around the datum line of a sine wave is never equal when
> > generated around a tank circuit.
> >   The reason for this is "voltage over shoot" which gets smaller
> > with every cycle but never disappears. Thus when programs are used
> > based on fractional wavelength radiators the results will never show
> > 100% accountability and in fact efficiencies derived will be in the
> > order of 92%!
> >   If the radiator is of a wavelength then one is not using a "fudge"
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> > in the calculations and then becomes possible to attain total
> > accountability with efficiency of 100%. regardles of what type program
> > is used.
> >   If one is to use exact equations, as are Maxwell equations, then
> > one must also use measurements that are also exact and repeatable and
> > that is definitely not fractional wavelengths!
> > What one gains from this aproach is that any radiator of any shape,
> > size or elevation can provide figures in the order of 100% as long as
> > the radiator is a multiple of a wavelength where it is resonant at
> > exact and repeatable measurements.
> > If anybody can give pointers that refute the accuracy of the above I
> > would be very interested in hearing them
>
> How about giving some pointers as to where you got this BS. Sounds
> like you just made a bunch of stuff up.
>
> Jimmie

No Jim. Ideas with what is presented to me in science, where such can
be obtained from first principles and with agreement with known LAWS

of science rather than various theories. In this case the aproach of Gauss provided a mathematical connection to Maxwells equations which by the use of antenna programs based on Maxwell only provide accountability of all forces. This is easily proven when use of a program that is optimized to account for all forces involved in radiation such that the solution provided is termed 100% efficient as opposed to planar or other designs that cannot achieve 100% efficiency because of the non accountability of the recognition of "over shoot". One always looks for 100% accountability of all forces such that 100% efficiency is achieved.

If you are in the early stages of education it would be folly to bring forth suggestions to the contrary of those presented in the books and your professor since these are the standards against which determines whether you graduate or not. Obviously this is not the time to debate differences. As life proceedes one becomes comfortable with alignment with ideas and teachings that conform with those around you because in general your wages depend on it. Thus you are dealing with faith regardless of the attainment via first principles that produce conflict.

So yes, your only response to continue a science debate is to provide counter proof from first principles that is available some where in a book! Compared to that task it is so much more convenient to exit the debate on a statement that does not require a proof. Thus anger comes to the fore and debate or a thread comes to an end.

Cheers

Art

3100. Re: Causes of Distrust of NEC and Mininec programs

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-15 22:26:27 UTC
From: Art Unwin <arthurunwin@gmail.com>
Message-ID: <7815d33f-3d94-4d82-944f-0d8df51b88d4@p8g2000yqb.googlegroups.com>
Source record: 11962

```
On Nov 15, 3:00 pm, Dave <k1...@arrl.net> wrote:
> On Nov 15, 8:10 pm, Art Unwin <arthurun...@gmail.com> wrote:
>
>
>
> > On Nov 15, 12:59 pm, Dave <k1...@arrl.net> wrote:
>
> > > On Nov 15, 4:14 pm, Art Unwin <arthurun...@gmail.com> wrote:
>
> > > > On Nov 15, 6:18 am, Dave <k1...@arrl.net> wrote:
>
> > > > > On Nov 15, 6:23 am, Art Unwin <arthurun...@gmail.com> wrote:
>
> > > > > > Cebic found when comparing different style programs that some behaved
> > > > > > well in certain circumstance where others did not. Yet all antenna
> > > > > > programs
> > > > > > are based on the use of Maxwells equations where all programs should
> > > > > > have the same results, after all Maxwells equations are exact and not
> > > > > > fudged. One of the reasons is that since Maxwells laws are exact
> > > > > > radiators used must be resonant at repeatable points designated as a
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> > > > > >    Fact is that most users use fractional wavelength designs, usually
> > > > > > a half wavelength, that is not resonant at repeatable points where
> > > > > > the area around the datum line of a sine wave is never equal when
> > > > > > generated around a tank circuit.
> > > > > >     The reason for this is "voltage over shoot" which gets smaller
> > > > > > with every cycle but never disappears. Thus when programs are used
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> > > > > >    If one is to use exact equations, as are Maxwell equations, then
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> > > > > > that is definitely not fractional wavelengths!
> > > > > >  What one gains from this aproach is that any radiator of any shape,
> > > > > >  size or elevation can provide figures in the order of 100% as long as
> > > > > > the radiator is a multiple of a wavelength where it is  resonant at
> > > > > > exact and repeatable measurements.
> > > > > > If anybody can give pointers that refute the accuracy of the above I
> > > > > > would be very interested in hearing them
```

>
> > > > > the key is that while all the programs are based on maxwell's
> > > > > equations, it is impossible to implement maxwell's equations with 100%
> > > > > accuracy on a digital computer. this is true of any and all
> > > > > simulation and modeling programs for electrical or mechanical design.
> > > > > all such programs make approximations and take shortcuts to reduce
> > > > > calculation time while maintaining some minimum level of accuracy and
> > > > > precision. it is important to understand the assumptions and
> > > > > simplifications that have been made in order to make proper use of the
> > > > > programs. typical traps in antenna simulations are that they don't
> > > > > like very small or very large length/diameter ratios... so using them
> > > > > for extrement long or short wires or very fat or very thin wires may
> > > > > produce results that aren't realistic. many of them also don't like
> > > > > very small spacing between wires, this is where most optimizer
> > > > > programs fall apart, they start moving wires close together and get
> > > > > strange results like super gain or unrealizable narrow beam patterns,
> > > > > often accompanied by a very low feedpoint impedance.
>
> > > > > most reputable programs like NEC have been validated very diligently
> > > > > over many years and their accuracy is well documented... as are the
> > > > > restrictions and assumptions that apply, but you have to read ALL the
> > > > > documentation, not just the quick start guide. Other programs like
> > > > > mininec, ao, yo, yagimax, and others make even more simplifications
> > > > > and therefore added restrictions so they can run on a desktop
> > > > > relatively quickly. unfortunately they don't always document the
> > > > > limitations as well as the professional level products. after all the
> > > > > professionals have millions of dollars riding on the accuracy of
> > > > > designs, hams have only pennies, so it just doesn't pay to write lots
> > > > > of documentation or do lots of testing that won't be read for ham
> > > > > users.
>
> > > > > so, while all the programs must be based on the same equations, the
> > > > > results they generate, especially in the fringe cases, may be vastly
> > > > > different. remember two maxims... 'garbage in - garbage out', and
> > > > > 'you get what you pay for'.
>
> > > > Exactly.
> > > > If one uses a "period" of a cycle or a full wave instead of fractional
> > > > wavelengths
> > > > Maxwell's equations can be used in antenna programs to achieve 100%
> > > > accountability
> > > > or efficiency Where as the fudge figure of fractional wavelengths can
> > > > only achieve efficiencies in the lower 90s unless voltage over shoot
> > > > is accounted for.
> > > > Programs with optimizers recognize over shoot by providing radiators
> > > > that are all multiples of a wavelength and resonant so that the array
> > > > is also resonant as a whole.- Hide quoted text -
>
> > > > - Show quoted text -
>

> > > what exactly is 'voltage overshoot' and why does it affect modeling
> > > programs? you can model an antenna without ever calculating a
> > > voltage. all that is needed is current, which is usually much easier
> > > to track. all voltages can be calculated from the current after the
> > > fact if needed for figuring insulation requirements.
>
> > When a energy switching action occurs as with energy exchange between
> > an inductance
> > and a capacitance a transient spur of voltage is created beyond the
> > point of balance or equilibrium of the circuit. Tho this is only
> > momentary, it delays the return of energy back to the capacitance to a
> > lesser time. The capacitor then returns the energy back to the
> > inductance but with a lesser voltage which again creates a transient
> > spike of a now lesser value than before, such that the amplitude of a
> > balanced "loss less" circuit is lost to one that defines vibration
> > which in the human ear also creates communication. (When delving into
> > the mathematical laws of vibration where the amplitude change and the
> > similarity to vibration can be readily be seen.
> >   Any way, it can be seen that with the amplitude of vibration is ever
> > changing, so must the point where the amplitude is repeatable ie
> > resonant, must also change. Yes, you can model anything without ever
> > considering voltage when you choose to omit the presence of overshoot
> > for easability over accuracy.
> > Regards
> > Art
> > where the amplitude- Hide quoted text -
>
> > - Show quoted text -
>
> yeah, whatever you have been smoking is spiked with something. LC
> resonant circuits do not have 'spikes', they have nice sinusoidal
> energy transfer... maybe you envision the electrons sloshsing back and
> forth like that swill in your glass? sorry, it just don't work that
> way. enjoy your own little world, it just got one person smaller.

Well David prove it based on science instead of expecting me to accept
you on faith.
That is only accomplished by the source providing replacement such
that consistent amplitude is maintained. Without this replacement the
amplitude will show degradement as seen with vibration or a simple
pendulum clock that exhibits the two vectors previously mentioned ie
one linear and one circircular. There is no free lunch as with
perpetual motion
when equilibrium is broken.
Cheers
Art

3101. Re: Causes of Distrust of NEC and Mininec programs

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-15 23:17:51 UTC
From: Richard Fry <rfry@adams.net>
Message-ID: <7cc9d45e-670b-4cae-ad44-493275d23854@d21g2000yqn.googlegroups.com>
Source record: 11963

On Nov 15, Art Unwin <arthurun...@gmail.com> wrote:

>>As with religeon [sic] faith will always overide [sic] the
>>tenents [sic] of science, more so as you get older.

then

> Well David prove it based on science instead of expecting me
> to accept you on faith.

Art, you are the Master here at asking the readers of your posts to accept them on faith, while having provided no scientific proof for your posts whatsoever -- and while denying or at least ignoring the validity of other posts containing provable scientific and experiential evidence to the contrary.

Why should any well-educated person accept _your_ faith-based, and unproven beliefs?

RF

3102. Re: cock muncher tom evans caught in another LIE ....WAS:--->Re: alt.support.winkysposure-wankers - Diaperboi intel Outs Bobandcarole

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-15 23:41:01 UTC
From: Mork GavinHorse <mork.gavinhorse@gmail.com>
Message-ID: <72148038-b918-47ac-bc51-9e9e5ba0a653@d21g2000yqn.googlegroups.com>
Source record: 11964
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.policy,rec.radio.cb,alt.support.boy-lovers,alt.usenet.kooks

On Nov 15, 5:24 pm, Mork GavinHorse <mork.gavinho...@gmail.com> wrote:
> On Nov 15, 5:25 pm, kb9...@yahoooo.com wrote:
>
>
>
>
>
> > On Sun, 15 Nov 2009 15:16:37 -0800 (PST), Mork GavinHorse
>
> > <mork.gavinho...@gmail.com> wrote:
> > >On Nov 15, 5:03?pm, Mork GavinHorse <mork.gavinho...@gmail.com> wrote:
> > >> On Nov 15, 4:41 pm, Lamey <la...@nomail.invalid> wrote:
>
> > >> > On Sun, 15 Nov 2009 14:14:31 -0800 (PST), Marc Mentalham
>
> > >> > <nocode.mental...@gmail.com> wrote:
> > >> > >On Nov 15, 11:04?am, Lamey <la...@nomail.invalid> wrote:
> > >> > >> On Sun, 15 Nov 2009 08:37:22 -0800 (PST), Usenet Legends bobandcarole
>
> > >> > >> <usenetlegends...@googlemail.com> wrote:
> > >> > >> >x-no-archive:
> > >> > >> >On Nov 14, 9:22 pm, under...@news.vrx.net (Mad as a Box of Frogs)
> > >> > >> >wrote:
> > >> > >> >> In article <2d2uf593a6rl2fn38bb9qdaasoga6de...@4ax.com>,
> > >> > >> >> Onideus Mad Hatter ?<use...@backwater-productions.net> wrote:
>
> > >> > >> >>On Sat, 14 Nov 2009 11:33:30 -0800 (PST), Enos Penvy
> > >> > >> >><enospe...@null.net> wrote:
>
> > >> > >> >>>Aren't YOU the genius who said -- and insisted with all certainty --
> > >> > >> >>>that bobandcarole are in Amsterdam?
>
> > >> > >> >>LOL!!!!!!!
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> > >> > >> >>>So you don't think they got outed, eh Fuckup? ?*snicker* ?Yup, yer a
> > >> > >> >>>twelve year old alright.
>
> > >> > >> >> Without a doubt - Moulton the brain damaged. 3,000 miles off yet he
> > >> > >> >> *still* is stupid enough to believe he got anywhere close.
> > >> > >> >> The entire net knows where bobandcarole lives and posts from,
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> > >> > >> >LOL!!! ?would you be so kind as to enlighten usenet as to my actual
> > >> > >> >whereabouts, Jethro??? ?Hummmm?? ?You can type my location
> > >> > >> >here:
>
> > >> > >> >X----------
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> > >> > >> > I didn't think so.
>
> > >> > >> >Why?
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> > >> > >> >Becuz nobody really knows where b&c resides and I mean NOBODY ....
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> > >> > >> >Got it, boi??? ?Not you .. not diaperboi .. not ANYBODY.
>
> > >> > >> >And don't bother looking becuz you ain't tha first and laughably ya
> > >> > >> >won't
> > >> > >> >be tha last to attempt to locate me and fail miserably.
>
> > >> > >> >I've been "found" everywhere from Los Angeles to Amsterdam and all
> > >> > >> >points in between ?:-) ?Yer a liar, tommi boi. Not to mention a b-rate
> > >> > >> > torll ta boot .. Yer skilz ain't developed past 3rd or 4th grade
> > >> > >> >level.
>
> > >> > >> He thinks I live in fairplay
>
> > >> > >Yep, same could be said for KB9RQZ & KD8CTL
>
> > >> > I don't believe I know them.- Hide quoted text -
>
> > >> Hi Lamey,
> > >> This will tell you even more than you want to know about the sick
> > >> fuck!http://ve7kfm.com/kb9rqz.html
>
> > >""sick fabtasies""
> > >get your fat ass back to mqt, you poor sick bastard!
> > >http://ve7kfm.com/kb9rqz.html
>
> > just you sick fantasies
>
> > "one useless man is disgrace 2 become a law firm 3 or more become a congress"
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>
> > woger you are a Congress all in your own head
> > "http://www.3ix.org/sys/aff.php?aff=7439" target="_blank"
>
> > altopia is never used by KB9RQZhttp://kb9rqz.cc.cchttp://kd8ctl.com
> > nor is Konst...@hotmail.com ever
> > btw i can be found at
> > 17366 N River Rd

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> > but the cowards asking lack the gut to act
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> Thanks for correcting your fucked up, mental defective,
> spelling.....mental ward boi!http://ve7kfm.com/kb9rqz.html
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3103. Re: cock muncher tom evans caught in another LIE ....WAS:--->Re: alt.support.winkysposure-wankers - Diaperboi intel Outs Bobandcarole

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-15 23:46:33 UTC
From: Mork GavinHorse <mork.gavinhorse@gmail.com>
Message-ID: <5f644c54-46bf-4a49-86be-1125ca9dd0c5@r5g2000yqb.googlegroups.com>
Source record: 11966
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.policy,rec.radio.cb,alt.support.boy-lovers,alt.usenet.kooks

On Nov 15, 5:41 pm, Mork GavinHorse <mork.gavinho...@gmail.com> wrote:
> On Nov 15, 5:24 pm, Mork GavinHorse <mork.gavinho...@gmail.com> wrote:
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> > > On Sun, 15 Nov 2009 15:16:37 -0800 (PST), Mork GavinHorse
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> > > <mork.gavinho...@gmail.com> wrote:
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> > > >> > On Sun, 15 Nov 2009 14:14:31 -0800 (PST), Marc Mentalham
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> > > >> > <nocode.mental...@gmail.com> wrote:
> > > >> > >On Nov 15, 11:04?am, Lamey <la...@nomail.invalid> wrote:
> > > >> > >> On Sun, 15 Nov 2009 08:37:22 -0800 (PST), Usenet Legends bobandcarole
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> > > >> > >> <usenetlegends...@googlemail.com> wrote:
> > > >> > >> >x-no-archive:
> > > >> > >> >On Nov 14, 9:22 pm, under...@news.vrx.net (Mad as a Box of Frogs)
> > > >> > >> >wrote:
> > > >> > >> >> In article <2d2uf593a6rl2fn38bb9qdaasoga6de...@4ax.com>,
> > > >> > >> >> Onideus Mad Hatter ?<use...@backwater-productions.net> wrote:
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> > > >> > >> >> >On Sat, 14 Nov 2009 11:33:30 -0800 (PST), Enos Penvy
> > > >> > >> >> ><enospe...@null.net> wrote:
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> > > >> > >> >> >>Aren't YOU the genius who said -- and insisted with all certainty --
> > > >> > >> >> >>that bobandcarole are in Amsterdam?
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> > > >> > >> >> >So you don't think they got outed, eh Fuckup? ?*snicker* ?Yup, yer a
> > > >> > >> >> >twelve year old alright.
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> > > >> > >> >> Without a doubt - Moulton the brain damaged. 3,000 miles off yet he
> > > >> > >> >> *still* is stupid enough to believe he got anywhere close.
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> > > >> > >> >LOL!!! ?would you be so kind as to enlighten usenet as to my actual
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> > > >> > >> >X----------
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> > > >> > >> > I didn't think so.
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> > > >> > >> >Why?
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> > > >> > >> >Becuz nobody really knows where b&c resides and I mean NOBODY ....
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> > > >> > >> >Got it, boi??? ?Not you .. not diaperboi .. not ANYBODY.
>
> > > >> > >> >And don't bother looking becuz you ain't tha first and laughably ya
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> > > >> > >> He thinks I live in fairplay
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> > > >> > >Yep, same could be said for KB9RQZ & KD8CTL
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> > > >> Hi Lamey,
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> > > just you sick fantasies
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> > > "one useless man is disgrace 2 become a law firm 3 or more become a congress"
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> > > woger you are a Congress all in your own head
> > > "http://www.3ix.org/sys/aff.php?aff=7439" target="_blank"
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> > > altopia is never used by KB9RQZhttp://kb9rqz.cc.cchttp://kd8ctl.com
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>
> http://ve7kfm.com/kb9rqz.html- Hide quoted text -
>
>
http://ve7kfm.com/kb9rqz.html

3104. get kelp

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-15 23:48:28 UTC
From: kb9rqz@yahoooo.com
Message-ID: <mp41g511gt1f5d33n57j0vqn0a6r4rs6h2@4ax.com>
Source record: 11965
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.policy,rec.radio.cb,alt.usenet.kooks

On Sun, 15 Nov 2009 15:41:01 -0800 (PST), Mork GavinHorse
<mork.gavinhorse@gmail.com> wrote:

>On Nov 15, 5:24?pm, Mork GavinHorse <mork.gavinho...@gmail.com> wrote:
>> On Nov 15, 5:25 pm, kb9...@yahoooo.com wrote:
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>> > On Sun, 15 Nov 2009 15:16:37 -0800 (PST), Mork GavinHorse
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>>
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>> > >> > >> >> The entire net knows where bobandcarole lives and posts from,

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>> > >> > >> He thinks I live in fairplay
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>> > >> Hi Lamey,
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>> > altopia is never used by KB9RQZhttp://kb9rqz.cc.cchttp://kd8ctl.com
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>> Thanks for correcting your fucked up, mental defective,
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nor is Konstans@hotmail.com ever
btw i can be found at
17366 N River Rd
Chassel Mi

but the cowards asking lack the gut to act

3105. Re: Causes of Distrust of NEC and Mininec programs

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-15 23:49:58 UTC
From: Jeff Liebermann <jeffl@cruzio.com>
Message-ID: <0g31g59k262fhdcjnn49nr2pansebif7m6@4ax.com>
Source record: 11967

On Sat, 14 Nov 2009 22:23:05 -0800 (PST), Art Unwin
<arthurunwin@gmail.com> wrote:

>Cebic found when comparing different style programs that some behaved
>well in certain circumstance where others did not.

True. When circumstances dictate that I pay attention and I'm in a
good mood, most programs behave normally. However, when circumstances
are not so favorable, such as last week when I replaced my septic
tank, all of the software I was using literally stunk.

>Fact is that most users use fractional wavelength designs, usually
>a half wavelength, that is not resonant at repeatable points where
>the area around the datum line of a sine wave is never equal when
>generated around a tank circuit.

Last time I checked, the definition of a half wave automagically
includes any external or magical factors that might change its length.
For example, if you submerge the antenna under water, the increased
dielectric constant will cause the half wave length to somewhat
shorten. While the previous length has changed, the new shorter
length is still a half wavelength.

>The reason for this is "voltage over shoot" which gets smaller
>with every cycle but never disappears.

Overshoot can easily be fixed with a Cutts Compensator.
<http://en.wikipedia.org/wiki/Cutts_compensator>
Every time you cycle your antenna, the recoil tends to make the barrel
climb a bit. This is the cause of the overshoot. A suitable Cutts
Compensator attached opposite the feed point should help prevent
overshooting the target.

>Thus when programs are used
>based on fractional wavelength radiators the results will never show
>100% accountability and in fact efficiencies derived will be in the
>order of 92%!

95.718% of all statistics are wrong. If you're using single digit
accuracy and single digit significant figures, 92% rounded off is
equal to 100%.

>If the radiator is of a wavelength then one is not using a "fudge"
>figure
>in the calculations and then becomes possible to attain total
>accountability with efficiency of 100%. regardles of what type program
>is used.

Half wave wire dipoles do tend to be resonant somewhat shorter than the free space wavelength. That's due to sales and value added tax placed on antennas by the government. You'll always come out a bit short when dealing with them. However, the last time I checked, the cut length was only about 5% shorter than the free space half-wave length. Did the antenna tax increase to 8%?

>If one is to use exact equations, as are Maxwell equations, then
>one must also use measurements that are also exact and repeatable and
>that is definitely not fractional wavelengths!

My antennas are exact and repeatable. Not only that, I can also repeat my mistakes every time.

>What one gains from this aproach is that any radiator of any shape,
>size or elevation can provide figures in the order of 100% as long as
>the radiator is a multiple of a wavelength where it is resonant at
>exact and repeatable measurements.

Perhaps. If you buy your antennas out of state or on eBay, you can avoid paying the 5% antenna length tax. However, you are required to pay Use Tax on any out of state purchases where the vendor neglected to collect the antenna tax and forward it to the Calif Franchise Tax Bored:
<http://www.ftb.ca.gov/current/usetax.shtml>

>If anybody can give pointers that refute the accuracy of the above I
>would be very interested in hearing them

Why? You haven't proven your point, demonstrated the phenomenon, or otherwise provided anything worth tearing apart. For all I know, your antennas are shorter than expected because of magic, enchantment, sloppy construction, mis-measurement, or all the aforementioned. Anyway, the problem is easily solved. Just increase your AC power line voltage about 5% and your numbers should increase by the same amount.

--
Jeff Liebermann jeffl@cruzio.com
150 Felker St #D http://www.LearnByDestroying.com
Santa Cruz CA 95060 http://802.11junk.com
Skype: JeffLiebermann AE6KS 831-336-2558

3106. gwet kelp

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-16 00:00:12 UTC
From: kb9rqz@yahoooo.com
Message-ID: <tf51g5pcpchmbuja25foen3fcniuf6m9co@4ax.com>
Source record: 11968
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.policy,rec.radio.cb,alt.usenet.kooks

On Sun, 15 Nov 2009 15:46:33 -0800 (PST), Mork GavinHorse
<mork.gavinhorse@gmail.com> wrote:

>On Nov 15, 5:41?pm, Mork GavinHorse <mork.gavinho...@gmail.com> wrote:
>> On Nov 15, 5:24 pm, Mork GavinHorse <mork.gavinho...@gmail.com> wrote:
>>
>>
>>
>> > On Nov 15, 5:25 pm, kb9...@yahoooo.com wrote:
>>
>> > > On Sun, 15 Nov 2009 15:16:37 -0800 (PST), Mork GavinHorse
>>
>> > > <mork.gavinho...@gmail.com> wrote:
>> > > >On Nov 15, 5:03?pm, Mork GavinHorse <mork.gavinho...@gmail.com> wrote:
>> > > >> On Nov 15, 4:41 pm, Lamey <la...@nomail.invalid> wrote:
>>
>> > > >> > On Sun, 15 Nov 2009 14:14:31 -0800 (PST), Marc Mentalham
>>
>> > > >> > <nocode.mental...@gmail.com> wrote:
>> > > >> > >On Nov 15, 11:04?am, Lamey <la...@nomail.invalid> wrote:
>> > > >> > >> On Sun, 15 Nov 2009 08:37:22 -0800 (PST), Usenet Legends bobandcarole
>>
>> > > >> > >> <usenetlegends...@googlemail.com> wrote:
>> > > >> > >> >x-no-archive:
>> > > >> > >> >On Nov 14, 9:22 pm, under...@news.vrx.net (Mad as a Box of Frogs)
>> > > >> > >> >wrote:
>> > > >> > >> >> In article <2d2uf593a6rl2fn38bb9qdaasoga6de...@4ax.com>,
>> > > >> > >> >> Onideus Mad Hatter ?<use...@backwater-productions.net> wrote:
>>
>> > > >> > >> >> >On Sat, 14 Nov 2009 11:33:30 -0800 (PST), Enos Penvy
>> > > >> > >> >> ><enospe...@null.net> wrote:
>>
>> > > >> > >> >> >>Aren't YOU the genius who said -- and insisted with all certainty --
>> > > >> > >> >> >>that bobandcarole are in Amsterdam?
>>
>> > > >> > >> >> >>LOL!!!!!!!
>>
>> > > >> > >> >> >So you don't think they got outed, eh Fuckup? ?*snicker* ?Yup, yer a
>> > > >> > >> >> >twelve year old alright.
>>
>> > > >> > >> >> Without a doubt - Moulton the brain damaged. 3,000 miles off yet he
>> > > >> > >> >> *still* is stupid enough to believe he got anywhere close.
>> > > >> > >> >> The entire net knows where bobandcarole lives and posts from,

>>
>> > > >> > >> >LOL!!! ?would you be so kind as to enlighten usenet as to my actual
>> > > >> > >> >whereabouts, Jethro??? ?Hummmm?? ?You can type my location
>> > > >> > >> >here:
>>
>> > > >> > >> >X----------
>>
>> > > >> > >> > I didn't think so.
>>
>> > > >> > >> >Why?
>>
>> > > >> > >> >Becuz nobody really knows where b&c resides and I mean NOBODY ....
>>
>> > > >> > >> >Got it, boi??? ?Not you .. not diaperboi .. not ANYBODY.
>>
>> > > >> > >> >And don't bother looking becuz you ain't tha first and laughably ya
>> > > >> > >> >won't
>> > > >> > >> >be tha last to attempt to locate me and fail miserably.
>>
>> > > >> > >> >I've been "found" everywhere from Los Angeles to Amsterdam and all
>> > > >> > >> >points in between ?:-) ?Yer a liar, tommi boi. Not to mention a b-rate
>> > > >> > >> > torll ta boot .. Yer skilz ain't developed past 3rd or 4th grade
>> > > >> > >> >level.
>>
>> > > >> > >> He thinks I live in fairplay
>>
>> > > >> > >Yep, same could be said for KB9RQZ & KD8CTL
>>
>> > > >> > I don't believe I know them.- Hide quoted text -
>>
>> > > >> Hi Lamey,
>> > > >> This will tell you even more than you want to know about the sick
>> > > >> fuck!http://ve7kfm.com/kb9rqz.html
>>
>> > > >""sick fabtasies""
>> > > >get your fat ass back to mqt, you poor sick bastard!
>> > > >http://ve7kfm.com/kb9rqz.html
>>
>> > > just you sick fantasies
>>
>> > > "one useless man is disgrace 2 become a law firm 3 or more become a congress"
>> > > adams
>>
>> > > woger you are a Congress all in your own head
>> > > "http://www.3ix.org/sys/aff.php?aff=7439" target="_blank"
>>
>> > > altopia is never used by KB9RQZhttp://kb9rqz.cc.cchttp://kd8ctl.com
>> > > nor is Konst...@hotmail.com ever
>> > > btw i can be found at
>> > > 17366 N River Rd

>> > > Chassel Mi
>>
>> > > but the cowards asking lack the gut to act
>>
>> > Thanks for correcting your fucked up, mental defective,
>> > spelling...........mental ward boi!http://ve7kfm.com/kb9rqz.html
>>
>> http://ve7kfm.com/kb9rqz.html- Hide quoted text -
>>
>>
>http://ve7kfm.com/kb9rqz.html

"one useless man is disgrace 2 become a law firm 3 or more become a congress"
adams

woger you are a Congress all in your own head
"http://www.3ix.org/sys/aff.php?aff=7439" target="_blank"

altopia is never used by KB9RQZ
http://kb9rqz.cc.cc
http://kd8ctl.com
nor is Konstans@hotmail.com ever
btw i can be found at
17366 N River Rd
Chassel Mi

but the cowards asking lack the gut to act

3107. Re: Causes of Distrust of NEC and Mininec programs

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-16 01:00:10 UTC
From: Art Unwin <arthurunwin@gmail.com>
Message-ID: <0760773a-e36c-4724-ba5a-59bea81398b2@j19g2000yqk.googlegroups.com>
Source record: 11969

On Nov 15, 5:49 pm, Jeff Liebermann <je...@cruzio.com> wrote:
> On Sat, 14 Nov 2009 22:23:05 -0800 (PST), Art Unwin
>
> <arthurun...@gmail.com> wrote:
> >Cebic found when comparing different style programs that some behaved
> >well in certain circumstance where others did not.
>
> True. When circumstances dictate that I pay attention and I'm in a
> good mood, most programs behave normally. However, when circumstances
> are not so favorable, such as last week when I replaced my septic
> tank, all of the software I was using literally stunk.
>
> >Fact is that most users use fractional wavelength designs, usually
> >a half wavelength, that is not resonant at repeatable points where
> >the area around the datum line of a sine wave is never equal when
> >generated around a tank circuit.
>
> Last time I checked, the definition of a half wave automagically
> includes any external or magical factors that might change its length.
> For example, if you submerge the antenna under water, the increased
> dielectric constant will cause the half wave length to somewhat
> shorten. While the previous length has changed, the new shorter
> length is still a half wavelength.

Very true, but the measured length is never repeatable. Only at the
point of a period
is where it is repeatable which is how a cycle comes into being.

>
> >The reason for this is "voltage over shoot" which gets smaller
> >with every cycle but never disappears.
>
> Overshoot can easily be fixed with a Cutts Compensator.
> <http://en.wikipedia.org/wiki/Cutts_compensator>

Ofshoot can be essentially removed or minimised by just the addition
of a resister but such methods are not included in antenna computer
programs.
> Every time you cycle your antenna, the recoil tends to make the barrel
> climb a bit. This is the cause of the overshoot. A suitable Cutts
> Compensator attached opposite the feed point should help prevent
> overshooting the target.
>
> >Thus when programs are used
> >based on fractional wavelength radiators the results will never show

> >100% accountability and in fact efficiencies derived will be in the
> >order of 92%!
>
> 95.718% of all statistics are wrong. If you're using single digit
> accuracy and single digit significant figures, 92% rounded off is
> equal to 100%.

Again what ever trips your trigger, horse shoes or Maxwells equations.
Only when accurate metrics are inserted in a program can the accuracy
of Maxwell's equations be shown and the half wave length can never be
stated accurately.
>
> >If the radiator is of a wavelength then one is not using a "fudge"
> >figure
> >in the calculations and then becomes possible to attain total
> >accountability with efficiency of 100%. regardles of what type program
> >is used.
>
> Half wave wire dipoles do tend to be resonant somewhat shorter than
> the free space wavelength. That's due to sales and value added tax
> placed on antennas by the government. You'll always come out a bit
> short when dealing with them. However, the last time I checked, the
> cut length was only about 5% shorter than the free space half-wave
> length. Did the antenna tax increase to 8%?
>
> >If one is to use exact equations, as are Maxwell equations, then
> >one must also use measurements that are also exact and repeatable and
> >that is definitely not fractional wavelengths!
>
> My antennas are exact and repeatable. Not only that, I can also
> repeat my mistakes every time.

Yes you have shown evidence of that.
>
> >What one gains from this aproach is that any radiator of any shape,
> >size or elevation can provide figures in the order of 100% as long as
> >the radiator is a multiple of a wavelength where it is resonant at
> >exact and repeatable measurements.
>
> Perhaps. If you buy your antennas out of state or on eBay, you can
> avoid paying the 5% antenna length tax. However, you are required to
> pay Use Tax on any out of state purchases where the vendor neglected
> to collect the antenna tax and forward it to the Calif Franchise Tax
> Bored:
> <http://www.ftb.ca.gov/current/usetax.shtml>
>
> >If anybody can give pointers that refute the accuracy of the above I
> >would be very interested in hearing them
>
> Why? You haven't proven your point, demonstrated the phenomenon, or
> otherwise provided anything worth tearing apart. For all I know, your

> antennas are shorter than expected because of magic, enchantment,
> sloppy construction, mis-measurement, or all the aforementioned.
> Anyway, the problem is easily solved. Just increase your AC power
> line voltage about 5% and your numbers should increase by the same
> amount.
Maybe true but physics demands accuracy which explains the heavy
useage of constant added to justify the use of an equal sign. Same
thing goes for the myriad of particles invented that are not seen or
measurable. This because those who delve in physics sometimes replace
a constant with a new invented particle that can substantiate
equilibrium or its cousin "equal"
>
> --
> Jeff Liebermann   je...@cruzio.com
You know, a well known former ham Stephen Best got hold of a new
antenna program
that had strict adherence to Maxwells laws. The program relied on
Poynting circle as being representitive for all forces in radiation.
The program ,probably more than I can afford. produced a radiator that
was not straight according to the old wives tale that is propagated by
hams. It showed something like a tennis ball where multiple
wavelengths of radiator were stuffed inside and where balance or
equilibrium was obtained. In his study which was around a half wave
radiater produced a radiation pattern that was a perfect hemisphere
that all on this group stated was impossible to attain. (actually it
was based on a full wave where the ground plane supplied the mirror
image) Possibly in our time, that will make it into the newer physics
books, that will force the re thinking of radiation. This paper is on
the WWW but I leave it to you to show that it must be in error as it
is not yet in the books!
At the same time opponents will bring forwards Toms adage W8TI, that
for maximum efficiency a radiator must be straight, thus leaving him
with the onus of showing that Steven Best efforts were all wrong by
the use of the soon to be corrected theory corrections
before old theories are fully discounted where all may read it for
themselves in a book.
Art
Art
> 150 Felker St #D   http://www.LearnByDestroying.com
> Santa Cruz CA 95060http://802.11junk.com
> Skype: JeffLiebermann   AE6KS   831-336-2558

3108. Re: Causes of Distrust of NEC and Mininec programs

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-16 01:03:18 UTC
From: tom <news4792@taring.org>
Message-ID: <4b00a4b5$0$42845$8046368a@newsreader.iphouse.net>
Source record: 11970

Art Unwin wrote:
> On Nov 15, 3:00 pm, Dave <k1...@arrl.net> wrote:-
>> yeah, whatever you have been smoking is spiked with something. LC
>> resonant circuits do not have 'spikes', they have nice sinusoidal
>> energy transfer... maybe you envision the electrons sloshsing back and
>> forth like that swill in your glass? sorry, it just don't work that
>> way. enjoy your own little world, it just got one person smaller.
>
> Well David prove it based on science instead of expecting me to accept
> you on faith.
> That is only accomplished by the source providing replacement such
> that consistent amplitude is maintained. Without this replacement the
> amplitude will show degradement as seen with vibration or a simple
> pendulum clock that exhibits the two vectors previously mentioned ie
> one linear and one circircular. There is no free lunch as with
> perpetual motion
> when equilibrium is broken.
> Cheers
> Art

Art

You ask others to prove things based on science while you ignore proven
and demonstrable science and make up your own "facts".

You have never proven or demonstrated ANYTHING, yet have the frigging
balls to require others to do so.

A hypocrite by any other name is still a hypocrite.

tom
K0TAR

3109. Re: Causes of Distrust of NEC and Mininec programs

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-16 01:11:08 UTC
From: tom <news4792@taring.org>
Message-ID: <4b00a688$0$28112$8046368a@newsreader.iphouse.net>
Source record: 11971

JIMMIE wrote:
> On Nov 15, 1:23 am, Art Unwin <arthurun...@gmail.com> wrote:

<snip lots of BULLSH*T>

>
> How about giving some pointers as to where you got this BS. Sounds
> like you just made a bunch of stuff up.
>
>
> Jimmie

Exactly right.

He makes it all up. It's easy to tell if you read him long enough,
because his story is continuously changing. When you stick to the truth
or reality that doesn't happen.

tom
K0TAR

3110. Re: Causes of Distrust of NEC and Mininec programs

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-16 01:16:00 UTC
From: tom <news4792@taring.org>
Message-ID: <4b00a7ab$0$28112$8046368a@newsreader.iphouse.net>
Source record: 11972

Jeff Liebermann wrote:
> On Sat, 14 Nov 2009 22:23:05 -0800 (PST), Art Unwin
> <arthurunwin@gmail.com> wrote:
<snip lots of CRAP>
>
>> If anybody can give pointers that refute the accuracy of the above I
>> would be very interested in hearing them
>
> Why? You haven't proven your point, demonstrated the phenomenon, or
> otherwise provided anything worth tearing apart. For all I know, your
> antennas are shorter than expected because of magic, enchantment,
> sloppy construction, mis-measurement, or all the aforementioned.
<snip a bit>

And anytime anyone does respond with a credible argument, he makes up
new "facts" to cover his ass.

tom
K0TAR

3111. Re: Genius

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-16 02:37:12 UTC
From: Bill <k4wge@arrl.net>
Message-ID: <96e14faf-8a58-4e1a-bea1-a087be7b560e@r5g2000yqb.googlegroups.com>
Source record: 11973

>
> Its true the sun runs on coal, English coal no doubt of the finest
> grade.
>
> Jimmie

"The world is really a flat plate supported on the back of a giant
tortoise."

3112. Re: Causes of Distrust of NEC and Mininec programs

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-16 02:42:20 UTC
From: Art Unwin <arthurunwin@gmail.com>
Message-ID: <e42b20b3-0782-4111-8737-ab12e46587ea@m26g2000yqb.googlegroups.com>
Source record: 11975

On Nov 15, 7:16 pm, tom <news4...@taring.org> wrote:
> Jeff Liebermann wrote:
> > On Sat, 14 Nov 2009 22:23:05 -0800 (PST), Art Unwin
> > <arthurun...@gmail.com> wrote:
> <snip lots of CRAP>
>
> >> If anybody can give pointers that refute the accuracy of the above I
> >> would be very interested in hearing them
>
> > Why? You haven't proven your point, demonstrated the phenomenon, or
> > otherwise provided anything worth tearing apart. For all I know, your
> > antennas are shorter than expected because of magic, enchantment,
> > sloppy construction, mis-measurement, or all the aforementioned.
>
> <snip a bit>
>
> And anytime anyone does respond with a credible argument, he makes up
> new "facts" to cover his ass.
>
> tom
> K0TAR

I do not have to prove anything to you! The first project is to obtain
a patent that is desired by those skilled in the art of making money
on new antenna disclosures.
You have neither of those requirements. Because you are unarmed with
respect to having skill in the science of antennas it is normal to
gravitate towards insults where the record shows that your knowledge
of antennas is negligeable. It is impossible to debate science with
one that excells only with the skill of memory that parrots only that
which can be memorised by a reading of a book with zero understanding.
Ofcourse, if you had a tangible record on the teachings on the science
of antennas you surely would have provided evidence of same, rather
than the use of slander to provide perceived elevation of your station
in the presence of Madame Guillotine, where the loudest voice becomes
a leader of what is just a mob. I have never seen evidence in your
postings that you have had a tangible trail of education that would
substantiate your self perceived expertise in the field of antennas
thus you do not have a real beef to show on this thread.
As for your statement "as for all I know" it is better that you
believe in magic where faith overcomes physics.

3113. Re: Genius

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-16 02:42:49 UTC
From: tom <news4792@taring.org>
Message-ID: <4b00bc03$0$28115$8046368a@newsreader.iphouse.net>
Source record: 11974

Bill wrote:
>> Its true the sun runs on coal, English coal no doubt of the finest
>> grade.
>>
>> Jimmie
>
> "The world is really a flat plate supported on the back of a giant
> tortoise."
>

"And it's turtles all the way down."

tom
K0TAR

3114. Re: Genius

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-16 02:55:58 UTC
From: Bill <k4wge@arrl.net>
Message-ID: <0722b7ab-b814-4a23-9b6c-02a9b1bf04f4@37g2000yqm.googlegroups.com>
Source record: 11976

Art sez,
>
> The term "soot" defines the presence of particles that still
> contain energy when dispelled from a chemical exchange >process. In
the case of escape from the Sun's internal >processes it must be
recognized that ejected particles still >contain energy in nuclear
form as well as vector forces >applied by the boundary equilibrium
breaking form of a
> leverage action.

Soot refers to carbon particles resulting from the incomplete
combustion of a hydrocarbon. ... or particulate matter, whose size is
measured in microns. You are confusing the term with sub-atomic
particles.

You are like Humpty Dumpty in 'Alice in Wonderland'.

“When I use a word,” Humpty Dumpty said in rather a scornful tone, “it
means what I choose it to mean, neither more nor less.”

3115. Re: Causes of Distrust of NEC and Mininec programs

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-16 02:57:24 UTC
From: tom <news4792@taring.org>
Message-ID: <4b00bf6f$0$28114$8046368a@newsreader.iphouse.net>
Source record: 11977

Art Unwin wrote:
> On Nov 15, 7:16 pm, tom <news4...@taring.org> wrote:
>> Jeff Liebermann wrote:
>>> On Sat, 14 Nov 2009 22:23:05 -0800 (PST), Art Unwin
>>> <arthurun...@gmail.com> wrote:
>> <snip lots of CRAP>
>>
>>>> If anybody can give pointers that refute the accuracy of the above I
>>>> would be very interested in hearing them
>>> Why? You haven't proven your point, demonstrated the phenomenon, or
>>> otherwise provided anything worth tearing apart. For all I know, your
>>> antennas are shorter than expected because of magic, enchantment,
>>> sloppy construction, mis-measurement, or all the aforementioned.
>> <snip a bit>
>>
>> And anytime anyone does respond with a credible argument, he makes up
>> new "facts" to cover his ass.
>>
>> tom
>> K0TAR
>
> I do not have to prove anything to you! The first project is to obtain
> a patent that is desired by those skilled in the art of making money
> on new antenna disclosures.
> You have neither of those requirements. Because you are unarmed with
> respect to having skill in the science of antennas it is normal to
> gravitate towards insults where the record shows that your knowledge
> of antennas is negligeable. It is impossible to debate science with
> one that excells only with the skill of memory that parrots only that
> which can be memorised by a reading of a book with zero understanding.
> Ofcourse, if you had a tangible record on the teachings on the science
> of antennas you surely would have provided evidence of same, rather
> than the use of slander to provide perceived elevation of your station
> in the presence of Madame Guillotine, where the loudest voice becomes
> a leader of what is just a mob. I have never seen evidence in your
> postings that you have had a tangible trail of education that would
> substantiate your self perceived expertise in the field of antennas
> thus you do not have a real beef to show on this thread.
> As for your statement "as for all I know" it is better that you
> believe in magic where faith overcomes physics.

And who has paid for use of your patents? And how much? I am sure we
all know the answer. No one, and nothing.

My antenna designs are actually being used very successfully, and yours aren't.

You are a fraud and a hypocrite.

tom
K0TAR

3116. Re: Genius

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-16 03:04:16 UTC
From: Art Unwin <arthurunwin@gmail.com>
Message-ID: <5f5d30e7-8d27-4f2a-a486-3c01d287c03e@c16g2000yqd.googlegroups.com>
Source record: 11978

On Nov 15, 8:42 pm, tom <news4...@taring.org> wrote:
> Bill wrote:
> >> Its true the sun runs on coal, English coal no doubt of the finest
> >> grade.
>
> >> Jimmie
>
> > "The world is really a flat plate supported on the back of a giant
> > tortoise."
>
> "And it's turtles all the way down."
>
> tom
> K0TAR

So here you are again with nothing of value other than insults.
You mentioned that credible evidence has been presented(obviously not
you)
that provides credible evidence supplied that refutes my position. Why
not push that point over and over again where the credible evidence
becomes readily accepted by those skilled in the art? The church once
declared that the World is flat and those who do not follow the
teachings will be excommunicated. Eventually scientific knoweledge
increased as the Century past such that teaching became discreditedand
the church had to recant to allow the teachings of faith by the
servants of the church could continue. Come to think of it I bet the
findings of Steven Best has already made it in the latest books for
assimilation by those now entering college regardles of what the
naysayers promote by refuting change to all that every thing is now
is known about the science of antennas. These people eventually die
thus leaving the education field to review the sciences of old and
update them where necessary so they may be duplicated by plagurizers
that are natural followers.

3117. Re: Causes of Distrust of NEC and Mininec programs

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-16 03:06:54 UTC
From: tom <news4792@taring.org>
Message-ID: <4b00c1a8$0$28114$8046368a@newsreader.iphouse.net>
Source record: 11979

Art Unwin wrote:
> On Nov 15, 7:16 pm, tom <news4...@taring.org> wrote:
>> Jeff Liebermann wrote:
>>> On Sat, 14 Nov 2009 22:23:05 -0800 (PST), Art Unwin
>>> <arthurun...@gmail.com> wrote:
>> <snip lots of CRAP>
>>
>>>> If anybody can give pointers that refute the accuracy of the above I
>>>> would be very interested in hearing them
>>> Why? You haven't proven your point, demonstrated the phenomenon, or
>>> otherwise provided anything worth tearing apart. For all I know, your
>>> antennas are shorter than expected because of magic, enchantment,
>>> sloppy construction, mis-measurement, or all the aforementioned.
>> <snip a bit>
>>
>> And anytime anyone does respond with a credible argument, he makes up
>> new "facts" to cover his ass.
>>
>> tom
>> K0TAR
>
> I do not have to prove anything to you! The first project is to obtain
> a patent that is desired by those skilled in the art of making money
> on new antenna disclosures.
> You have neither of those requirements. Because you are unarmed with
> respect to having skill in the science of antennas it is normal to
> gravitate towards insults where the record shows that your knowledge
> of antennas is negligeable. It is impossible to debate science with
> one that excells only with the skill of memory that parrots only that
> which can be memorised by a reading of a book with zero understanding.
> Ofcourse, if you had a tangible record on the teachings on the science
> of antennas you surely would have provided evidence of same, rather
> than the use of slander to provide perceived elevation of your station
> in the presence of Madame Guillotine, where the loudest voice becomes
> a leader of what is just a mob. I have never seen evidence in your
> postings that you have had a tangible trail of education that would
> substantiate your self perceived expertise in the field of antennas
> thus you do not have a real beef to show on this thread.
> As for your statement "as for all I know" it is better that you
> believe in magic where faith overcomes physics.

Where did I say "as for all I know"?

Making stuff up again. Big surprise.

Fraud, hypocrite, and confirmed liar.

tom
K0TAR

3118. Re: Genius

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-16 03:10:38 UTC
From: tom <news4792@taring.org>
Message-ID: <4b00c289$0$28114$8046368a@newsreader.iphouse.net>
Source record: 11980

Art Unwin wrote:
> On Nov 15, 8:42 pm, tom <news4...@taring.org> wrote:
>> Bill wrote:
>>>> Its true the sun runs on coal, English coal no doubt of the finest
>>>> grade.
>>>> Jimmie
>>> "The world is really a flat plate supported on the back of a giant
>>> tortoise."
>> "And it's turtles all the way down."
>>
>> tom
>> K0TAR
>
> So here you are again with nothing of value other than insults.
> You mentioned that credible evidence has been presented

I wasn't even responding to you. You really are losing it.

And where in my very short statement of ""And it's turtles all the way down"" did you see the words "credible evidence"?

You need to see your brain specialist again. More meds are indicated loony boy.

tom
K0TAR

3119. Re: Causes of Distrust of NEC and Mininec programs

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-16 03:11:38 UTC
From: Art Unwin <arthurunwin@gmail.com>
Message-ID: <5478e70f-e326-4db7-883b-49c57d6f81f2@o10g2000yqa.googlegroups.com>
Source record: 11981

On Nov 15, 8:57 pm, tom <news4...@taring.org> wrote:
> Art Unwin wrote:
> > On Nov 15, 7:16 pm, tom <news4...@taring.org> wrote:
> >> Jeff Liebermann wrote:
> >>> On Sat, 14 Nov 2009 22:23:05 -0800 (PST), Art Unwin
> >>> <arthurun...@gmail.com> wrote:
> >> <snip lots of CRAP>
>
> >>>> If anybody can give pointers that refute the accuracy of the above I
> >>>> would be very interested in hearing them
> >>> Why? You haven't proven your point, demonstrated the phenomenon, or
> >>> otherwise provided anything worth tearing apart. For all I know, your
> >>> antennas are shorter than expected because of magic, enchantment,
> >>> sloppy construction, mis-measurement, or all the aforementioned.
> >> <snip a bit>
>
> >> And anytime anyone does respond with a credible argument, he makes up
> >> new "facts" to cover his ass.
>
> >> tom
> >> K0TAR
>
> > I do not have to prove anything to you! The first project is to obtain
> > a patent that is desired by those skilled in the art of making money
> > on new antenna disclosures.
> > You have neither of those requirements. Because you are unarmed with
> > respect to having skill in the science of antennas it is normal to
> > gravitate towards insults where the record shows that your knowledge
> > of antennas is negligeable. It is impossible to debate science with
> > one that excells only with the skill of memory that parrots only that
> > which can be memorised by a reading of a book with zero understanding.
> > Ofcourse, if you had a tangible record on the teachings on the science
> > of antennas you surely would have provided evidence of same, rather
> > than the use of slander to provide perceived elevation of your station
> > in the presence of Madame Guillotine, where the loudest voice becomes
> > a leader of what is just a mob. I have never seen evidence in your
> > postings that you have had a tangible trail of education that would
> > substantiate your self perceived expertise in the field of antennas
> > thus you do not have a real beef to show on this thread.
> > As for your statement "as for all I know" it is better that you
> > believe in magic where faith overcomes physics.
>
> And who has paid for use of your patents? And how much? I am sure we
> all know the answer. No one, and nothing.

>
> My antenna designs are actually being used very successfully, and yours
> aren't.
>
> You are a fraud and a hypocrite.
>
> tom
> K0TAR

So you are a millionare today? Patent number? The present industry is advocating the invention of a new science with respect to obtaining smaller radiators. Get in there and double your money while the consortium continue to struggle with the design of a new technology.alternative than that supplied by nature. If you had such knowledge you would not be persueing insults in place of debate.

3120. Re: Genius

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-16 03:14:16 UTC
From: Art Unwin <arthurunwin@gmail.com>
Message-ID: <76ecc368-5a83-4ee3-b517-345c2d20c5a6@k17g2000yqh.googlegroups.com>
Source record: 11982

```
On Nov 15, 9:10 pm, tom <news4...@taring.org> wrote:
> Art Unwin wrote:
> > On Nov 15, 8:42 pm, tom <news4...@taring.org> wrote:
> >> Bill wrote:
> >>>> Its true the sun runs on coal, English coal no doubt of the finest
> >>>> grade.
> >>>> Jimmie
> >>> "The world is really a flat plate supported on the back of a giant
> >>> tortoise."
> >> "And it's turtles all the way down."
>
> >> tom
> >> K0TAR
>
> > So here you are again with nothing of value other than insults.
> > You mentioned that credible evidence has been presented
>
> I wasn't even responding to you.  You really are losing it.
>
> And where in my very short statement of ""And it's turtles all the way
> down"" did you see the words "credible evidence"?
>
> You need to see your brain specialist again.  More meds are indicated
> loony boy.
>
> tom
> K0TAR

And here you are again. It is getting hard to communicate with you.
```

3121. Re: Causes of Distrust of NEC and Mininec programs

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-16 03:20:09 UTC
From: tom <news4792@taring.org>
Message-ID: <4b00c4c4$0$28113$8046368a@newsreader.iphouse.net>
Source record: 11983

Art Unwin wrote:

>>
>> My antenna designs are actually being used very successfully, and yours
>> aren't.
>>
>> You are a fraud and a hypocrite.
>>
>> tom
>> K0TAR
>
> So you are a millionare today? Patent number? The present industry is
> advocating the invention of a new science with respect to obtaining
> smaller radiators. Get in there and double your money while the
> consortium continue to struggle with the design of a new
> technology.alternative than that supplied by nature. If you had such
> knowledge you would not be persueing insults in place of debate.

I'm not claiming or implying (as you are) that I'm making money on anything. Just that my antennas are actually used by real people quite successfully.

And given what you've been saying to anyone that responds to you, you have no place to stand on insults since you are great at supplying multiple paragraphs of them at a time. At least mine are pertinent to the subject.

I have no interest in small antennas or making money on them. I am however interested in the truth and antennas that truly work. And you are interested in BS and self promotion.

Have fun with your fraud, hypocrisy and lies.

And try to learn to spell.

tom
K0TAR

3122. Re: Causes of Distrust of NEC and Mininec programs

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-16 03:49:35 UTC
From: Art Unwin <arthurunwin@gmail.com>
Message-ID: <5caa61e9-2a1c-4df2-9e12-a94259f531c7@v30g2000yqm.googlegroups.com>
Source record: 11984

On Nov 15, 9:34 pm, Bill <k4...@arrl.net> wrote:
> On Nov 15, 10:17 pm, Art Unwin <arthurun...@gmail.com> wrote:
>
> > > . Sounds like you just made a bunch of stuff up.
>
> > > Jimmie
>
> > No Jim. Ideas with what is presented to me in science, where > such can be obtained from first principles and with >agreement with known LAWS
> > of science rather than various theories.
>
> Is scientific theory inferior to scientific laws?

Yes

3123. Re: Causes of Distrust of NEC and Mininec programs

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-16 03:50:49 UTC
From: Jeff Liebermann <jeffl@cruzio.com>
Message-ID: <1ag1g551olgevcrghiv77n1k00b8qp514j@4ax.com>
Source record: 11985

On Sun, 15 Nov 2009 17:00:10 -0800 (PST), Art Unwin
<arthurunwin@gmail.com> wrote:

>Very true, but the measured length is never repeatable. Only at the
>point of a period
>is where it is repeatable which is how a cycle comes into being.

One cycle = one period = one wavelength
Do you have a problem with this?

>Ofshoot can be essentially removed or minimised by just the addition
>of a resister but such methods are not included in antenna computer
>programs.

Adding a resistor will increase the resonant length of an antenna by
5% to 8%. Amazing. I didn't know that. Since resonance is where the
inductive and cazapative reactances cancel, leaving only the real part
of the antenna impedance, I would think that adding a resistor
anywhere would have no effect on the reactive components.

>Again what ever trips your trigger, horse shoes or Maxwells equations.

When I was younger, it was sex, drugs, and rock and roll. These days
it's pills, politics, and entertainment value that keeps me going.

>Only when accurate metrics are inserted in a program can the accuracy
>of Maxwell's equations be shown and the half wave length can never be
>stated accurately.

How accurately would you like them to be stated?
1%? 0.1%? 0.00000001%
Accuracy is usually expressed with numbers. I fail to see any
numbers. There's also a question of what's "good enough". Infinite
resolution and accuracy doesn't do me much good if the operating
bandwidth of the antenna is substantial, or the operating requirements
of system are rather minimal.

>> My antennas are exact and repeatable. ï¿½Not only that, I can also
>> repeat my mistakes every time.
>
>Yes you have shown evidence of that.

To err is human. Reassurances are not required.

For my mistakes, I'll accept responsibility but not blame.

Two wrongs don't make a right, but do eliminate two possibilities,
thus eventually leading to the right answer.

Positive feedback is inherently unstable. One does not learn by
getting positive acclamation and praise. One learns from negative
feedback which is inherently stable and a much more effective learning
experience.

>Maybe true but physics demands accuracy

Physics does not demand accuracy. However, my customers might.

>which explains the heavy
>useage of constant added to justify the use of an equal sign.

None of my work is linear. Therefore constants added as fudge,
finagle, or tweak factors are useless. I prefer to multiple my
results in order to conjure the correct answer.

>Same
>thing goes for the myriad of particles invented that are not seen or
>measurable.

Yep. I suck them up in my vacuum cleaner when they start to become
measurable.

>This because those who delve in physics sometimes replace
>a constant with a new invented particle that can substantiate
>equilibrium or its cousin "equal"

I'll look in the vacuum cleaner bag next time I have a chance for any
new particles.

>You know, a well known former ham Stephen Best got hold of a new
>antenna program
>that had strict adherence to Maxwells laws. The program relied on
>Poynting circle as being representitive for all forces in radiation.
>The program ,probably more than I can afford. produced a radiator that
>was not straight according to the old wives tale that is propagated by
>hams. It showed something like a tennis ball where multiple
>wavelengths of radiator were stuffed inside and where balance or
>equilibrium was obtained. In his study which was around a half wave
>radiater produced a radiation pattern that was a perfect hemisphere
>that all on this group stated was impossible to attain. (actually it
>was based on a full wave where the ground plane supplied the mirror
>image) Possibly in our time, that will make it into the newer physics
>books, that will force the re thinking of radiation. This paper is on
>the WWW but I leave it to you to show that it must be in error as it
>is not yet in the books!

I think you mean this:
<http://www.cst.com/Content/Applications/Article/A+Small,+Efficient,+Linear-polarized+Omni
-directional+Antenna>
I've been trying to understand it for some time.

Again, it's not my place to find your errors. It's your place to
prove and demonstrate your allegations.

>At the same time opponents will bring forwards Toms adage W8TI, that
>for maximum efficiency a radiator must be straight, thus leaving him
>with the onus of showing that Steven Best efforts were all wrong by
>the use of the soon to be corrected theory corrections
>before old theories are fully discounted where all may read it for
>themselves in a book.

Dr Best didn't seem to mention anything about the design being any
more efficient than a larger antenna. He had a design requirement to
fit an antenna inside a 0.04 wavelength diameter ball, and optimized
his design around that requirement. Getting 1.6dBi of gain out such a
small antenna is impressive.

Incidentally, his design is NOT a half-hemisphere. He uses the
symmetry of the antenna to dramatically reduce his calculation time.

Yes, there are some things that NEC doesn't so very well, or rather
other programs do much better. For example, for microstrip and slot
antennas, I'm trying to learn Mstrip40:
<http://www.spl.ch/software/MultiSTRIP/Manual.htm>
when not posting inane drive to Usenet.

--
Jeff Liebermann jeffl@cruzio.com
150 Felker St #D http://www.LearnByDestroying.com
Santa Cruz CA 95060 http://802.11junk.com
Skype: JeffLiebermann AE6KS 831-336-2558

3124. Re: Causes of Distrust of NEC and Mininec programs

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-16 04:42:25 UTC
From: Art Unwin <arthurunwin@gmail.com>
Message-ID: <e84c6abb-46d1-4770-8f13-8380b009a884@m26g2000yqb.googlegroups.com>
Source record: 11986

On Nov 15, 9:50 pm, Jeff Liebermann <je...@cruzio.com> wrote:
> On Sun, 15 Nov 2009 17:00:10 -0800 (PST), Art Unwin
>
> <arthurun...@gmail.com> wrote:
> >Very true, but the measured length is never repeatable. Only at the
> >point of a period
> >is where it is repeatable which is how a cycle comes into being.
>
> One cycle = one period = one wavelength
> Do you have a problem with this?
Ok jeff your turn wih aiming the cannon.
No ofcourse not, as long as the cycle is complete and terminates
and terminates at the point designated as the period.
Good enough ?
>
> >Ofshoot can be essentially removed or minimised by just the addition
> >of a resister but such methods are not included in antenna computer
> >programs.
>
> Adding a resistor will increase the resonant length of an antenna by
> 5% to 8%. Amazing. I didn't know that. Since resonance is where the
> inductive and cazapative reactances cancel, leaving only the real part
> of the antenna impedance, I would think that adding a resistor
> anywhere would have no effect on the reactive components.
>
> >Again what ever trips your trigger, horse shoes or Maxwells equations.
>
> When I was younger, it was sex, drugs, and rock and roll. These days
> it's pills, politics, and entertainment value that keeps me going.
>
> >Only when accurate metrics are inserted in a program can the accuracy
> >of Maxwell's equations be shown and the half wave length can never be
> >stated accurately.
>
> How accurately would you like them to be stated?
> 1%? 0.1%? 0.00000001%
Enough according to my needs. If the needs are expanded then their is
no point
in expanding errors implanted for past convenience. O.K ?
> Accuracy is usually expressed with numbers. I fail to see any
> numbers. There's also a question of what's "good enough". Infinite
> resolution and accuracy doesn't do me much good if the operating
> bandwidth of the antenna is substantial, or the operating requirements
> of system are rather minimal.

very true as your needs are minimal OK ?
>
> >> My antennas are exact and repeatable. Not only that, I can also
> >> repeat my mistakes every time.

Hmm I wont bite at that bait OK?
>
> >Yes you have shown evidence of that.
>
> To err is human. Reassurances are not required.
>
> For my mistakes, I'll accept responsibility but not blame.

Again very understandable
>
> Two wrongs don't make a right, but do eliminate two possibilities,
> thus eventually leading to the right answer.

Quite true. Only one who has experienced many bankrupcys
has the necessary wisdom to become rich The wisdom is usually at the
expense of others
OK?
>
> Positive feedback is inherently unstable.
Why do you think that?

 One does not learn by
> getting positive acclamation and praise. One learns from negative
> feedback which is inherently stable and a much more effective learning
> experience.
I believe my answer with respect to attaining wisdom is a suitable
response for that!
>
> >Maybe true but physics demands accuracy
Exactly where space for a constant is provided as learning improves.
>
> Physics does not demand accuracy. However, my customers might.
Might is a untangible. If one wants to expand on the design of smaller
antennas one does not pursue a fudge factor which suggests that the
smallest of smallest of radiators will also meet ones needs. That is
like adding height to buildings built on sand
instead of first ataining a sound foundation in advance of any
expansion

>
> >which explains the heavy
> >useage of constant added to justify the use of an equal sign.
>
> None of my work is linear. Therefore constants added as fudge,
> finagle, or tweak factors are useless. I prefer to multiple my
> results in order to conjure the correct answer.
>

> >Same
> >thing goes for the myriad of particles invented that are not seen or
> >measurable.
>
> Yep. I suck them up in my vacuum cleaner when they start to become
> measurable. Well physics point to a difference in pressures on a carpet from that
attained
by that which provides a suction.
>
> >This because those who delve in physics sometimes replace
> >a constant with a new invented particle that can substantiate
> >equilibrium or its cousin "equal"
>
> I'll look in the vacuum cleaner bag next time I have a chance for any
> new particles.
Well an "equal" sign in mathematics designates balance on both sides
of the sign. Was it the arabs that expanded the term to equilibrium
that could accompany the use of boundary laws?

>
>
>
> >You know, a well known former ham Stephen Best got hold of a new
> >antenna program
> >that had strict adherence to Maxwells laws. The program relied on
> >Poynting circle as being representitive   for all forces in radiation.
> >The program ,probably more than I can afford. produced a radiator that
> >was not straight according to the old wives tale that is propagated by
> >hams. It showed something like a tennis ball where multiple
> >wavelengths of radiator were stuffed inside and where balance or
> >equilibrium was obtained. In his study which was around a half wave
> >radiater produced a radiation pattern that was a perfect hemisphere
> >that all on this group stated was impossible to attain. (actually it
> >was based on a full wave where the ground plane supplied the mirror
> >image) Possibly in our time, that will make it into the newer physics
> >books, that will force the re thinking of radiation. This paper is on
> >the WWW but I leave it to you to show that it must be in error as it
> >is not yet in the books!
>
> I think you mean this:
> <http://www.cst.com/Content/Applications/Article/A+Small,+Efficient,+L...>
> I've been trying to understand it for some time.

I dont recognise that as time has passed by.
>
> Again, it's not my place to find your errors. It's your place to
> prove and demonstrate your allegations.
That cannot be done when others rely on theories because they are seen
written in a book. It takes corroberation with existing laws to supply
a modicom of science teachings where those agreements can then be
built upon. This is a repeat of the battles of faith versus the

observations and deductions provided by science.
>
> >At the same time opponents will bring forwards Toms adage W8TI, that
> >for maximum efficiency a radiator must be straight, thus leaving him
> >with the onus of showing that Steven Best efforts were all wrong by
> >the use of the soon to be corrected theory corrections
> >before old theories are fully discounted where all may read it for
> >themselves in a book.
>
> Dr Best didn't seem to mention anything about the design being any
> more efficient than a larger antenna. He had a design requirement to
> fit an antenna inside a 0.04 wavelength diameter ball, and optimized
> his design around that requirement. Getting 1.6dBi of gain out such a
> small antenna is impressive.

Yes, but more important was the ability to stuff wavelengths of
radiator showing past erronius suggestion that a radiator must be
straight.On top of that he attained a hemisperical radiation pattern
that this group stated was impoissible. Thus another false old wives
tale was debunked, By the way the paper in no way suggested a
"electrically" small antenna, only a "physically" smaller antenna, so
you need to re read the paper.
>
> Incidentally, his design is NOT a half-hemisphere. He uses the
> symmetry of the antenna to dramatically reduce his calculation time.
>
> Yes, there are some things that NEC doesn't so very well, or rather
> other programs do much better.

I have stated same

 For example, for microstrip and slot
> antennas, I'm trying to learn Mstrip40:
> <http://www.spl.ch/software/MultiSTRIP/Manual.htm>
> when not posting inane drive to Usenet.

Then you are a better man than I Gunga Din. It was the very
interpretation of the phenomina of a slot antenna that led to
confrontation with the idea of particles as the carriers of radiation.
Perhaps you can find errors in that assertation which is so much less
difficult in convincing same to those who abide purely on faith.

Phew, that was a long questionaire but as always my life and thoughts
is an open book.
I hope the above satisfies your needs!
>
> --
> Jeff Liebermann   je...@cruzio.com
> 150 Felker St #D   http://www.LearnByDestroying.com
> Santa Cruz CA 95060http://802.11junk.com
> Skype: JeffLiebermann   AE6KS   831-336-2558

3125. Re: Causes of Distrust of NEC and Mininec programs

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-16 08:46:19 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <j7mdneTaDO_DjJzWnZ2dnUVZ_vhi4p2d@giganews.com>
Source record: 11987

Helmut Wabnig wrote:
>
> How do I simulate a sheet metal or other metal structure in NEC,
> when the software only knows (infinitesimally thin) "wires"
>
> w.

You simulate it as a wire grid, like a screen. Download the free EZNEC demo program, or just the manual, from http://eznec.com, and look in the index under "Wire Grid Modeling" for more information.

This technique is widely used and generally gives very good results.

Roy Lewallen, W7EL

3126. Re: an ontopic post about code

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-16 09:29:09 UTC
From: kb9rqz@yahoooo.com
Message-ID: <3r62g5piv6rs5s4ul9a4i96n9dof3m1625@4ax.com>
Source record: 11988
Cross-posted to: alt.ham-radio.vhf-uhf,rec.radio.amateur.policy,rec.radio.amateur.antenna

On Fri, 01 Dec 2006 09:36:47 -0800, John Smith
<assemblywizard@gmail.com> wrote:

>K4YZ wrote:
>> Nope.
>>
>> The IP Address and servers are complete proof that I do NOT share
>> any annonymous character's "address".
>>
>> Sounds like Lennie, to me....
>>
>> Steve, K4YZ
>>
>
>To anyone with even an elementary understanding of anonymous proxies,
>anonymous remailers, zombie backdoors, etc., the ability to change ones
>IP address and header details is simplistic, indeed, with little time
>spent anyone can appear to be "coming" from anywhere in the world.
>
>You waste my time. Worse, you think us all idiots here. You remind me
>of the "street smart" prosecutors and defense attorneys who stack jurys
>with members of little or no technical knowledge and then call in
>"expert witnesses" and propose arguments of technical details to boggle
>their minds.
>
>You have only proven that you, yourself are either ignorant to such
>technical details, or else you are indeed street smart, I favor the
>latter in this case (however, if you in the dark about such things, 15
>minutes on google will enlighten you.)
>
>JS

"one useless man is disgrace 2 become a law firm 3 or more become a congress"
adams

woger you are a Congress all in your own head
"http://www.3ix.org/sys/aff.php?aff=7439" target="_blank"

altopia is never used by KB9RQZ
http://kb9rqz.cc.cc
http://kd8ctl.com
nor is Konstans@hotmail.com ever
btw i can be found at
17366 N River Rd

Chassel Mi

but the cowards asking lack the gut to act

3127. Re: Causes of Distrust of NEC and Mininec programs

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-16 14:56:16 UTC
From: JIMMIE <JIMMIEDEE123@YAHOO.COM>
Message-ID: <48809333-feee-4520-827b-020ff6e23e1d@e23g2000yqd.googlegroups.com>
Source record: 11989

On Nov 15, 10:50 pm, Jeff Liebermann <je...@cruzio.com> wrote:
> On Sun, 15 Nov 2009 17:00:10 -0800 (PST), Art Unwin
>
> <arthurun...@gmail.com> wrote:
> >Very true, but the measured length is never repeatable. Only at the
> >point of a period
> >is where it is repeatable which is how a cycle comes into being.
>
> One cycle = one period = one wavelength
> Do you have a problem with this?
>
> >Ofshoot can be essentially removed or minimised by just the addition
> >of a resister but such methods are not included in antenna computer
> >programs.
>
> Adding a resistor will increase the resonant length of an antenna by
> 5% to 8%. Amazing. I didn't know that. Since resonance is where the
> inductive and cazapative reactances cancel, leaving only the real part
> of the antenna impedance, I would think that adding a resistor
> anywhere would have no effect on the reactive components.
>
> >Again what ever trips your trigger, horse shoes or Maxwells equations.
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> When I was younger, it was sex, drugs, and rock and roll. These days
> it's pills, politics, and entertainment value that keeps me going.
>
> >Only when accurate metrics are inserted in a program can the accuracy
> >of Maxwell's equations be shown and the half wave length can never be
> >stated accurately.
>
> How accurately would you like them to be stated?
> 1%? 0.1%? 0.00000001%
> Accuracy is usually expressed with numbers. I fail to see any
> numbers. There's also a question of what's "good enough". Infinite
> resolution and accuracy doesn't do me much good if the operating
> bandwidth of the antenna is substantial, or the operating requirements
> of system are rather minimal.
>
> >> My antennas are exact and repeatable. Not only that, I can also
> >> repeat my mistakes every time.
>
> >Yes you have shown evidence of that.
>
> To err is human. Reassurances are not required.

>
> For my mistakes, I'll accept responsibility but not blame.
>
> Two wrongs don't make a right, but do eliminate two possibilities,
> thus eventually leading to the right answer.
>
> Positive feedback is inherently unstable. One does not learn by
> getting positive acclamation and praise. One learns from negative
> feedback which is inherently stable and a much more effective learning
> experience.
>
> >Maybe true but physics demands accuracy
>
> Physics does not demand accuracy. However, my customers might.
>
> >which explains the heavy
> >useage of constant added to justify the use of an equal sign.
>
> None of my work is linear. Therefore constants added as fudge,
> finagle, or tweak factors are useless. I prefer to multiple my
> results in order to conjure the correct answer.
>
> >Same
> >thing goes for the myriad of particles invented that are not seen or
> >measurable.
>
> Yep. I suck them up in my vacuum cleaner when they start to become
> measurable.
>
> >This because those who delve in physics sometimes replace
> >a constant with a new invented particle that can substantiate
> >equilibrium or its cousin "equal"
>
> I'll look in the vacuum cleaner bag next time I have a chance for any
> new particles.
>
>
>
> >You know, a well known former ham Stephen Best got hold of a new
> >antenna program
> >that had strict adherence to Maxwells laws. The program relied on
> >Poynting circle as being representitive   for all forces in radiation.
> >The program ,probably more than I can afford. produced a radiator that
> >was not straight according to the old wives tale that is propagated by
> >hams. It showed something like a tennis ball where multiple
> >wavelengths of radiator were stuffed inside and where balance or
> >equilibrium was obtained. In his study which was around a half wave
> >radiater produced a radiation pattern that was a perfect hemisphere
> >that all on this group stated was impossible to attain. (actually it
> >was based on a full wave where the ground plane supplied the mirror

> >image) Possibly in our time, that will make it into the newer physics
> >books, that will force the re thinking of radiation. This paper is on
> >the WWW but I leave it to you to show that it must be in error as it
> >is not yet in the books!
>
> I think you mean this:
> <http://www.cst.com/Content/Applications/Article/A+Small,+Efficient,+L...>
> I've been trying to understand it for some time.
>
> Again, it's not my place to find your errors. It's your place to
> prove and demonstrate your allegations.
>
> >At the same time opponents will bring forwards Toms adage W8TI, that
> >for maximum efficiency a radiator must be straight, thus leaving him
> >with the onus of showing that Steven Best efforts were all wrong by
> >the use of the soon to be corrected theory corrections
> >before old theories are fully discounted where all may read it for
> >themselves in a book.
>
> Dr Best didn't seem to mention anything about the design being any
> more efficient than a larger antenna. He had a design requirement to
> fit an antenna inside a 0.04 wavelength diameter ball, and optimized
> his design around that requirement. Getting 1.6dBi of gain out such a
> small antenna is impressive.
>
> Incidentally, his design is NOT a half-hemisphere. He uses the
> symmetry of the antenna to dramatically reduce his calculation time.
>
> Yes, there are some things that NEC doesn't so very well, or rather
> other programs do much better. For example, for microstrip and slot
> antennas, I'm trying to learn Mstrip40:
> <http://www.spl.ch/software/MultiSTRIP/Manual.htm>
> when not posting inane drive to Usenet.
>
> --
> Jeff Liebermann   je...@cruzio.com
> 150 Felker St #D   http://www.LearnByDestroying.com
> Santa Cruz CA 95060http://802.11junk.com
> Skype: JeffLiebermann   AE6KS   831-336-2558

Jeff, Art is going to be your buddy forever. He doesn't care whether
you praise him, bash him or anything in between, but he loves long
replies.

Jimmie

3128. Re: Causes of Distrust of NEC and Mininec programs

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-16 18:03:04 UTC
From: Michael Coslo <mjc5@psu.edu>
Message-ID: <hds44q$ok1e$1@tr22n12.aset.psu.edu>
Source record: 11990

Art Unwin wrote:
>
> So you are a millionare today? Patent number? The present industry is
> advocating the invention of a new science with respect to obtaining
> smaller radiators. Get in there and double your money while the
> consortium continue to struggle with the design of a new
> technology.alternative than that supplied by nature. If you had such
> knowledge you would not be persueing insults in place of debate.

Just as a non-insulting question, to what do you attribute the principles you describe not being discovered until radio and antenna technology becoming fairly mature? Given that physically small radiators have been desirable just about forever, it is interesting that no one has not accidentally stumbled upon your type of antenna at least once in the past hundred years.

One would not have to ascribe to your interesting views on physics to accidentally produce something that works according to your principles. Sweeping an antenna over a wide range should produce clues, if not understanding.

Which is to say I'd ordinarily expect things to happen in a particular order typically in one or two modes:

1. Discover the effect accidentally.

2. Reproduce the effect.

3. Come up with good theory to support the effect.

Way two

1. Theorize the effect.

2. Build the apparatus to prove it.

3. Reproduce the results.

Either way is fine much has been learned through honest sweat as well as cerebral horsepower.

- 73 de Mike N3LI -

3129. Re: SMS?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-16 18:17:33 UTC
From: billm <billm.54791f1@radiobanter.com>
Message-ID: <billm.54791f1@radiobanter.com>
Source record: 11998

'Cecil Moore[_2_ Wrote:
> ;692592']Has anyone else noticed that the Prudential commercial
> on TV is sending SMS instead of SOS?
> --
> 73, Cecil, IEEE, OOTC, http://www.w5dxp.com

If you listen carefully, I think they are sending VMS. You could make
the case that it's a really bad "fist" trying to send SOS.

--
billm

3130. Re: Causes of Distrust of NEC and Mininec programs

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-16 18:25:39 UTC
From: JIMMIE <JIMMIEDEE123@YAHOO.COM>
Message-ID: <45561a61-e3a7-4cae-be99-929ae9c9e4a3@b15g2000yqd.googlegroups.com>
Source record: 11991

On Nov 16, 1:03 pm, Michael Coslo <m...@psu.edu> wrote:
> Art Unwin wrote:
>
> > So you are a millionare today? Patent number? The present industry is
> > advocating the invention of a new science with respect to obtaining
> > smaller radiators. Get in there and double your money while the
> > consortium continue to struggle with the design of a new
> > technology.alternative than that supplied by nature. If you had such
> > knowledge you would not be persueing insults in place of debate.
>
> Just as a non-insulting question, to what do you attribute the
> principles you describe not being discovered until radio and antenna
> technology becoming fairly mature? Given that physically small
> radiators have been desirable just about forever, it is interesting
> that no one has not accidentally stumbled upon your type of antenna at
> least once in the past hundred years.
>
> One would not have to ascribe to your interesting views on physics to
> accidentally produce something that works according to your principles.
> Sweeping an antenna over a wide range should produce clues, if not
> understanding.
>
> Which is to say I'd ordinarily expect things to happen in a particular
> order typically in one or two modes:
>
> 1. Discover the effect accidentally.
>
> 2. Reproduce the effect.
>
> 3. Come up with good theory to support the effect.
>
> Way two
>
> 1. Theorize the effect.
>
> 2. Build the apparatus to prove it.
>
> 3. Reproduce the results.
>
> Either way is fine much has been learned through honest sweat as well as
> cerebral horsepower.
>
>   - 73 de Mike N3LI -

I think Art is trying to get the members of this group to test or affirm his theories for him so all he has to do is sit on his butt and toss out hair brained ideas. IMO he is desperate for either money or recognition or maybe his life is so boring doing this is all he has left. That would be very sad. I guess if we wanted to be really mean to him we could all just agree with everything he says.

Jimmie

Jimmie

3131. Re: Causes of Distrust of NEC and Mininec programs

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-16 19:29:51 UTC
From: Jeff Liebermann <jeffl@cruzio.com>
Message-ID: <1v93g59a9ppdvd1ab6m6cc6hu98mde64ne@4ax.com>
Source record: 11992

On Mon, 16 Nov 2009 06:56:16 -0800 (PST), JIMMIE
<JIMMIEDEE123@YAHOO.COM> wrote:

>Jeff, Art is going to be your buddy forever. He doesn't care whether
>you praise him, bash him or anything in between, but he loves long
>replies.
>Jimmie

Sorry, but I don't have the time to craft a short reply.

--
Jeff Liebermann jeffl@cruzio.com
150 Felker St #D http://www.LearnByDestroying.com
Santa Cruz CA 95060 http://802.11junk.com
Skype: JeffLiebermann AE6KS 831-336-2558

3132. Re: Angry WHY is it spammers and assorted other trash are posted in the WRONG forums??

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-16 20:38:22 UTC
From: buzz <buzz@nowhere.com>
Message-ID: <hdsd7u$dc8$1@news.eternal-september.org>
Source record: 11993

n9zas wrote:

> This is RADIOBANTER.COM not politics.com or obama.com which is where
> everyone makes their first mistake! That TRASH doesn't BELONG here.
> This a site for RADIO oriented articles,so why are people so dense they
> can't figure this out until someone has to break out the crayons and
> draw them a picture?? Post that crap on cnn.com or some OTHER political
> website!
> Wanna talk about RADIO then stay here,otherwise scroll to ANOTHER
> site!
> This sh*t is getting old! I feel like I'm explaining this to a bunch of
> damn 3rd graders!!!!
> Ok,rant mode off. F*CK IT!
>
>

Take two M&M's, get a good nights sleep and get back to us in the morning.
>
>

3133. Re: SMS?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-16 20:59:25 UTC
From: You <you@shadow.orgs>
Message-ID: <you-1464D7.11592516112009@news.starband.net>
Source record: 11994

In article <ryeburn-A7B10C.12244215112009@morgoth.sfu.ca>,
David Ryeburn <ryeburn@sfu.caz> wrote:

> In article <hdpfqvlj1@news.eternal-september.org>,
> "Wayne" <mygarbagecan@verizon.net> wrote:
>
> > "Cecil Moore" <nospam@w5dxp.com> wrote in message
>
> ... snip
>
> > > SOS is usually sent as a prosign, i.e. a single dit
> > > between tones?
> > > --
> > > 73, Cecil, IEEE, OOTC, http://www.w5dxp.com
> > -
> > I have never heard that is was sent as a prosign, but IMHO it would sound
> > weird.
> > --Wayne
>
>
> Back in 1949-1950 when I got my first ticket as W8EZE and became the trustee
> for the Walnut Hills High School amateur radio club in Cincinnati, the club
> had one of those World War Two devices to be used in lifeboats, with a crank
> on top, which you held between your legs while turning the crank. It had an
> antenna terminal to which we attached a dummy load. It had no other controls
> or terminals, just the crank and an antenna terminal. I think it only put
> out a few watts. Listening on 500 kc/s (as we called them, in those days)
> on I think a BC348 receiver, while turning the crank one heard
>
> . . . _ _ _ . . . (long space) . . . _ _ _ . . . (long space), and on and
> on, as if you were sending one character with nine components, over and over
> again. You could write it as
> ___
> SOS
>
> the same way one can write
> __
> BT
>
> for a double dash, or
> __
> DN
>
> for a fraction bar (forward slash).

>
> David, ex-W8EZE, who can still picture and and remember hearing the thing --
> it was orange

It was called a "Gibson Girl"

3134. Re: Folded Dipole Calculator Help

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-16 21:10:18 UTC
From: steveeh131047 <google@karinya.net>
Message-ID: <fba82b77-e3cd-46d3-b928-f03355cb97cd@x31g2000yqx.googlegroups.com>
Source record: 11995

> > Also folded dipole tends to have broader b/w compared to dipole.
>
> Due to the transformer effect of folding it.
>

Most of the bandwidth enhancement on a folded dipole comes from the
fact that it's a "fatter" radiator rather than because it's folded.
Section Bii) here:

http://www.karinya.net/g3txq/folded_dipole/

Steve G3TXQ

3135. Re: SMS?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-16 21:16:30 UTC
From: Bert Hyman <bert@iphouse.com>
Message-ID: <Xns9CC59B6356311VeebleFetzer@216.250.184.7>
Source record: 11996

In news:9%oIm.590$Wd1.583@newsfe15.iad Cecil Moore <nospam@w5dxp.com>
wrote:

> Has anyone else noticed that the Prudential commercial
> on TV is sending SMS instead of SOS?

Finally saw a commercial that's probably the one you're talking about.

It sounded more like "VMS" to me, but based strictly on the dots and
dashes, ignoring the timing, it was "SOS."

--
Bert Hyman St. Paul, MN bert@iphouse.com

3136. Re: Causes of Distrust of NEC and Mininec programs

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-16 21:58:22 UTC
From: nm5k@wt.net
Message-ID: <f980ddef-c8c2-4a76-b26b-4a07f71eb5f1@k19g2000yqc.googlegroups.com>
Source record: 11997

On Nov 15, 10:42 pm, Art Unwin <arthurun...@gmail.com> wrote:

> Was it the arabs that expanded the term to equilibrium
> that could accompany the use of boundary laws?

Lurch imitation.. ugggggghhhhhhhhhhhhhhh......

>

>
> > Again, it's not my place to find your errors. It's your place to
> > prove and demonstrate your allegations.
>
> That cannot be done when others rely on theories because they are seen
> written in a book. It takes corroberation with existing laws to supply
> a modicom of science teachings where those agreements can then be
> built upon. This is a repeat of the battles of faith versus the
> observations and deductions provided by science.

It could be done quite easily. All you have to do is build the
antenna, and then compare it with known benchmarks.
But of course, that would be using common sense. :/
It would also prove your theories are flawed, which is why
you won't do this in public, if at all.

>
>
> > >At the same time opponents will bring forwards Toms adage W8TI, that
> > >for maximum efficiency a radiator must be straight, thus leaving him
> > >with the onus of showing that Steven Best efforts were all wrong by
> > >the use of the soon to be corrected theory corrections
> > >before old theories are fully discounted where all may read it for
> > >themselves in a book.

#1, it's W8JI, not W8TI, and what he said was correct. You are just
taking what he said out of context and are distorting it to fit your
agenda. If you have a straight radiator of a certain length, yes, the
most efficient configuration will be a straight line.
If you take this same length of wire and mangle it into various
bends, twists and turns, loss will rear it's ugly head.
Deal with it. There is no free lunch.

>
> > Dr Best didn't seem to mention anything about the design being any
> > more efficient than a larger antenna. He had a design requirement to
> > fit an antenna inside a 0.04 wavelength diameter ball, and optimized
> > his design around that requirement. Getting 1.6dBi of gain out such a

> > small antenna is impressive.
>
> Yes, but more important was the ability to stuff wavelengths of
> radiator showing past erronius suggestion that a radiator must be
> straight.On top of that he attained a hemisperical radiation pattern
> that this group stated was impoissible. Thus another false old wives
> tale was debunked, By the way the paper in no way suggested a
> "electrically" small antenna, only a "physically" smaller antenna, so
> you need to re read the paper.

Ugh.. 1.6dbi gain is still less than a straight dipole.. There is no
free lunch when you use linear loading. Which BTW, is a technique
as old as dirt.. :/
Just because someone decides to call it a fancy name such as
"fractal", does not impart magic qualities to this old as dirt
technique.
BTW, it's quite possible one will need a matching device with such an
antenna. Even more loss. :(
If you don't require matching for this wonder of technology, I'd
suspect you probably have re-invented the dummy load.

But maybe that's a moot point, being as you have ignored others
that point out the same thing over and over again.
IE: all radiators are quite capable of radiating nearly all power
that is applied to them. It's getting the power to them without
it turning to heat which is the real trick. Good luck in the contest.
You are going to need it.

>
> Phew, that was a long questionaire but as always my life and thoughts
> is an open book.

I thought you had a problem with books? According to you, books
corrupt the mind. Does that mean we would be best off to ignore
everything you write?

> I hope the above satisfies your needs!

I doubt it was as good for him as it was for you. You just seem
to lay there. :/

3137. Re: Causes of Distrust of NEC and Mininec programs

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-16 23:12:39 UTC
From: Registered User <n4jvp@ix.netcom.com>
Message-ID: <v1n3g5ljifamm4m7hf5k4tjcg6kd2bmeet@4ax.com>
Source record: 11999

On Mon, 16 Nov 2009 10:25:39 -0800 (PST), JIMMIE
<JIMMIEDEE123@YAHOO.COM> wrote:

>
>I think Art is trying to get the members of this group to test or
>affirm his theories for him so all he has to do is sit on his butt and
>toss out hair brained ideas. IMO he is desperate for either money or
>recognition or maybe his life is so boring doing this is all he has
>left. That would be very sad. I guess if we wanted to be really mean
>to him we could all just agree with everything he says.
>

When it comes to antenna theory and practice, it would be better to
simply acknowledge Stanley Unwin as being more knowledgeable than Art
Unwin.

3138. Re: Folded Dipole Calculator Help

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-16 23:54:10 UTC
From: christofire <christofire@btinternet.com>
Message-ID: <X5udnc8xF-2ye5zWnZ2dnUVZ8hGdnZ2d@bt.com>
Source record: 12000

"steveeh131047" <google@karinya.net> wrote in message
news:fba82b77-e3cd-46d3-b928-f03355cb97cd@x31g2000yqx.googlegroups.com...
>> > Also folded dipole tends to have broader b/w compared to dipole.
>>
>> Due to the transformer effect of folding it.
>>
>
> Most of the bandwidth enhancement on a folded dipole comes from the
> fact that it's a "fatter" radiator rather than because it's folded.
> Section Bii) here:
>
> http://www.karinya.net/g3txq/folded_dipole/
>
> Steve G3TXQ

Of course, the 'transformer effect' is unlikely to increase the bandwidth by itself, and when the common type of half-wave-line balun (and 4:1 impedance transformer) is used to connect the dipole to co-axial cable the resonant nature of this additional half wavelength is likely to impair the bandwidth to some extent (by introducing additional reactance at frequencies for which its length isn't a true half wavelength).

Certainly the additional fatness of the folded-dipole structure must contribute to improved bandwidth by reducing the slopes of the terminal resistance and reactance, but the treatment given in the link provided above - suggesting that the susceptance added at the drive point by the 'parasitic' parallel wire or rod, joined to the driven element at its ends, has insignificant effect - is a rather broad generalisation which may not be true for some geometries (i.e. length/thickness ratios of the wires/rods and their spacing). Generally, it's dangerous to generalise!

There's quite a lot going on in a folded dipole. Some further insight (on allied, but not the same, topic) is offered in http://www.physics.princeton.edu/~mcdonald/examples/cutantenna.pdf.

Chris

3139. Re: Causes of Distrust of NEC and Mininec programs

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-17 01:15:58 UTC
From: Jeff Liebermann <jeffl@cruzio.com>
Message-ID: <d4u3g5ti7mjbbb1lu9ulmluf7302mjbj1g@4ax.com>
Source record: 12001

On Sun, 15 Nov 2009 21:20:09 -0600, tom <news4792@taring.org> wrote:

>And try to learn to spell.

Good point. Looks like Art is using Firefox 3.5.5 under OS/X 10.5 and
Google Groups. There's no built in spelling chequer in Google Groups
but there are plenty of add-on spelling chequers for Firfox. Go thee
unto:
<https://addons.mozilla.org/en-US/firefox>
and find something that's usable.

--
Jeff Liebermann jeffl@cruzio.com
150 Felker St #D http://www.LearnByDestroying.com
Santa Cruz CA 95060 http://802.11junk.com
Skype: JeffLiebermann AE6KS 831-336-2558

3140. Re: Genius

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-17 01:27:47 UTC
From: Bill <k4wge@arrl.net>
Message-ID: <1f6b65b2-359a-4a3d-ad35-f63d3c287afa@j14g2000yqm.googlegroups.com>
Source record: 12002

On Nov 16, 2:42 am, tom <news4...@taring.org> wrote:
> Bill wrote:
> >> Its true the sun runs on coal, English coal no doubt of the finest
> >> grade.
>
> >> Jimmie
>
> > "The world is really a flat plate supported on the back of a giant
> > tortoise."
>
> "And it's turtles all the way down."
>
> tom
> K0TAR

That's what the old lady said.

3141. (OT) Inventing a Better Patent System

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-17 06:01:41 UTC
From: David Ryeburn <ryeburn@sfu.caz>
Message-ID: <ryeburn-94F110.22014116112009@morgoth.sfu.ca>
Source record: 12003

Off topic though this certainly is, I'm posting this because I know that several people who frequently post in rraa have one or more patents, and there have over the years been a number of comments here about the sorry state these days of patents and the patenting process in the USA. Moreover, with some notable exceptions, postings in this newsgroup often show intelligence and thoughtfulness on the part of the people making the postings, more often than in many of the other newsgroups I read.

With that said, I'd enjoy reading comments on the NY Times article "Inventing a Better Patent System", which you can see at <http://www.nytimes.com/2009/11/17/opinion/17pozen.html?hp>. The author makes five specific recommendations for amendments to patent law which he believes would improve the situation. I'm a (retired) pure mathematician with no patents whatsoever, and my knowledge of law is nil. But what he says seems to make sense to me.

If you can illustrate why you agree, or disagree, with points made in the article by referring to antenna patents (or other patents on related matters) with which you are familiar, that would be good, and it would make the issue a little less off-topic. Thanks in advance for reading the article and making your comments.

David, ex-W8EZE

--
David Ryeburn
ryeburn@sfu.caz
To send e-mail, use "ca" instead of "caz".

3142. Re: Causes of Distrust of NEC and Mininec programs

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-17 06:22:36 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <n7g4g5t1vd9ge19mje2r7ciceeus40vdc7@4ax.com>
Source record: 12004

>On Sat, 14 Nov 2009 22:23:05 -0800 (PST), Art Unwin
><arthurunwin@gmail.com> wrote:
>>If anybody can give pointers that refute the accuracy of the above I
>>would be very interested in hearing them

I don't suppose any real NEC content has been published to shorten the
life of this soap opera, has there?

73's
Richard Clark, KB7QHC

3143. Re: (OT) Inventing a Better Patent System

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-17 16:23:25 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <sgg5g5tbk7kq5tln2r5rsfg1d74aj9533b@4ax.com>
Source record: 12005

On Mon, 16 Nov 2009 22:01:41 -0800, David Ryeburn <ryeburn@sfu.caz>
wrote:

>With that said, I'd enjoy reading comments on the NY Times article
>"Inventing a Better Patent System", which you can see at
><http://www.nytimes.com/2009/11/17/opinion/17pozen.html?hp>.

Hi David,

I have patents, and yes the system is broken - but not in the ways
this author describes (but, oddly, is separate from his fixes).

The author comes up with some rather odd objections which are like
moving deck chairs on the Titanic. Some of it is quite naive:
"Yes, it makes renting movies a snap,
but was it really a breakthrough
deserving patent protection?"

The patent examiner is specifically prohibited from denials based on
hindsight. The patent must disclose prior art, and if that art
anticipates the use (as something within the art of the practioner)
then there is a basis of denial, but the examiner cannot make that
leap without this paper trail. One legal tenet a patent lawyer told
me last week was that "Only God can create, man assembles all
invention from other existing ideas."

The following quote is an outright wet-dream:
"One root of the problem is that patent examiners,
many of whom are young or lack practical
experience, are not qualified to evaluate
whether complex claims in biotech or
physics meet the most critical tests."
This is patently absurd from an historical basis. Examiners have
always been young and lacking experience - the office is the first
rung in a ladder of their career as patent lawyers. How any NYT
scribbler would expect the economic model to suddenly invert
(practiced lawyers becoming examiners for far less pay) is misty eyed
in the extreme.

This also brings us to the second glaring error in that quote which I
repeat in part here:
" to evaluate
whether complex claims in biotech or
physics meet the most critical tests."
This speaks to the validation of science which is NOT part of the
examiner's job. This is confusing the specification (the description

written in what should be clear English) with the claim (the list of relationships and associations). Examiners deny a patent on the basis of the claims made which do not rely on "this proves Einstein was wrong and I have invented of something that Gauss forgot."

There are very few criteria to be met: is it novel? Is it marketable? Neither of which demand scientific proof. Someone might demand that novel requires proof, but this is on the basis of claims alone. Does your invention's claims appear somewhere else? The examiner is paid to wade through the 6 million patents to ascertain that.

Now, let's move on to those suggestions.
"To help fix this, Congress should pass an
amendment allowing experts in the field to
submit explanatory or critical comments on
patent applications."
This doesn't go to the matter of claims of prior art. I've spent enough ink on that.

Next:
"Next, Congress should require that all
applications be made public 18 months
after they are filed."
I would argue 18 months is arbitrary (who is this scribbler working for?). Why not next week? The proposed solution is to combat what is called Submarine Patents. Basically, this was responded to in 1995. I had a patent that was underwater for 4 years. This wasn't out of some business ploy, but simply because the brief was so huge (several hundred pages) that it fell behind one of the filing cabinets and was lost for years.

Next:
"Congress should eliminate the 'could have raised clause.'"
Reasonable.

Next:
"Fourth, Congress should provide limited
new immunity to all inventors who choose
to protect their innovations as trade secrets
rather than patents."
Trade secrets are a risk that should be borne by the one who wishes to protect their IP through their own devices. This goes into estoppel and laches - law that has a long history. If you cannot keep your cat in the bag - so be it. Whatever is being spoken to here in this author's suggestion does not have to be cloaked in the mantle of Patent reform.

Last:
"Congress should adopt a first to file rule
for awarding patents between competing parties.
America is the only major country that tries to
ascertain who was the first applicant to invent the

product or procedure."
The second sentence is not true, but when did facts ever matter? Indeed, the first to invent versus the first to file has been contentious since Alexander Graham Bell and the telephone (and many others through the decades). Invention is a populist notion in a populist nation. Europeans see things as law, not popularity. This, too, was a topic that has been answered in 1995 and is now being crow barred to fit globally. We have learned to cope with it over the centuries and Europe doesn't have a dog in this fight, unless a foreigner needs coverage here.

Going beyond as there are some interesting things about Patent law to add to this. You can be sued for practicing your patent! This usually stuns non-lawyers so an illustration needs to be illustrated:

The LED is patented. As far as the patent examiner can tell, nothing within the patent identifies any anticipated product outside of its claims (the inventors didn't elaborate beyond the general notion that light could be emitted from a semiconductor).

You invent the Red LED. The patent examiner reviews prior art, and sure enough the LED inventors never anticipated a single wavelength application. BINGO! Your patent is issued.

You go out, build a plant, produce a bajillion Red LEDs and are immediately served a cease and desist order for infringement! The LED patent blocks your patent. The only thing you have gained is a way to keep the original LED patent holders (and everyone else too) from making Red LEDs - if it matters to them.

There's a bajillion other oddities, but time has come to close here.

73's
Richard Clark, KB7QHC

3144. Re: SMS?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-17 16:52:52 UTC
From: Wayne <mygarbagecan@verizon.net>
Message-ID: <hdukd6olt1@news.eternal-september.org>
Source record: 12006

"Bert Hyman" <bert@iphouse.com> wrote in message
news:Xns9CC59B6356311VeebleFetzer@216.250.184.7...
> In news:9%oIm.590$Wd1.583@newsfe15.iad Cecil Moore <nospam@w5dxp.com>
> wrote:
>
>> Has anyone else noticed that the Prudential commercial
>> on TV is sending SMS instead of SOS?
>
> Finally saw a commercial that's probably the one you're talking about.
>
> It sounded more like "VMS" to me, but based strictly on the dots and
> dashes, ignoring the timing, it was "SOS."
>
> --
> Bert Hyman St. Paul, MN bert@iphouse.com
-
After hearing the "corrected" version of the commercial where "S O S" was
definitely sent.....I again heard the "original" version on a different
channel. So, they have two versions now. BTW, I still copy "VTTS".
--Wayne
W5GIE

3145. Re: SMS?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-17 20:03:21 UTC
From: Michael Coslo <mjc5@psu.edu>
Message-ID: <hduvi9$bs4e$1@tr22n12.aset.psu.edu>
Source record: 12007

billm wrote:
> 'Cecil Moore[_2_ Wrote:
>> ;692592']Has anyone else noticed that the Prudential commercial
>> on TV is sending SMS instead of SOS?
>> --
>> 73, Cecil, IEEE, OOTC, http://www.w5dxp.com
>
> If you listen carefully, I think they are sending VMS. You could make
> the case that it's a really bad "fist" trying to send SOS.

You guys beat this one to death surely!

How about a new one? Analysis of the MASH episode where the 4077th
performs a bris by Morse code.

- 73 de Mike N3LI -

3146. Re: Genius

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-17 20:03:58 UTC
From: Michael Coslo <mjc5@psu.edu>
Message-ID: <hduvje$bs4e$2@tr22n12.aset.psu.edu>
Source record: 12008

Bill wrote:
> On Nov 16, 2:42 am, tom <news4...@taring.org> wrote:
>> Bill wrote:
>>>> Its true the sun runs on coal, English coal no doubt of the finest
>>>> grade.
>>>> Jimmie
>>> "The world is really a flat plate supported on the back of a giant
>>> tortoise."
>> "And it's turtles all the way down."
>>
>> tom
>> K0TAR
>
> That's what the old lady said.
>

She's right you know!

- 73 de Mike N3LI -

3147. Re: (OT) Inventing a Better Patent System

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-18 02:30:05 UTC
From: "J. Mc Laughlin" <jcm@power-net.net>
Message-ID: <cq6dncn_Q5q7wZ7WnZ2dnUVZ_qydnZ2d@bright.net>
Source record: 12009

Dear Group: Richard has done a good job on the Times article.

I echo that the use of a first-to-invent system fits our Republic's ideals.
The efforts involved in "interferences" where determinations are made as to
who is first are a very minor part of the process.

Left off entirely is the issue of the bonus system used in the PTO that
appears to reward not issuing patents. Issued patents have gone from about
65% of applicants to about 40%, and much more telling is a reported six fold
increase in the number of applications waiting for judgment in the appeal
process. I now tell potential patent applicants that they must expect to
use the appeal process as that may be the only way their application is
evaluated by judges who are not influenced by the bonus system.
Applications take too many years and have become very expensive. Once the
US patent system was the least expensive and was fast.

It is unreasonable to expect things like the Times to understand anything
that is a bit complicated.

73, Mac N8TT
--
J. McLaughlin; Michigan, USA
Home: JCM@power-net.net
"Richard Clark" <kb7qhc@comcast.net> wrote in message
news:sgg5g5tbk7kq5tln2r5rsfg1d74aj9533b@4ax.com...
> On Mon, 16 Nov 2009 22:01:41 -0800, David Ryeburn <ryeburn@sfu.caz>
> wrote:
>
>>With that said, I'd enjoy reading comments on the NY Times article
>>"Inventing a Better Patent System", which you can see at
>><http://www.nytimes.com/2009/11/17/opinion/17pozen.html?hp>.
>
> Hi David,
>
> I have patents, and yes the system is broken - but not in the ways
> this author describes (but, oddly, is separate from his fixes).
>
> The author comes up with some rather odd objections which are like
> moving deck chairs on the Titanic. Some of it is quite naive:
> "Yes, it makes renting movies a snap,
> but was it really a breakthrough
> deserving patent protection?"
>
> The patent examiner is specifically prohibited from denials based on
> hindsight. The patent must disclose prior art, and if that art

> anticipates the use (as something within the art of the practioner)
> then there is a basis of denial, but the examiner cannot make that
> leap without this paper trail. One legal tenet a patent lawyer told
> me last week was that "Only God can create, man assembles all
> invention from other existing ideas."
>
> The following quote is an outright wet-dream:
> "One root of the problem is that patent examiners,
> many of whom are young or lack practical
> experience, are not qualified to evaluate
> whether complex claims in biotech or
> physics meet the most critical tests."
> This is patently absurd from an historical basis. Examiners have
> always been young and lacking experience - the office is the first
> rung in a ladder of their career as patent lawyers. How any NYT
> scribbler would expect the economic model to suddenly invert
> (practiced lawyers becoming examiners for far less pay) is misty eyed
> in the extreme.
>
> This also brings us to the second glaring error in that quote which I
> repeat in part here:
> " to evaluate
> whether complex claims in biotech or
> physics meet the most critical tests."
> This speaks to the validation of science which is NOT part of the
> examiner's job. This is confusing the specification (the description
> written in what should be clear English) with the claim (the list of
> relationships and associations). Examiners deny a patent on the basis
> of the claims made which do not rely on "this proves Einstein was
> wrong and I have invented of something that Gauss forgot."
>
> There are very few criteria to be met: is it novel? Is it marketable?
> Neither of which demand scientific proof. Someone might demand that
> novel requires proof, but this is on the basis of claims alone. Does
> your invention's claims appear somewhere else? The examiner is paid
> to wade through the 6 million patents to ascertain that.
>
> Now, let's move on to those suggestions.
> "To help fix this, Congress should pass an
> amendment allowing experts in the field to
> submit explanatory or critical comments on
> patent applications."
> This doesn't go to the matter of claims of prior art. I've spent
> enough ink on that.
>
> Next:
> "Next, Congress should require that all
> applications be made public 18 months
> after they are filed."
> I would argue 18 months is arbitrary (who is this scribbler working

> for?). Why not next week? The proposed solution is to combat what is
> called Submarine Patents. Basically, this was responded to in 1995. I
> had a patent that was underwater for 4 years. This wasn't out of some
> business ploy, but simply because the brief was so huge (several
> hundred pages) that it fell behind one of the filing cabinets and was
> lost for years.
>
> Next:
> "Congress should eliminate the 'could have raised clause.'"
> Reasonable.
>
> Next:
> "Fourth, Congress should provide limited
> new immunity to all inventors who choose
> to protect their innovations as trade secrets
> rather than patents."
> Trade secrets are a risk that should be borne by the one who wishes to
> protect their IP through their own devices. This goes into estoppel
> and laches - law that has a long history. If you cannot keep your cat
> in the bag - so be it. Whatever is being spoken to here in this
> author's suggestion does not have to be cloaked in the mantle of
> Patent reform.
>
> Last:
> "Congress should adopt a first to file rule
> for awarding patents between competing parties.
> America is the only major country that tries to
> ascertain who was the first applicant to invent the
> product or procedure."
> The second sentence is not true, but when did facts ever matter?
> Indeed, the first to invent versus the first to file has been
> contentious since Alexander Graham Bell and the telephone (and many
> others through the decades). Invention is a populist notion in a
> populist nation. Europeans see things as law, not popularity. This,
> too, was a topic that has been answered in 1995 and is now being crow
> barred to fit globally. We have learned to cope with it over the
> centuries and Europe doesn't have a dog in this fight, unless a
> foreigner needs coverage here.
>
> Going beyond as there are some interesting things about Patent law to
> add to this. You can be sued for practicing your patent! This
> usually stuns non-lawyers so an illustration needs to be illustrated:
>
> The LED is patented. As far as the patent examiner can tell, nothing
> within the patent identifies any anticipated product outside of its
> claims (the inventors didn't elaborate beyond the general notion that
> light could be emitted from a semiconductor).
>
> You invent the Red LED. The patent examiner reviews prior art, and
> sure enough the LED inventors never anticipated a single wavelength

> application. BINGO! Your patent is issued.
>
> You go out, build a plant, produce a bajillion Red LEDs and are
> immediately served a cease and desist order for infringement! The LED
> patent blocks your patent. The only thing you have gained is a way to
> keep the original LED patent holders (and everyone else too) from
> making Red LEDs - if it matters to them.
>
> There's a bajillion other oddities, but time has come to close here.
>
> 73's
> Richard Clark, KB7QHC

3148. Re: Matching on the MFJ-1800

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-18 02:35:15 UTC
From: Jeff Liebermann <jeffl@cruzio.com>
Message-ID: <pml6g51p5e83tfcr3ebmnfmb5s9tbe2qjq@4ax.com>
Source record: 12010
Cross-posted to: rec.radio.amateur.antenna,alt.internet.wireless

On Fri, 13 Nov 2009 07:28:34 -0600, "amdx" <amdx@knology.net> wrote:

>My original thread seems to have died, still wondering how the folded loop
>is matched to 50 ohms. (probably isn't? cheap, but works?)
>I've added a dimensional drawing and some more pics.
>If more info is needed let me know.

See:
<http://802.11junk.com/jeffl/antennas/mfj1800/>
The annotated NEC2 file is attached to the "Main" JPG. Cut-n-paste
should get you something to play with.

This is NOT an exact representation of the MFJ1800 antenna. The
elements are round, not flat. The driven element is a squared off
approximation. Some of the dimensions are questionable. Note that
the feed impedance is normalized to 288 ohms, the characteristic
impedance of a folded dipole, not 50 ohms.

>Here is a drawing and some more pics.
>http://i395.photobucket.com/albums/pp37/Qmavam/MFJPaintFileJPG.jpg

I need an overall length, measured from the CENTER of the driven
element (the plastic screw hole) to the CENTER of the last director.
That's because a tiny error in the spacing between elements at 1.060"
(2.69cm) grows rather rapidly when multiplied by 14 elements.

NEC works in wavelengths or meters, not inches. Think metric and
forget about using inches.

Please check the length of the first and 2nd directors. I don't
believe MFJ would make them the same length as the other directors.

Also, measure the coax balun cable dimensions. Mostly, I'm interested
in the:
1. Shield to shield length.
2. Center pin to start of folded dipole length. (i.e. exposed center
wire length).
3. OD of center conductor wire.
4. ID of shield.
5. A good guess as to the type of dielectric (foam, solid, or PTFE).
6. Any markings that might identify the coax.

I'll do a better job of modeling the folded dipole driven element
later. Modeling all the asymmetrical elements is going to require
more time than I want to spend. Maybe if I get inspired to RTFM. It
seems easy, but looks tedious.

What I've deduced from the model so far is:
1. The characteristic impedance is over 300 ohm without the coax balun/matching/whatever section.
2. A 1/4 wave coaxial matching section isn't going to work as the highest commonly available impedance coax of 93 ohms will only match 50 ohms to about 173 ohms. That thing doesn't look anything like a 4:1 balun (unless there's something we missed under all that shrink tube).
3. With a suitable 4:1 balun, the antenna is slightly shy of the advertised gain spec of 15dBi:
<http://www.mfjenterprises.com/Product.php?productid=MFJ-1800>
with a gain of 14.3dBi. Close enough.

--
Jeff Liebermann jeffl@cruzio.com
150 Felker St #D http://www.LearnByDestroying.com
Santa Cruz CA 95060 http://802.11junk.com
Skype: JeffLiebermann AE6KS 831-336-2558

3149. Re: Causes of Distrust of NEC and Mininec programs

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-18 02:42:57 UTC
From: Bill <k4wge@arrl.net>
Message-ID: <251752d0-e8c1-4f66-8f1e-dca3045eaa84@f16g2000yqm.googlegroups.com>
Source record: 12011

> When it comes to antenna theory and practice, it would be better to
> simply acknowledge Stanley Unwin as being more knowledgeable than Art
> Unwin.

More coherent as well.

3150. Re: Matching on the MFJ-1800

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-18 03:31:46 UTC
From: Tony Hwang <dragon40@shaw.ca>
Message-ID: <FUJMm.31964$6c2.16726@newsfe03.iad>
Source record: 12012
Cross-posted to: rec.radio.amateur.antenna,alt.internet.wireless

amdx wrote:
> Hi All,
> My original thread seems to have died, still wondering how the folded loop
> is matched to 50 ohms. (probably isn't? cheap, but works?)
> I've added a dimensional drawing and some more pics.
> If more info is needed let me know.
>
>
> Here is a drawing and some more pics.
> http://i395.photobucket.com/albums/pp37/Qmavam/MFJPaintFileJPG.jpg
> http://i395.photobucket.com/albums/pp37/Qmavam/MFJCoaxconnection.jpg
> http://i395.photobucket.com/albums/pp37/Qmavam/MFJRuledDE.jpg
> http://i395.photobucket.com/albums/pp37/Qmavam/MFJruledcoax.jpg
> Hope I covered everything,
> Mike
>
>
Hi,
I used to measure impedance of antenna feed point with home made noise
bridge. I know there is a 300 Ohm to 75 Ohm trnasformer balun.

3151. Re: Matching on the MFJ-1800

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-18 04:29:08 UTC
From: Jeff Liebermann <jeffl@cruzio.com>
Message-ID: <git6g5lu8d0t88its6rsniod8afav6dn1d@4ax.com>
Source record: 12013
Cross-posted to: rec.radio.amateur.antenna,alt.internet.wireless

On Tue, 17 Nov 2009 18:35:15 -0800, Jeff Liebermann <jeffl@cruzio.com>
wrote:
><http://802.11junk.com/jeffl/antennas/mfj1800/>
>The annotated NEC2 file is attached to the "Main" JPG. Cut-n-paste
>should get you something to play with.

A few changes. I changed the simulated folded dipole into something
more closely resembling the original MFJ folded dipole. I also
changed the characteristic impedance to 200 ohms so that more closely
resembles a 4:1 match to 50 ohms. Of course, the VSWR went from
tolerable to horrible (10:1). I suspect I did something wrong in
locating the feed point, but I'll fix that later. When using a
geometry editor/generator, I turned my nice neat NEC macros into
unreadable gibberish. Sigh... I'll also fix that later.

Gain is still 14.1dBi.

--
Jeff Liebermann jeffl@cruzio.com
150 Felker St #D http://www.LearnByDestroying.com
Santa Cruz CA 95060 http://802.11junk.com
Skype: JeffLiebermann AE6KS 831-336-2558

3152. Re: Matching on the MFJ-1800

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-18 04:58:00 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <1st6g5d40jkdbq5stlcjdtrkmkuj0k65pf@4ax.com>
Source record: 12014
Cross-posted to: rec.radio.amateur.antenna,alt.internet.wireless

On Tue, 17 Nov 2009 18:35:15 -0800, Jeff Liebermann <jeffl@cruzio.com>
wrote:

>On Fri, 13 Nov 2009 07:28:34 -0600, "amdx" <amdx@knology.net> wrote:
>
>>My original thread seems to have died, still wondering how the folded loop
>>is matched to 50 ohms. (probably isn't? cheap, but works?)
>>I've added a dimensional drawing and some more pics.
>>If more info is needed let me know.
>
>See:
><http://802.11junk.com/jeffl/antennas/mfj1800/>
>The annotated NEC2 file is attached to the "Main" JPG. Cut-n-paste
>should get you something to play with.
>
>This is NOT an exact representation of the MFJ1800 antenna. The
>elements are round, not flat. The driven element is a squared off
>approximation. Some of the dimensions are questionable. Note that
>the feed impedance is normalized to 288 ohms, the characteristic
>impedance of a folded dipole, not 50 ohms.

My model uses 1/4" elements, and for just the loop, Z = 150 Ohms @
2250 MHz

For the Reflector, driven loop, and director, the Z = 72 Ohms @ 2450
MHz

The loop ends are 8 segments(22.5 degrees). EZNEC complains of
len/dia ratio being too small, but there's nothing to be done about
that. 20 wires total, 62 segments total (for just the first three
elements).

>NEC works in wavelengths or meters, not inches. Think metric and
>forget about using inches.

I went with the dimensions provided - inches no problem.

>Please check the length of the first and 2nd directors. I don't
>believe MFJ would make them the same length as the other directors.

This is imparting too much engineering for their product.

>Also, measure the coax balun cable dimensions. Mostly, I'm interested
>in the:
>1. Shield to shield length.
>2. Center pin to start of folded dipole length. (i.e. exposed center

>wire length).
>3. OD of center conductor wire.
>4. ID of shield.
>5. A good guess as to the type of dielectric (foam, solid, or PTFE).
>6. Any markings that might identify the coax.

THIS is where error is going to intrude, big time. I think there's too much attention to this detail for what it is supposed to do - but I have already written on that subject.

To answer the original question, the folded loop Z drops due to the proximity of the other parasitic elements (a normal consequence). However, as to calling it a folded loop seems to be straying from conventional usage as those loops are rather sweeping (large). This may be deliberate if my data conforms to the usage found.

As a side note on just three elements, there is a degree of up/down/side look due to the loss of co-planar symmetry of the loop with the other elements. Adding more directors would probably hide this.

73's
Richard Clark, KB7QHC

3153. Re: an ontopic post about code

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-18 05:42:51 UTC
From: kb9rqz@yahoooo.com
Message-ID: <pa27g5t57r02vni00hj38119aikap54d3g@4ax.com>
Source record: 12015
Cross-posted to: alt.ham-radio.vhf-uhf,rec.radio.amateur.policy,rec.radio.amateur.antenna

On Fri, 01 Dec 2006 09:36:47 -0800, John Smith
<assemblywizard@gmail.com> wrote:

>K4YZ wrote:
>> Nope.
>>
>> The IP Address and servers are complete proof that I do NOT share
>> any annonymous character's "address".
>>
>> Sounds like Lennie, to me....
>>
>> Steve, K4YZ
>>
>
>To anyone with even an elementary understanding of anonymous proxies,
>anonymous remailers, zombie backdoors, etc., the ability to change ones
>IP address and header details is simplistic, indeed, with little time
>spent anyone can appear to be "coming" from anywhere in the world.
>
>You waste my time. Worse, you think us all idiots here. You remind me
>of the "street smart" prosecutors and defense attorneys who stack jurys
>with members of little or no technical knowledge and then call in
>"expert witnesses" and propose arguments of technical details to boggle
>their minds.
>
>You have only proven that you, yourself are either ignorant to such
>technical details, or else you are indeed street smart, I favor the
>latter in this case (however, if you in the dark about such things, 15
>minutes on google will enlighten you.)
>
>JS

"one useless man is disgrace 2 become a law firm 3 or more become a congress"
adams

woger you are a Congress all in your own head
"http://www.3ix.org/sys/aff.php?aff=7439" target="_blank"

altopia is never used by KB9RQZ
http://kb9rqz.cc.cc
http://kd8ctl.com
nor is Konstans@hotmail.com ever
btw i can be found at
17366 N River Rd

Chassel Mi

but the cowards asking lack the gut to act

3154. Re: Matching on the MFJ-1800

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-18 05:50:34 UTC
From: Jeff Liebermann <jeffl@cruzio.com>
Message-ID: <kh27g59skoa1pvfo23ah7msqrp8m5j683k@4ax.com>
Source record: 12016
Cross-posted to: rec.radio.amateur.antenna,alt.internet.wireless

On Tue, 17 Nov 2009 20:29:08 -0800, Jeff Liebermann <jeffl@cruzio.com>
wrote:

>On Tue, 17 Nov 2009 18:35:15 -0800, Jeff Liebermann <jeffl@cruzio.com>
>wrote:
>><http://802.11junk.com/jeffl/antennas/mfj1800/>
>>The annotated NEC2 file is attached to the "Main" JPG. Cut-n-paste
>>should get you something to play with.
>
>A few changes. I changed the simulated folded dipole into something
>more closely resembling the original MFJ folded dipole. I also
>changed the characteristic impedance to 200 ohms so that more closely
>resembles a 4:1 match to 50 ohms. Of course, the VSWR went from
>tolerable to horrible (10:1). I suspect I did something wrong in
>locating the feed point, but I'll fix that later. When using a
>geometry editor/generator, I turned my nice neat NEC macros into
>unreadable gibberish. Sigh... I'll also fix that later.
>
>Gain is still 14.1dBi.

More changes(tm). I fixed the feed point on the flattened folded
dipole and the VSWR magically came down to normal (1.47:1 into 200
ohms). Vertical gain dropped to 13.1dBi, but horizontal gain dropped
to 6.35dBi. Something (else) is wrong.

I'll fix the macros so that the NEC2 file is readable, later.

--
Jeff Liebermann jeffl@cruzio.com
150 Felker St #D http://www.LearnByDestroying.com
Santa Cruz CA 95060 http://802.11junk.com
Skype: JeffLiebermann AE6KS 831-336-2558

3155. Re: Matching on the MFJ-1800 - 3d-01.jpg (0/1)

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-18 06:26:05 UTC
From: Jeff Liebermann <jeffl@cruzio.com>
Message-ID: <9q27g5poe9dp3l8vco9187qligcqk55hh8@4ax.com>
Source record: 12017
Cross-posted to: rec.radio.amateur.antenna,alt.internet.wireless

On Tue, 17 Nov 2009 20:58:00 -0800, Richard Clark <kb7qhc@comcast.net>
wrote:

>My model uses 1/4" elements, and for just the loop, Z = 150 Ohms @
>2250 MHz

The original has an asymmetrical cross section of .330cm x 0.200cm
(from the supplied dimensions). I decided that a suitable equivalent
would be a round rod, with the same circumferance. of 1.06cm. That's
a 0.338cm dia rod. However, I don't know if this is a realistic
approximation. Your 0.635cm diameter rods might be a bit wide.

>For the Reflector, driven loop, and director, the Z = 72 Ohms @ 2450
>MHz
>
>The loop ends are 8 segments(22.5 degrees). EZNEC complains of
>len/dia ratio being too small, but there's nothing to be done about
>that. 20 wires total, 62 segments total (for just the first three
>elements).

My folded dipole ended up with 4 segements (45 deg/seg) at each end
and about 42 segments total. 4NEC2 also initially complained about
the ratio of the segment length to rod diameter, but I reduced the
number of segments and reduced the wire diameter to correspond to the
copper tape thickness. 4NEC2 was then happy.
<http://www.11junk.com/jeffl/antennas/mfj1800/slides/Geometry.html>

>>NEC works in wavelengths or meters, not inches. Think metric and
>>forget about using inches.
>
>I went with the dimensions provided - inches no problem.

I kinda like to do things in wavelengths because invariably I end up
recycling (plagerizing) my own designs to operate on different
frequencies. With wavelengths, that can be done by just tweaking one
or two numbers (GS scale structure card). However, this abomination
of an antenna design is unlikely to be useful at other frequencies, so
I used meters and not worry about scaling. I find that I make many
more errors when using inches than with metric.

>>Please check the length of the first and 2nd directors. I don't
>>believe MFJ would make them the same length as the other directors.
>
>This is imparting too much engineering for their product.

I'll be generous and not pass judgement on this contrivance until I understand this antenna with its rather odd balun, or whatever it is. It's possible to build an equal space director Yagi-Uda antenna but not with equal length directors. If I feel ambitious, I might feed it to an optimizer and see what optimizing the first two director lengths can offer.

>>Also, measure the coax balun cable dimensions. Mostly, I'm interested
>>in the:
>>1. Shield to shield length.
>>2. Center pin to start of folded dipole length. (i.e. exposed center
>>wire length).
>>3. OD of center conductor wire.
>>4. ID of shield.
>>5. A good guess as to the type of dielectric (foam, solid, or PTFE).
>>6. Any markings that might identify the coax.
>
>THIS is where error is going to intrude, big time. I think there's
>too much attention to this detail for what it is supposed to do - but
>I have already written on that subject.

Me too. However, I was rather guarded in my criticism since I didn't really understand the design of the balun and the purpose of the ferrite beads. My best guess was a 1/4 wave (or 3/4 wave) coax matching contrivance made from RG-62/u (93ohm) to match to 173 ohms. If the feed impedance came anywhere near 173 ohms, and the coax turns out to be 93 ohms, then it has a chance. However, even if it met all the criteria for an effective 1/4 wave match, the sloppy construction and exposed center conductors will certainly have detrimental effects.

>To answer the original question, the folded loop Z drops due to the
>proximity of the other parasitic elements (a normal consequence).
>However, as to calling it a folded loop seems to be straying from
>conventional usage as those loops are rather sweeping (large). This
>may be deliberate if my data conforms to the usage found.

Well, the impedance is going to be somewhere between a circular full wave loop (about 100 ohms) and that of a folded dipole (about 288 ohms). The problem is that this folded dipole isn't folded very much and more closely resembles a loop. In addition, the reflector and 1st director are not particularly close to the driven element. That makes me suspect (i.e. guess) that their effect on reducing the feed impedance is going to be minimal.

>As a side note on just three elements, there is a degree of
>up/down/side look due to the loss of co-planar symmetry of the loop
>with the other elements. Adding more directors would probably hide
>this.
>
>73's
>Richard Clark, KB7QHC

--
Jeff Liebermann jeffl@cruzio.com
150 Felker St #D http://www.LearnByDestroying.com
Santa Cruz CA 95060 http://802.11junk.com
Skype: JeffLiebermann AE6KS 831-336-2558

3156. Re: (OT) Inventing a Better Patent System

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-18 07:04:03 UTC
From: "Geoffrey S. Mendelson" <gsm@mendelson.com>
Message-ID: <slrnhg76th.c97.gsm@cable.mendelson.com>
Source record: 12018

J. Mc Laughlin wrote:
> Dear Group: Richard has done a good job on the Times article.

I agree. I also think that of all the articles I've seen this one was the best. While it was very limited in its understanding of the problems, at least it was an attempt to fix the problem instead of scrapping the whole system or reducing its scope (e.g. eliminating software patents).

> I echo that the use of a first-to-invent system fits our Republic's ideals.
> The efforts involved in "interferences" where determinations are made as to
> who is first are a very minor part of the process.

First to invent has its problems too. Without a system of publication, one can simply describe inventions in dated documentation and wait for other people to patent them. Then you just show up with proof of first invention and collect your patent someone else paid for.

Possibly a system where patent applications are published within 30 days of recepit and the amount of time to file claims of prior invention are limited to a year or 18 months.

This would also require the publication of provisional patent applications which is currently never done.

> Left off entirely is the issue of the bonus system used in the PTO that
> appears to reward not issuing patents. Issued patents have gone from about
> 65% of applicants to about 40%, and much more telling is a reported six fold
> increase in the number of applications waiting for judgment in the appeal
> process. I now tell potential patent applicants that they must expect to
> use the appeal process as that may be the only way their application is
> evaluated by judges who are not influenced by the bonus system.
> Applications take too many years and have become very expensive.

The effect of the bonus system has been to change a patent application from the final step in the process to one near the begining. This has been a windfall for the top patent lawyers who can successfully navigate the appeal process and a disaster for the small inventor or patent agent.

>Once the
> US patent system was the least expensive and was fast.

I expect that one of the smaller countries with a minimally functioning patent system will take over. They will, for a large fee, issue a patent quickly and quietly. Something like for a $100k fee, they will issue a patent without publication of the application, in 6-8 weeks.

Once they issue the patent, as US patent via the Patent Cooperation Treaty is assured. It does not matter if the US application takes years or there are any appeals and so on. You have what is in effect a US patent and just have to wait for the paperwork to catch up.

> It is unreasonable to expect things like the Times to understand anything
> that is a bit complicated.

Compared to their usual technology articles, which are just re-aranging the paragraphs in press-releases, this one was wonderful.

Geoff.
--
Geoffrey S. Mendelson, Jerusalem, Israel gsm@mendelson.com N3OWJ/4X1GM

3157. Re: Matching on the MFJ-1800

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-18 13:00:26 UTC
From: amdx <amdx@knology.net>
Message-ID: <9c54$4b03eff4$18ec6dd7$27562@KNOLOGY.NET>
Source record: 12019
Cross-posted to: rec.radio.amateur.antenna,alt.internet.wireless

"Jeff Liebermann" <jeffl@cruzio.com> wrote in message
news:pml6g51p5e83tfcr3ebmnfmb5s9tbe2qjq@4ax.com...
> On Fri, 13 Nov 2009 07:28:34 -0600, "amdx" <amdx@knology.net> wrote:
>
>>My original thread seems to have died, still wondering how the folded loop
>>is matched to 50 ohms. (probably isn't? cheap, but works?)
>>I've added a dimensional drawing and some more pics.
>>If more info is needed let me know.
>
>
> I need an overall length, measured from the CENTER of the driven
> element (the plastic screw hole) to the CENTER of the last director.
> That's because a tiny error in the spacing between elements at 1.060"
> (2.69cm) grows rather rapidly when multiplied by 14 elements.

The CENTER of the driven element (the plastic screw hole) to the
CENTER of the last director is 36.7cm (14-7/16")

> Please check the length of the first and 2nd directors. I don't
> believe MFJ would make them the same length as the other directors.

ALL directors or the same length (within .003")
They are 46.6mm in length.

> Also, measure the coax balun cable dimensions. Mostly, I'm interested
> in the:

> 1. Shield to shield length.

54.2mm (2.134")

> 2. Center pin to start of folded dipole length. (i.e. exposed center wire
> length).

61.75mm (2.431)

> 3. OD of center conductor wire.

0.94mm (0.037")

> 4. ID of shield.

3.3mm (.130)

> 5. A good guess as to the type of dielectric (foam, solid, or PTFE).

My guess is solid poyethylene, if you have a test other than poking it
with a pin to get feel of it, which I did.

> 6. Any markings that might identify the coax.

No help there.

> That thing doesn't look anything like a
> 4:1 balun (unless there's something we missed under all that shrink tube).

Looks like 4 toroids that slide over the coax, you can see the outline of
the edges of each toroid.

Mike

3158. Re: Matching on the MFJ-1800

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-18 13:07:21 UTC
From: amdx <amdx@knology.net>
Message-ID: <218da$4b03f193$18ec6dd7$28180@KNOLOGY.NET>
Source record: 12020
Cross-posted to: rec.radio.amateur.antenna,alt.internet.wireless

"Richard Clark" <kb7qhc@comcast.net> wrote in message
news:1st6g5d40jkdbq5stlcjdtrkmkuj0k65pf@4ax.com...
> On Tue, 17 Nov 2009 18:35:15 -0800, Jeff Liebermann <jeffl@cruzio.com>
> wrote:
>
>>On Fri, 13 Nov 2009 07:28:34 -0600, "amdx" <amdx@knology.net> wrote:
>>
>>>My original thread seems to have died, still wondering how the folded
>>>loop
>>>is matched to 50 ohms. (probably isn't? cheap, but works?)
>>>I've added a dimensional drawing and some more pics.
>>>If more info is needed let me know.
>>
>>See:
>><http://802.11junk.com/jeffl/antennas/mfj1800/>
>>The annotated NEC2 file is attached to the "Main" JPG. Cut-n-paste
>>should get you something to play with.
>>
>>This is NOT an exact representation of the MFJ1800 antenna. The
>>elements are round, not flat. The driven element is a squared off
>>approximation. Some of the dimensions are questionable. Note that
>>the feed impedance is normalized to 288 ohms, the characteristic
>>impedance of a folded dipole, not 50 ohms.
>
> My model uses 1/4" elements, and for just the loop, Z = 150 Ohms @
> 2250 MHz
>
> For the Reflector, driven loop, and director, the Z = 72 Ohms @ 2450
> MHz
>
> The loop ends are 8 segments(22.5 degrees). EZNEC complains of
> len/dia ratio being too small, but there's nothing to be done about
> that. 20 wires total, 62 segments total (for just the first three
> elements).
>
>>NEC works in wavelengths or meters, not inches. Think metric and
>>forget about using inches.
>
> I went with the dimensions provided - inches no problem.
>
>>Please check the length of the first and 2nd directors. I don't
>>believe MFJ would make them the same length as the other directors.
>

> This is imparting too much engineering for their product.

Yes it is just a stamped piece of aluminum with rough edges and
little nibs here and there that were never cleaned off.

>>Also, measure the coax balun cable dimensions. Mostly, I'm interested
>>in the:
>>1. Shield to shield length.
>>2. Center pin to start of folded dipole length. (i.e. exposed center
>>wire length).
>>3. OD of center conductor wire.
>>4. ID of shield.
>>5. A good guess as to the type of dielectric (foam, solid, or PTFE).
>>6. Any markings that might identify the coax.
>
> THIS is where error is going to intrude, big time. I think there's
> too much attention to this detail for what it is supposed to do - but
> I have already written on that subject.
>
> To answer the original question, the folded loop Z drops due to the
> proximity of the other parasitic elements (a normal consequence).

Understood.

> However, as to calling it a folded loop seems to be straying from
> conventional usage as those loops are rather sweeping (large). This
> may be deliberate if my data conforms to the usage found.

By this statement, do you mean the spacing between elements is large
so it looses it's folded loop characteristics?

Mike

3159. Re: Matching on the MFJ-1800

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-18 15:42:55 UTC
From: amdx <amdx@knology.net>
Message-ID: <c4778$4b041607$d8baf3ed$12083@KNOLOGY.NET>
Source record: 12021
Cross-posted to: rec.radio.amateur.antenna,alt.internet.wireless

"amdx" <amdx@knology.net> wrote in message
news:218da$4b03f193$18ec6dd7$28180@KNOLOGY.NET...
>
> "Richard Clark" <kb7qhc@comcast.net> wrote in message
> news:1st6g5d40jkdbq5stlcjdtrkmkuj0k65pf@4ax.com...
>> On Tue, 17 Nov 2009 18:35:15 -0800, Jeff Liebermann <jeffl@cruzio.com>
>> wrote:
>>
>>>On Fri, 13 Nov 2009 07:28:34 -0600, "amdx" <amdx@knology.net> wrote:
>>>
>>>>My original thread seems to have died, still wondering how the folded
>>>>loop
>>>>is matched to 50 ohms. (probably isn't? cheap, but works?)
>>>>I've added a dimensional drawing and some more pics.
>>>>If more info is needed let me know.
>>>
>>>See:
>>><http://802.11junk.com/jeffl/antennas/mfj1800/>
>>>The annotated NEC2 file is attached to the "Main" JPG. Cut-n-paste
>>>should get you something to play with.
>>>
>>>This is NOT an exact representation of the MFJ1800 antenna. The
>>>elements are round, not flat. The driven element is a squared off
>>>approximation. Some of the dimensions are questionable. Note that
>>>the feed impedance is normalized to 288 ohms, the characteristic
>>>impedance of a folded dipole, not 50 ohms.
>>
>> My model uses 1/4" elements, and for just the loop, Z = 150 Ohms @
>> 2250 MHz
>>
>> For the Reflector, driven loop, and director, the Z = 72 Ohms @ 2450
>> MHz
>>
>> The loop ends are 8 segments(22.5 degrees). EZNEC complains of
>> len/dia ratio being too small, but there's nothing to be done about
>> that. 20 wires total, 62 segments total (for just the first three
>> elements).
>>
>>>NEC works in wavelengths or meters, not inches. Think metric and
>>>forget about using inches.
>>
>> I went with the dimensions provided - inches no problem.
>>

>>>Please check the length of the first and 2nd directors. I don't
>>>believe MFJ would make them the same length as the other directors.
>>
>> This is imparting too much engineering for their product.
>
> Yes it is just a stamped piece of aluminum with rough edges and
> little nibs here and there that were never cleaned off.
>
>
>>>Also, measure the coax balun cable dimensions. Mostly, I'm interested
>>>in the:
>>>1. Shield to shield length.
>>>2. Center pin to start of folded dipole length. (i.e. exposed center
>>>wire length).
>>>3. OD of center conductor wire.
>>>4. ID of shield.
>>>5. A good guess as to the type of dielectric (foam, solid, or PTFE).
>>>6. Any markings that might identify the coax.
>>
>> THIS is where error is going to intrude, big time. I think there's
>> too much attention to this detail for what it is supposed to do - but
>> I have already written on that subject.
>>
>> To answer the original question, the folded loop Z drops due to the
>> proximity of the other parasitic elements (a normal consequence).
>
> Understood.
>
>
>> However, as to calling it a folded loop seems to be straying from
>> conventional usage as those loops are rather sweeping (large). This
>> may be deliberate if my data conforms to the usage found.
>
> By this statement, do you mean the spacing between elements is large
> so it looses it's folded loop characteristics?
>

I meant folded dipole characteristics. (not folded loop)

> Mike
>

3160. Re: Matching on the MFJ-1800

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-18 16:42:15 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <ud88g5hojkntj3lmc3gabvde6451mh047e@4ax.com>
Source record: 12022
Cross-posted to: rec.radio.amateur.antenna,alt.internet.wireless

On Wed, 18 Nov 2009 07:07:21 -0600, "amdx" <amdx@knology.net> wrote:

>> However, as to calling it a folded loop seems to be straying from
>> conventional usage as those loops are rather sweeping (large). This
>> may be deliberate if my data conforms to the usage found.
>
>By this statement, do you mean the spacing between elements is large
>so it looses it's folded loop characteristics?

Hi Mike,

I was a bit obscure on that last point. YOUR antenna's looped dipole has rather large turns for a folded loop. A folded quarterwave (for verticals) or folded halfwaves (for dipoles) generally show 4X impedance boost for same sized wire/element in the loop. Some designs use different sized halves of the loop to change the multiplication factor as this is the primary determinant with closely spaced folds.

However, your antenna has rather larger spacing which may lower the multiplication factor IF my model conforms to actual. This choice of larger looping may show MFJ's engineering talent in achieving a natural match. I don't think the rest of the array is going to matter much in getting the "most" gain it could, but it is probably good.

73's
Richard Clark, KB7QHC

3161. Re: (OT) Inventing a Better Patent System

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-18 17:00:13 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <d298g5dhsrte5sojb51534p88cl27jmc39@4ax.com>
Source record: 12023

On Wed, 18 Nov 2009 07:04:03 +0000 (UTC), "Geoffrey S. Mendelson"
<gsm@mendelson.com> wrote:

>While it was very limited in its understanding of the problems,
>at least it was an attempt to fix the problem instead of scrapping the
>whole system or reducing its scope (e.g. eliminating software patents).

Hi Geoffrey,

I think they should be sent to the bit-bucket. This is a point where
claims are specific and a huge amount of published patents have
clearly been built from work existing in the Public Domain for
decades.

Going back to the populist nature of an "Inventor," too many are
corporations hiding behind this cultural perception while they crush
innovation with offices full of attorneys hammering down individuals
who can't afford the cost of litigation.

>First to invent has its problems too. Without a system of publication, one
>can simply describe inventions in dated documentation and wait for other
>people to patent them. Then you just show up with proof of first invention
>and collect your patent someone else paid for.

It doesn't work that way. What you are describing is an IP that has
been ceded to the Public Domain, not patented as if it were a grab at
the brass ring.

>Possibly a system where patent applications are published within 30 days of
>recepit and the amount of time to file claims of prior invention are limited
>to a year or 18 months.

Prior art is not a limited, moving window in time. Otherwise, we
would be flooded with re-inventions of the telephone every year and
half by your method.

>This would also require the publication of provisional patent applications
>which is currently never done.

They are always done. For the bulk of invention, provisional patents
are often copies of press releases, journal articles, degree work,
papers for presentation and so on. And it hardly matters unless the
party files an actual application. Again, this was put to bed in 1995
and is supported by the international field. In fact, you need only
attach one claim to a provisional patent and you have international
protection. The claim can even be changed later!

>The effect of the bonus system has been to change a patent application from
>the final step in the process to one near the begining. This has been a
>windfall for the top patent lawyers who can successfully navigate the appeal
>process and a disaster for the small inventor or patent agent.

Sound like the Patent system I was very much a part of in the 80s and
90s. Being a small inventor, it was actually quite to my advantage
(the market practicalities aside).

>I expect that one of the smaller countries with a minimally functioning
>patent system will take over. They will, for a large fee, issue a patent
>quickly and quietly. Something like for a $100k fee, they will issue a
>patent without publication of the application, in 6-8 weeks.
>
>Once they issue the patent, as US patent via the Patent Cooperation Treaty
>is assured. It does not matter if the US application takes years or there
>are any appeals and so on. You have what is in effect a US patent and just
>have to wait for the paperwork to catch up.

I would think that 14 years of experience would have revealed this
anticipated grief by now. Getting a patent faster does not make the
ideas come sooner to submit that fast-track application.

73's
Richard Clark, KB7QHC

3162. Re: Matching on the MFJ-1800

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-18 17:06:05 UTC
From: Jeff Liebermann <jeffl@cruzio.com>
Message-ID: <mq88g5p6ct483gkubofrt9ap98oidgfkq8@4ax.com>
Source record: 12024
Cross-posted to: rec.radio.amateur.antenna,alt.internet.wireless

On Wed, 18 Nov 2009 07:00:26 -0600, "amdx" <amdx@knology.net> wrote:

>The CENTER of the driven element (the plastic screw hole) to the
>CENTER of the last director is 36.7cm (14-7/16")

Thanks. My numbers came out to 36.52 cm which is close enough.

>ALL directors or the same length (within .003")
>They are 46.6mm in length.

Amazing...

>> Also, measure the coax balun cable dimensions. Mostly, I'm interested
>> in the:

Nice. I'll see if I guess(tm) the coax type. It doesn't seem like a
good fit for any of the common cables as the center conductor is
somewhat larger diameter than any of these listed. See if you can
find an exposed center conductor without any tinning or soldering.
<http://www.epanorama.net/documents/wiring/coaxcable.html>
One more dimension... the approximate outer jacket diameter of the
coax (not including the shrink tube).

>My guess is solid poyethylene, if you have a test other than poking it
>with a pin to get feel of it, which I did.

Weird(tm). Low loss coax would need to be foam or teflon. Solid
polyethylene is easier to work with, cheaper, but not the best.
However, a short piece like this balun would not have much loss, so I
guess it doesn't matter what flavor is used:
<http://en.wikipedia.org/wiki/Coaxial_cable>

Gotta do paying work today. I'll play with this more in the next day
or two (so I don't forget what I'm doing).

--
Jeff Liebermann jeffl@cruzio.com
150 Felker St #D http://www.LearnByDestroying.com
Santa Cruz CA 95060 http://802.11junk.com
Skype: JeffLiebermann AE6KS 831-336-2558

3163. Re: SMS?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-18 18:02:59 UTC
From: John Ferrell <jferrell13@triad.rr.com>
Message-ID: <cjd8g5l8v20j15g31l4mmnh5klnn9023hm@4ax.com>
Source record: 12025

>-
>After hearing the "corrected" version of the commercial where "S O S" was
>definitely sent.....I again heard the "original" version on a different
>channel. So, they have two versions now. BTW, I still copy "VTTS".
>--Wayne
>W5GIE
>
Perhaps it was sent by Hashfisti Scratchi.
John Ferrell W8CCW

3164. Re: an ontopic post about code

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-19 01:42:02 UTC
From: kb9rqz@yahoooo.com
Message-ID: <8j89g5d95c69u3vjb54k22j092qo6sm2fn@4ax.com>
Source record: 12026
Cross-posted to: alt.ham-radio.vhf-uhf,rec.radio.amateur.policy,rec.radio.amateur.antenna

On Fri, 01 Dec 2006 09:36:47 -0800, John Smith
<assemblywizard@gmail.com> wrote:

>K4YZ wrote:
>> Nope.
>>
>> The IP Address and servers are complete proof that I do NOT share
>> any annonymous character's "address".
>>
>> Sounds like Lennie, to me....
>>
>> Steve, K4YZ
>>
>
>To anyone with even an elementary understanding of anonymous proxies,
>anonymous remailers, zombie backdoors, etc., the ability to change ones
>IP address and header details is simplistic, indeed, with little time
>spent anyone can appear to be "coming" from anywhere in the world.
>
>You waste my time. Worse, you think us all idiots here. You remind me
>of the "street smart" prosecutors and defense attorneys who stack jurys
>with members of little or no technical knowledge and then call in
>"expert witnesses" and propose arguments of technical details to boggle
>their minds.
>
>You have only proven that you, yourself are either ignorant to such
>technical details, or else you are indeed street smart, I favor the
>latter in this case (however, if you in the dark about such things, 15
>minutes on google will enlighten you.)
>
>JS

"one useless man is disgrace 2 become a law firm 3 or more become a congress"
adams

woger you are a Congress all in your own head
"http://www.3ix.org/sys/aff.php?aff=7439" target="_blank"

altopia is never used by KB9RQZ
http://kb9rqz.cc.cc
http://kd8ctl.com
nor is Konstans@hotmail.com ever
btw i can be found at
17366 N River Rd

Chassel Mi

but the cowards asking lack the gut to act

3165. Re: Matching on the MFJ-1800

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-19 12:05:20 UTC
From: amdx <amdx@knology.net>
Message-ID: <e0b11$4b053489$18ec6dd7$18533@KNOLOGY.NET>
Source record: 12027
Cross-posted to: rec.radio.amateur.antenna,alt.internet.wireless

"Jeff Liebermann" <jeffl@cruzio.com> wrote in message
news:mq88g5p6ct483gkubofrt9ap98oidgfkq8@4ax.com...
> On Wed, 18 Nov 2009 07:00:26 -0600, "amdx" <amdx@knology.net> wrote:
>
>>The CENTER of the driven element (the plastic screw hole) to the
>>CENTER of the last director is 36.7cm (14-7/16")
>
> Thanks. My numbers came out to 36.52 cm which is close enough.
>
>>ALL directors or the same length (within .003")
>>They are 46.6mm in length.
>
> Amazing...
>
>>> Also, measure the coax balun cable dimensions. Mostly, I'm interested
>>> in the:
>
> Nice. I'll see if I guess(tm) the coax type. It doesn't seem like a
> good fit for any of the common cables as the center conductor is
> somewhat larger diameter than any of these listed. See if you can
> find an exposed center conductor without any tinning or soldering.
> <http://www.epanorama.net/documents/wiring/coaxcable.html>
> One more dimension... the approximate outer jacket diameter of the
> coax (not including the shrink tube).
>
>>My guess is solid poyethylene, if you have a test other than poking it
>>with a pin to get feel of it, which I did.
>
> Weird(tm). Low loss coax would need to be foam or teflon. Solid
> polyethylene is easier to work with, cheaper, but not the best.
> However, a short piece like this balun would not have much loss, so I
> guess it doesn't matter what flavor is used:
> <http://en.wikipedia.org/wiki/Coaxial_cable>
>
> Gotta do paying work today. I'll play with this more in the next day
> or two (so I don't forget what I'm doing).
> Jeff Liebermann

I have found the need to work for a living, gets in the way of a lot of
fun!

I took the coax loose on the MFJ-1800 and and removed the toroids, I found
the letters found M1Z/111-RG and then the insulation ended. Argh!
Oh, I have a second antenna, so I took that one apart, Eureka! RGS-303

http://wireandcable.thermaxcdt.com/item/high-performance-coaxial-cables/mil-c-17-coaxial-and-twinaxial-cables/m17-111-rg303-id-70-?&seo=110
50 ohm coax. PTFE center insulator, FEP jacket.
Mike

3166. Noise to signal ratio

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-19 19:26:16 UTC
From: Michael Coslo <mjc5@psu.edu>
Message-ID: <he464o$8k62$1@tr22n12.aset.psu.edu>
Source record: 12028

Wow, the crazies must be having fun today. Out of 67 new posts, only one didn't go to my bozo bin.

That guy from Radiobanter must be tearing his hair out......

- 73 de Mike N3LI -

3167. Re: Matching on the MFJ-1800

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-19 19:48:12 UTC
From: Jeff Liebermann <jeffl@cruzio.com>
Message-ID: <047bg5l57ld5foth1c1otak2bg1m9sbks8@4ax.com>
Source record: 12029
Cross-posted to: rec.radio.amateur.antenna,alt.internet.wireless

On Thu, 19 Nov 2009 06:05:20 -0600, "amdx" <amdx@knology.net> wrote:

>I have found the need to work for a living, gets in the way of a lot of
>fun!

5 hours on the phone on a slow motion conference call this morning.
Absolutely nothing useful accomplished. Such online meetings should
be banned, taxed, or both as a threat to national productivity.

>I took the coax loose on the MFJ-1800 and and removed the toroids, I found
>the letters found M1Z/111-RG and then the insulation ended. Argh!
>Oh, I have a second antenna, so I took that one apart, Eureka! RGS-303
>http://wireandcable.thermaxcdt.com/item/high-performance-coaxial-cables/mil-c-17-coaxial-and-twinaxial-cables/m17-111-rg303-id-70-?&seo=110
> 50 ohm coax. PTFE center insulator, FEP jacket.
> Mike

Thanks. 50 ohm coax does not make it a matching section to a 200 ohm
folded dipole. However, the ferrite beads are a good way to simply
block the reflected power from the folded dipole so that it looks like
it's matched. In any case, that reflected power is lost (converted to
heat) in the ferrite beads. So much for efficiency. When I change
the characteristic impedance of the model from 200 ohms to 50 ohms,
the VSWR climbs to 5.5:1. Yech. (Note that the radiation efficiency
is 75% with or without the mismatch).

I suppose the antenna could be made to function by replacing the coax
section with a real 1/4 wave 4:1 balun, but I'll leave that to MFJ to
figure out.

If you need some more entertainment value, it would be interesting to
actually measure the gain of the antenna. Find a known good reputable
antenna with similar gain. A panel or patch will work. Find a signal
source that isn't infested with reflections (including ground
reflections), Fresnel Zone issues, and is fairly stable (i.e. doesn't
physically move). Use Netstumbler, WirelessMon, or Kismet to compare
the signal strengths. For additional accuracy, use a step attenuator
to adjust the signal levels to a common reference level. Better yet,
use a spectrum analyzer.

--
Jeff Liebermann jeffl@cruzio.com
150 Felker St #D http://www.LearnByDestroying.com
Santa Cruz CA 95060 http://802.11junk.com
Skype: JeffLiebermann AE6KS 831-336-2558

3168. Re: Noise to signal ratio

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-19 20:03:26 UTC
From: Jeff Liebermann <jeffl@cruzio.com>
Message-ID: <go8bg51d47on86pnt6fqd1555sg86gkp2c@4ax.com>
Source record: 12030

On Thu, 19 Nov 2009 14:26:16 -0500, Michael Coslo <mjc5@psu.edu>
wrote:

>Wow, the crazies must be having fun today. Out of 67 new posts, only one
>didn't go to my bozo bin.

Thanks. That one would be my posting today. The others must have
been spam and advertising. I'm honored.

>That guy from Radiobanter must be tearing his hair out......
> - 73 de Mike N3LI -

Cranial self-depilation is not particularly useful for cleaning up a
Usenet news group. I'm not sure what filter he uses, but it seems to
work quite well.
<http://www.radiobanter.com/forumdisplay.php?f=4>
I sometimes wish he would add a sanity filter, but then there would be
nothing left to read in rec.radio.amateur.antenna.

--
Jeff Liebermann jeffl@cruzio.com
150 Felker St #D http://www.LearnByDestroying.com
Santa Cruz CA 95060 http://802.11junk.com
Skype: JeffLiebermann AE6KS 831-336-2558

3169. Re: Matching on the MFJ-1800

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-19 21:20:01 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <4cdbg51g2he9lgnf2qc9i7ia5kka7jis26@4ax.com>
Source record: 12031
Cross-posted to: rec.radio.amateur.antenna,alt.internet.wireless

On Thu, 19 Nov 2009 11:48:12 -0800, Jeff Liebermann <jeffl@cruzio.com>
wrote:

>Thanks. 50 ohm coax does not make it a matching section to a 200 ohm
>folded dipole.

Perhaps not an optimal one (which would be the geometric mean of the
source/load) but an effective one - if it were designed so (I don't
think it was ever intended to be one).

>However, the ferrite beads are a good way to simply
>block the reflected power from the folded dipole so that it looks like
>it's matched. In any case, that reflected power is lost (converted to
>heat) in the ferrite beads. So much for efficiency.

In fact the beads won't do that at all. They see only the common mode
circuit. Reflected power is going to reside in the transverse mode
circuit where the beads are invisible.

> When I change
>the characteristic impedance of the model from 200 ohms to 50 ohms,
>the VSWR climbs to 5.5:1. Yech. (Note that the radiation efficiency
>is 75% with or without the mismatch).

My model shows a more benign mismatch to a 72 Ohm load.

73's
Richard Clark, KB7QHC

3170. Re: Noise to signal ratio

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-19 21:23:21 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <eldbg5975l9a65b9isuk5j7502dml1om72@4ax.com>
Source record: 12032

On Thu, 19 Nov 2009 14:26:16 -0500, Michael Coslo <mjc5@psu.edu>
wrote:

>Out of 67 new posts, only one
>didn't go to my bozo bin.

? ? ? ? ? ? ?

Hi Mike,

I've barely seen more than 4 posts all day: one from you (this) and
mike, and two from Jeff. My two would boost that further - but 67?

My filters haven't rung that loud.

73's
Richard Clark, KB7QHC

3171. Re: Matching on the MFJ-1800

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-20 00:20:21 UTC
From: dplatt@radagast.org
Message-ID: <5v3ht6-18e.ln1@radagast.org>
Source record: 12033
Cross-posted to: rec.radio.amateur.antenna,alt.internet.wireless

In article <047bg5l57ld5foth1c1otak2bg1m9sbks8@4ax.com>,
Jeff Liebermann <jeffl@cruzio.com> wrote:

>Thanks. 50 ohm coax does not make it a matching section to a 200 ohm
>folded dipole. However, the ferrite beads are a good way to simply
>block the reflected power from the folded dipole so that it looks like
>it's matched. In any case, that reflected power is lost (converted to
>heat) in the ferrite beads.

Ummm... I'd disagree (or at least quibble) on at least two grounds.

Ground #1: the ferrite beads would only block non-balanced current flow back down the outside of the coax. They will have no effect at all on power which is reflected back down the inside of the coax (the center conductor and the inside of the shield) from any impedance mismatch where the coax meets the folded dipole.

In effect, the presence of the beads (if they're choking the coax properly) actually ensures that the transmitter *does* see the true effect of any impedance mismatch. The transmitter is just as likely to see a higher SWR than a lower one, when the beads are added.

Ground #2: the beads do not necessarily result in a significant loss of power. If their RF impedance is high enough at the frequency of use, then RF current flow through them will be negligible, and there won't be a loss of power. Power loss in choke-ferrites tends to be worst when the RF impedance is both resistive, and too low for the application (i.e. still allows substantial current flow, which then results in dissipation of power inside the choke).

--
Dave Platt <dplatt@radagast.org> AE6EO
Friends of Jade Warrior home page: http://www.radagast.org/jade-warrior
I do _not_ wish to receive unsolicited commercial email, and I will
boycott any company which has the gall to send me such ads!

3172. Re: Matching on the MFJ-1800

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-20 00:41:29 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <YAlNm.45533$Wf2.42889@newsfe23.iad>
Source record: 12034
Cross-posted to: rec.radio.amateur.antenna,alt.internet.wireless

Jeff Liebermann wrote:
> 50 ohm coax does not make it a matching section to a 200 ohm
> folded dipole.

However, a 1/4WL side-by-side balanced run of 50 ohm coax with
a Z0=100 ohms makes an excellent match from a 200 ohm load
to a 50 ohm source.
--
73, Cecil, IEEE, OOTC, http://www.w5dxp.com

3173. Re: Matching on the MFJ-1800

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-20 00:46:59 UTC
From: amdx <amdx@knology.net>
Message-ID: <6a084$4b05e703$18ec6dd7$17186@KNOLOGY.NET>
Source record: 12035
Cross-posted to: rec.radio.amateur.antenna,alt.internet.wireless

"Jeff Liebermann" <jeffl@cruzio.com> wrote in message
news:047bg5l57ld5foth1c1otak2bg1m9sbks8@4ax.com...
> On Thu, 19 Nov 2009 06:05:20 -0600, "amdx" <amdx@knology.net> wrote:
>
>>I have found the need to work for a living, gets in the way of a lot of
>>fun!
>
> 5 hours on the phone on a slow motion conference call this morning.
> Absolutely nothing useful accomplished. Such online meetings should
> be banned, taxed, or both as a threat to national productivity.
>
>>I took the coax loose on the MFJ-1800 and and removed the toroids, I found
>>the letters found M1Z/111-RG and then the insulation ended. Argh!
>>Oh, I have a second antenna, so I took that one apart, Eureka! RGS-303
>>http://wireandcable.thermaxcdt.com/item/high-performance-coaxial-cables/mil-c-17-coaxial
-and-twinaxial-cables/m17-111-rg303-id-70-?&seo=110
>> 50 ohm coax. PTFE center insulator, FEP jacket.
>> Mike
>
> Thanks. 50 ohm coax does not make it a matching section to a 200 ohm
> folded dipole. However, the ferrite beads are a good way to simply
> block the reflected power from the folded dipole so that it looks like
> it's matched. In any case, that reflected power is lost (converted to
> heat) in the ferrite beads. So much for efficiency. When I change
> the characteristic impedance of the model from 200 ohms to 50 ohms,
> the VSWR climbs to 5.5:1. Yech. (Note that the radiation efficiency
> is 75% with or without the mismatch).
>
> I suppose the antenna could be made to function by replacing the coax
> section with a real 1/4 wave 4:1 balun, but I'll leave that to MFJ to
> figure out.
>
> If you need some more entertainment value, it would be interesting to
> actually measure the gain of the antenna. Find a known good reputable
> antenna with similar gain. A panel or patch will work. Find a signal
> source that isn't infested with reflections (including ground
> reflections), Fresnel Zone issues, and is fairly stable (i.e. doesn't
> physically move). Use Netstumbler, WirelessMon, or Kismet to compare
> the signal strengths. For additional accuracy, use a step attenuator
> to adjust the signal levels to a common reference level. Better yet,
> use a spectrum analyzer.
> Jeff Liebermann

Sure, as soon as I try to make you King you find work for me :-)

Ya, I have quad panel on the boat, when I get some time I'll try the
comparision.
BTW, I had a friend purchase an Alfa-Awus-036 Wifi Adapter.
He said it worked very well! So I ordered one, I replaced a TP-Link
TL-WN321G
with the Alfa-Awus-036. I had 23 signals received with only about 4 usable
signals on the
TL-WN321G. After I installed the Alfa I received 36 signals and all of them
have a signal
strength that would make them usable. (Of course some are encrypted)
This thing screams! I had used the TL-WN321G for several years and thought
it was good
until I tried the Alfa.
http://www.amazon.com/Adapter-Wardriving-Extension-Strongest-Market/dp/B000QYGNKQ/ref=sr_1
_4/181-2302073-2115203?ie=UTF8&s=electronics&qid=1257004388&sr=8-4
I'm using it with a 19dbi* panel antenna aimed a a 7 story condo.
http://www.fab-corp.com/product.php?productid=549&cat=255&page=1
Thanks, for all the input guys.
* advertised

3174. Re: an ontopic post about code

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-20 01:37:12 UTC
From: dancing morkiequeen <dancing.morkiequeen@gmail.com>
Message-ID: <60e93447-4f69-4c67-9646-38e4ce7620d4@x31g2000yqx.googlegroups.com>
Source record: 12036
Cross-posted to: alt.ham-radio.vhf-uhf,alt.usenet.kooks,rec.radio.amateur.policy,rec.radio.amateur.antenna

On Nov 18, 7:42 pm, kb9...@yahoooo.com wrote:
> On Fri, 01 Dec 2006 09:36:47 -0800, John Smith
>
>
>
>
>
> <assemblywiz...@gmail.com> wrote:
> >K4YZ wrote:
> >> Nope.
>
> >> The IP Address and servers are complete proof that I do NOT share
> >> any annonymous character's "address".
>
> >> Sounds like Lennie, to me....
>
> >> Steve, K4YZ
>
> >To anyone with even an elementary understanding of anonymous proxies,
> >anonymous remailers, zombie backdoors, etc., the ability to change ones
> >IP address and header details is simplistic, indeed, with little time
> >spent anyone can appear to be "coming" from anywhere in the world.
>
> >You waste my time. Worse, you think us all idiots here. You remind me
> >of the "street smart" prosecutors and defense attorneys who stack jurys
> >with members of little or no technical knowledge and then call in
> >"expert witnesses" and propose arguments of technical details to boggle
> >their minds.
>
> >You have only proven that you, yourself are either ignorant to such
> >technical details, or else you are indeed street smart, I favor the
> >latter in this case (however, if you in the dark about such things, 15
> >minutes on google will enlighten you.)
>
> >JS
>
> "one useless man is disgrace 2 become a law firm 3 or more become a congress"
> adams
>
> woger you are a Congress all in your own head
> "http://www.3ix.org/sys/aff.php?aff=7439" target="_blank"
>

> altopia is never used by KB9RQZhttp://kb9rqz.cc.cchttp://kd8ctl.com
> nor is Konst...@hotmail.com ever
> btw i can be found at
> 17366 N River Rd
> Chassel Mi
>
> but the cowards asking lack the gut to act- Hide quoted text -
>
>
Dance more for us,marky !

3175. Re: an ontopic post about code

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-20 01:42:29 UTC
From: kb9rqz@yahoooo.com
Message-ID: <40tbg55u7i32j8qvc2cmg6plrgntqjm1s8@4ax.com>
Source record: 12037
Cross-posted to: alt.ham-radio.vhf-uhf,rec.radio.amateur.policy,rec.radio.amateur.antenna

On Fri, 01 Dec 2006 09:36:47 -0800, John Smith
<assemblywizard@gmail.com> wrote:

>K4YZ wrote:
>> Nope.
>>
>> The IP Address and servers are complete proof that I do NOT share
>> any annonymous character's "address".
>>
>> Sounds like Lennie, to me....
>>
>> Steve, K4YZ
>>
>
>To anyone with even an elementary understanding of anonymous proxies,
>anonymous remailers, zombie backdoors, etc., the ability to change ones
>IP address and header details is simplistic, indeed, with little time
>spent anyone can appear to be "coming" from anywhere in the world.
>
>You waste my time. Worse, you think us all idiots here. You remind me
>of the "street smart" prosecutors and defense attorneys who stack jurys
>with members of little or no technical knowledge and then call in
>"expert witnesses" and propose arguments of technical details to boggle
>their minds.
>
>You have only proven that you, yourself are either ignorant to such
>technical details, or else you are indeed street smart, I favor the
>latter in this case (however, if you in the dark about such things, 15
>minutes on google will enlighten you.)
>
>JS

"one useless man is disgrace 2 become a law firm 3 or more become a congress"
adams

woger you are a Congress all in your own head
"http://www.3ix.org/sys/aff.php?aff=7439" target="_blank"

altopia is never used by KB9RQZ
http://kb9rqz.cc.cc
http://kd8ctl.com
nor is Konstans@hotmail.com ever
btw i can be found at
17366 N River Rd

Chassel Mi

but the cowards asking lack the gut to act

3176. Re: an ontopic post about code

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-20 01:44:25 UTC
From: kb9rqz@yahoooo.com
Message-ID: <n3tbg5pluqj223p8qrtlov3vcjsgmdfcr9@4ax.com>
Source record: 12038
Cross-posted to: alt.ham-radio.vhf-uhf,rec.radio.amateur.policy,rec.radio.amateur.antenna

On Thu, 19 Nov 2009 20:42:29 -0500, kb9rqz@yahoooo.com wrote:

>On Fri, 01 Dec 2006 09:36:47 -0800, John Smith
><assemblywizard@gmail.com> wrote:
>
>>K4YZ wrote:
>>> Nope.
>>>
>>> The IP Address and servers are complete proof that I do NOT share
>>> any annonymous character's "address".
>>>
>>> Sounds like Lennie, to me....
>>>
>>> Steve, K4YZ
>>>
>>
>>To anyone with even an elementary understanding of anonymous proxies,
>>anonymous remailers, zombie backdoors, etc., the ability to change ones
>>IP address and header details is simplistic, indeed, with little time
>>spent anyone can appear to be "coming" from anywhere in the world.
>>
>>You waste my time. Worse, you think us all idiots here. You remind me
>>of the "street smart" prosecutors and defense attorneys who stack jurys
>>with members of little or no technical knowledge and then call in
>>"expert witnesses" and propose arguments of technical details to boggle
>>their minds.
>>
>>You have only proven that you, yourself are either ignorant to such
>>technical details, or else you are indeed street smart, I favor the
>>latter in this case (however, if you in the dark about such things, 15
>>minutes on google will enlighten you.)
>>
>>JS
>
>"one useless man is disgrace 2 become a law firm 3 or more become a congress"
>adams
>
>woger you are a Congress all in your own head
>"http://www.3ix.org/sys/aff.php?aff=7439" target="_blank"
>
>altopia is never used by KB9RQZ
>http://kb9rqz.cc.cc
>http://kd8ctl.com

>nor is Konstans@hotmail.com ever
>btw i can be found at
>17366 N River Rd
>Chassel Mi
>
>but the cowards asking lack the gut to act

"one useless man is disgrace 2 become a law firm 3 or more become a congress"
adams

woger you are a Congress all in your own head
"http://www.3ix.org/sys/aff.php?aff=7439" target="_blank"

altopia is never used by KB9RQZ
http://kb9rqz.cc.cc
http://kd8ctl.com
nor is Konstans@hotmail.com ever
btw i can be found at
17366 N River Rd
Chassel Mi

but the cowards asking lack the gut to act

3177. hot

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-20 12:45:33 UTC
From: hot hot <shsfysgsvv@gmail.com>
Message-ID: <43426de2-4abc-4a20-8c78-7ebe890a5e89@v15g2000prn.googlegroups.com>
Source record: 12039

kiss pics
http://allvideossee.blogspot.com/2009/10/kiss-pics.html
kiss kiss
http://allvideossee.blogspot.com/2009/10/kiss-kiss.html
hot pics
http://allvideossee.blogspot.com/2009/10/hot-pics.html
spicy pics
http://allvideossee.blogspot.com/2009/10/spicy-pics.html
hot hot
http://allvideossee.blogspot.com/2009/10/hot-hot.html
sexy pics
http://allvideossee.blogspot.com/2009/10/sexy-pics.html
hot boobs pics
http://allvideossee.blogspot.com/2009/10/hot-boobs-pics.html
hot navel pics
http://allvideossee.blogspot.com/2009/10/hot-navel-pics.html
half saree hot
http://allvideossee.blogspot.com/2009/10/half-saree-hot.html

3178. Re: Matching on the MFJ-1800

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-20 16:52:25 UTC
From: Jeff Liebermann <jeffl@cruzio.com>
Message-ID: <2mhdg592h1c75ggs9pk7oh990s35efhreb@4ax.com>
Source record: 12040
Cross-posted to: rec.radio.amateur.antenna,alt.internet.wireless

On Thu, 19 Nov 2009 13:20:01 -0800, Richard Clark <kb7qhc@comcast.net>
wrote:

>My model shows a more benign mismatch to a 72 Ohm load.
>Richard Clark, KB7QHC

I built several models of the antenna folded dipole assembly. The
simple rectangular rod folded dipole yielded about 300 ohms. A
slightly better simulation of the rounded ends, but still using a
round rod, was about 260 ohms. Converting it to a flat wire ended up
about 280 ohms. I never got anything even close to 72 ohms. It's my
<http://802.11junk.com/jeffl/antennas/mfj1800/>

Show my your NEC2 deck and tell me what I did wrong, and maybe I'll
believe that it's 72 ohms. Incidentally, the possibility that I
screwed up somewhere in the model is quite real:
<http://802.11junk.com/jeffl/antennas/mfj1800/mfj1800.txt>
(I'll convert this mess back to a macro form so it's easier to read
maybe this weekend).

--
Jeff Liebermann jeffl@cruzio.com
150 Felker St #D http://www.LearnByDestroying.com
Santa Cruz CA 95060 http://802.11junk.com
Skype: JeffLiebermann AE6KS 831-336-2558

3179. Re: Matching on the MFJ-1800

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-20 17:10:27 UTC
From: Jeff Liebermann <jeffl@cruzio.com>
Message-ID: <6bidg5h01gdj4d39fnii7bpjacl5cv7lq6@4ax.com>
Source record: 12041
Cross-posted to: rec.radio.amateur.antenna,alt.internet.wireless

On Thu, 19 Nov 2009 16:20:21 -0800, dplatt@radagast.org (Dave Platt)
wrote:

>In article <047bg5l57ld5foth1c1otak2bg1m9sbks8@4ax.com>,
>Jeff Liebermann <jeffl@cruzio.com> wrote:
>
>>Thanks. 50 ohm coax does not make it a matching section to a 200 ohm
>>folded dipole. However, the ferrite beads are a good way to simply
>>block the reflected power from the folded dipole so that it looks like
>>it's matched. In any case, that reflected power is lost (converted to
>>heat) in the ferrite beads.
>
>Ummm... I'd disagree (or at least quibble) on at least two grounds.

Oh-oh.

>Ground #1: the ferrite beads would only block non-balanced current
>flow back down the outside of the coax. They will have no effect at
>all on power which is reflected back down the inside of the coax (the
>center conductor and the inside of the shield) from any impedance
>mismatch where the coax meets the folded dipole.

Agreed, if there were a balun present. Without a balun, there's going
to be some radiation from the coax cable, presumably from the shield.
Disclaimer: I don't fully understand how baluns work, and certainly
don't understand what the piece of coax with ferrite beads on the
MFJ-1800 is suppose to do.

>In effect, the presence of the beads (if they're choking the coax
>properly) actually ensures that the transmitter *does* see the true
>effect of any impedance mismatch. The transmitter is just as likely
>to see a higher SWR than a lower one, when the beads are added.

You lost me here. Just what are the beads suppose to do if not block
the reflected signal? Presumably, they do serve some useful purpose.
Now, you're suggesting that they could make the VSWR worse?

>Ground #2: the beads do not necessarily result in a significant loss
>of power. If their RF impedance is high enough at the frequency of
>use, then RF current flow through them will be negligible, and there
>won't be a loss of power. Power loss in choke-ferrites tends to be
>worst when the RF impedance is both resistive, and too low for the
>application (i.e. still allows substantial current flow, which then
>results in dissipation of power inside the choke).

This is beginning to sound like the discussion about whether it's acceptable to use a high VSWR antenna. The standard answer is that if the transmitter can take it without going into protection or oscillation, then it's acceptable. I don't have a problem with that, although I've never seen a Yagi-Uda antenna with a 50 ohm coax hung directly onto a folded dipole because there are usually easy ways to do the matching and balanced to unbalanced conversion.

Digging a deeper hole, I've been assuming that if the ferrite beads were not there, the coax cable will radiate. After all, that's one purpose of a balun, to prevent coax radiation from mangling the pattern. That's still a dubious proposition due to the large length of exposed center conductor at both ends of the coax piece, which certainly will radiate some. I can add that to the model, but I don't know how to model the ferrite beads.

--
Jeff Liebermann jeffl@cruzio.com
150 Felker St #D http://www.LearnByDestroying.com
Santa Cruz CA 95060 http://802.11junk.com
Skype: JeffLiebermann AE6KS 831-336-2558

3180. Re: Matching on the MFJ-1800

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-20 17:26:08 UTC
From: Jeff Liebermann <jeffl@cruzio.com>
Message-ID: <2hjdg5tod7mvqkg4330351pf5aietfej95@4ax.com>
Source record: 12042
Cross-posted to: rec.radio.amateur.antenna,alt.internet.wireless

On Thu, 19 Nov 2009 18:46:59 -0600, "amdx" <amdx@knology.net> wrote:

> Sure, as soon as I try to make you King you find work for me :-)

I hate to tell you this, but that's what kings are paid to do. They give orders. Do you require a public proclamation, executive order, or pontifical bull (in Latin), in order to be properly inspired? Now, pleae do some testing. After all this is your antenna, your question and your problem.

>Ya, I have quad panel on the boat, when I get some time I'll try the >comparision.

Doing it on a boat might be a problem. You're too close to the water which will probably be inside the Fresnel Zone. The water also acts as a great reflector. Thinks also move on a vessel, making stable readings difficult. I do my testing across a valley, where there's little chance of ground reflections (and there's a convenient 2.4GHz RF source from the local mountain top WISP). The path also has a wall of 40 meter high trees on both side to attenuate any interference.

--
Jeff Liebermann jeffl@cruzio.com
150 Felker St #D http://www.LearnByDestroying.com
Santa Cruz CA 95060 http://802.11junk.com
Skype: JeffLiebermann AE6KS 831-336-2558

3181. Re: Matching on the MFJ-1800

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-20 18:46:40 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <d9odg5lb37qsjfqfmptikm50okkftlitj1@4ax.com>
Source record: 12043
Cross-posted to: rec.radio.amateur.antenna,alt.internet.wireless

On Fri, 20 Nov 2009 08:52:25 -0800, Jeff Liebermann <jeffl@cruzio.com>
wrote:

>On Thu, 19 Nov 2009 13:20:01 -0800, Richard Clark <kb7qhc@comcast.net>
>wrote:
>
>>My model shows a more benign mismatch to a 72 Ohm load.
>>Richard Clark, KB7QHC
>
>I built several models of the antenna folded dipole assembly. The
>simple rectangular rod folded dipole yielded about 300 ohms. A
>slightly better simulation of the rounded ends, but still using a
>round rod, was about 260 ohms. Converting it to a flat wire ended up
>about 280 ohms. I never got anything even close to 72 ohms. It's my
><http://802.11junk.com/jeffl/antennas/mfj1800/>

EZNEC shows:
Impedance = 73.13 + J 18.78 ohms
which, I suppose, could have the reactance driven out if I shift
frequency.

>Show my your NEC2 deck and tell me what I did wrong, and maybe I'll
>believe that it's 72 ohms. Incidentally, the possibility that I
>screwed up somewhere in the model is quite real:
><http://802.11junk.com/jeffl/antennas/mfj1800/mfj1800.txt>
>(I'll convert this mess back to a macro form so it's easier to read
>maybe this weekend).

I don't have an option of NEC2 deck. One thing you might check, and
is something I reported about, is does your model have the loop
symmetrical to the plane of the directors/reflector? I followed all
of Mike's dimensions and I note that your lobe characteristics don't
show his lack of driven element symmetry - mine do. Again, I have
modeled only the three elements (Ref/Dr/Dir) as the additional
directors are unlikely to perturb drive point Z as much as to push it
from 73 Ohms up to your high 200s (triple?).

Another point, as I have described, I used 1/4 inch diameter wire in
place of larger flat sheet metal elements (which I note you try to
replecate, but only once). True, 1/4 inch is not as big as any flat
dimension, but as Roy reports on equivalence, flat is not the same as
diameter, but flat performance is closer to a smaller diameter round
wire. Hence the 1/4 inch.

73's
Richard Clark, KB7QHC

3182. Re: Matching on the MFJ-1800

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-20 18:58:40 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <g2pdg55tugj0jv363v2ddd7p4hkh88k7h2@4ax.com>
Source record: 12044
Cross-posted to: rec.radio.amateur.antenna,alt.internet.wireless

On Fri, 20 Nov 2009 09:10:27 -0800, Jeff Liebermann <jeffl@cruzio.com>
wrote:

>You lost me here. Just what are the beads suppose to do if not block
>the reflected signal?
>Presumably, they do serve some useful purpose.

They block common mode current. That is their purpose as a CHOKE. A
good BalUn contains choking, but a choke is not always a BalUn. For a
quarterwave BalUn, the beads serve to isolate each end which is both a
choking AND a BalUn necessity. As the loop is isolated from the sheet
metal, isolation is preserved (allowing the section to "possibly"
serve as a quarter wave choke - neglecting the geometric mean of Zs).

>Now, you're suggesting that they could make the VSWR worse?

That is only a possibility, not a necessity.

>I've never seen a Yagi-Uda antenna with a 50 ohm coax hung
>directly onto a folded dipole because there are usually easy ways to
>do the matching and balanced to unbalanced conversion.

Yagis are often balanced by design. You should have seen 50 Ohm coax
coiled nearby the feedpoint as a choke (an alternative method to using
beads). If you have not, then you have probably seen an installation
that suffered degraded performance (and either to the operator's
unending grief, or to their total unawareness). You give some sense
of already knowing this with your comment that follows:

>Digging a deeper hole, I've been assuming that if the ferrite beads
>were not there, the coax cable will radiate. After all, that's one
>purpose of a balun, to prevent coax radiation from mangling the
>pattern. That's still a dubious proposition due to the large length
>of exposed center conductor at both ends of the coax piece, which
>certainly will radiate some. I can add that to the model, but I don't
>know how to model the ferrite beads.

I've written to that where I took exception to you modeling the Z as
series, and I pointed out it was shunt. Apparently you didn't follow
that comment.

You model the beads as either creating an open circuit, or adding a
huge resistance in-line. The net result to current is the same. The
long and short of it is that to model the exterior of the coax, you
add a wire of same length back to the choke section and call it a day.

73's
Richard Clark, KB7QHC

3183. Re: Matching on the MFJ-1800

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-20 19:18:15 UTC
From: amdx <amdx@knology.net>
Message-ID: <de23c$4b06eb79$d8baf3ed$4826@KNOLOGY.NET>
Source record: 12045
Cross-posted to: rec.radio.amateur.antenna,alt.internet.wireless

"Jeff Liebermann" <jeffl@cruzio.com> wrote in message
news:2hjdg5tod7mvqkg4330351pf5aietfej95@4ax.com...
> On Thu, 19 Nov 2009 18:46:59 -0600, "amdx" <amdx@knology.net> wrote:
>
>> Sure, as soon as I try to make you King you find work for me :-)
>
> I hate to tell you this, but that's what kings are paid to do. They
> give orders. Do you require a public proclamation, executive order,
> or pontifical bull (in Latin), in order to be properly inspired? Now,
> pleae do some testing. After all this is your antenna, your question
> and your problem.
>
>>Ya, I have quad panel on the boat, when I get some time I'll try the
>>comparision.
>
> Doing it on a boat might be a problem. You're too close to the water
> which will probably be inside the Fresnel Zone. The water also acts
> as a great reflector. Thinks also move on a vessel, making stable
> readings difficult. I do my testing across a valley, where there's
> little chance of ground reflections (and there's a convenient 2.4GHz
> RF source from the local mountain top WISP). The path also has a wall
> of 40 meter high trees on both side to attenuate any interference.

>Jeff Liebermann

All that may be true, sorry King, is true.
My antennas are 14ft above the water and the signal only goes over water for
about 30ft
before a concrete parking lot fills the rest of the distance to my targets.
Total target distance
is about 600ft. The antennas are tipped upward about 10 degrees.
Here's the test I performed, I aligned the panel and the yagi on a pole
with about the 2ft between the yagi and the center of the panel. I aimed at
the target as
accurately a I could see. (Center of condo building) During testing I did
not terminate the unused
antenna.
I used net stumbler for signal strength numbers, I received 42 signals with
the Panel,
and 44 signals with the yagi.
The one signal I usually use went from -48db (panel) to -50db (yagi),
That's +2db for the Panel.
Then I did a Netstumbler screen print of the first 35 signals using the yagi
and then the panel.

I added all 35 signal strengths and divided by the 35, to get an average signal.
(35 is all that fit the screen without scrolling)
The Panel AVE = -58.11db, the Yagi AVE = 59.9db that is + 1.79db for the Panel.
So if you have any faith in my method, it looks like the yagi is down about 2db from the Panel.
I'm impressed, the MFJ-1800 yagi is advertised as a 15dbi antenna, the panel
as 19dbi antenna.
Here's the Panel seller for the 19dbi panel antenna.
http://www.fab-corp.com/product.php?productid=549&cat=255&page=1
At one time I found antenna plots for it, but can't locate them now.
Here's the yagi seller.
http://www.mfjenterprises.com/Product.php?productid=MFJ-1800
Thanks, Mike
PS.
Previously a saw 33 signals, I had never tried to optimize by adjusting the antenna, 33 was
good enough. While mounting the yagi I moved the position of the panel, looks like
I found a better position. :-)

3184. Re: Matching on the MFJ-1800

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-20 19:54:10 UTC
From: dplatt@radagast.org
Message-ID: <2o8jt6-5nq.ln1@radagast.org>
Source record: 12046
Cross-posted to: rec.radio.amateur.antenna,alt.internet.wireless

In article <6bidg5h01gdj4d39fnii7bpjacl5cv7lq6@4ax.com>,
Jeff Liebermann <jeffl@cruzio.com> wrote:

>Oh-oh.

grin

>>Ground #1: the ferrite beads would only block non-balanced current
>>flow back down the outside of the coax. They will have no effect at
>>all on power which is reflected back down the inside of the coax (the
>>center conductor and the inside of the shield) from any impedance
>>mismatch where the coax meets the folded dipole.
>
>Agreed, if there were a balun present. Without a balun, there's going
>to be some radiation from the coax cable, presumably from the shield.
>Disclaimer: I don't fully understand how baluns work, and certainly
>don't understand what the piece of coax with ferrite beads on the
>MFJ-1800 is suppose to do.

A piece of coax, with several ferrite beads or cores around it, *IS* a
balun. It's a 1:1 "current balun".

It has the effect of ensuring that current flow into the radiator (the
folded dipole, in this case) is balanced - that is, the current
flowing into each of the FD's two feedpoint ends is equal.

>>In effect, the presence of the beads (if they're choking the coax
>>properly) actually ensures that the transmitter *does* see the true
>>effect of any impedance mismatch. The transmitter is just as likely
>>to see a higher SWR than a lower one, when the beads are added.
>
>You lost me here. Just what are the beads suppose to do if not block
>the reflected signal? Presumably, they do serve some useful purpose.
>Now, you're suggesting that they could make the VSWR worse?

Well, let's see. From your questions, and from your comment that you
don't really understand how baluns work, I suspect that there are
several aspects of what's going on here which are being "mushed
together". Let's tease them apart, with an example, and see if this
clarifies thing.

We're dealing with the following inter-related things: characteristic
impedance, VSWR, reflections, balance, RF flowing where you don't want
it, and feedline radiation.

Let's start with a simple example: a folded dipole (characteristic Z of 300 ohms), being fed by a twin-wire feedline (characteristic Z also 300 ohms), from a balanced RF source. RF is going to flow up the feedline... and the current at a point on each conductor will be equal-and-opposite that of the point immediately opposite it on the other conductor. The feedline is "balanced".

At each point on the feedline, the RF voltage and the RF current will be in a specific relationship, as defined by Ohm's Law (E=IR). Rewrite this as R=E/I, divide the voltage you measure by the current you measure, and you'll get 300 ohms as the result... this ratio is the characteristic impedance of the line.

When the RF reaches the folded dipole, it will "see" the same characteristic impedance and will flow into the dipole without any sort of disruption. Because the dipole is physically symmetrical, and (just as important) because there's nowhere else for the current flowing up either side of the feedline to go, the antenna is also balanced, and equal-and-opposite currents will flow into the two sides of the antenna.

This is a nice setup, electrically - everything behaves as if we would like.

Now, let's change the FD to a loop, with a feedlpoint impedance of around 100 ohms. That is to say, when current flows into the feedpoint, it must do so where the ratio of voltage-over-current is lower.

When RF flowing up the (balanced, 300-ohm) feedline hits the loop's feedpoint... well, we have a mismatch. The voltage-to-current ratios in the feedline and the loop will differ. The physical effect of this is that only part of the RF power successfully enters the loop. The rest is reflected back down the feedline, as a wave travelling in the opposite of the original direction. [The same thing happens when a radar wave in space hits an object - the impedance difference between free space and the material of the object reflects much of the power back towards its origin.]

The forward (original) and reverse (reflection-generated) waves will reinforce (constructively) and interfere (destructively) as they travel along the lines. At points where their voltages are in phase, the voltages will add and the voltage across the line will be higher. At points where they interfere (phases are opposed) the voltages will be lower. The ratio between these two (higher-voltage and lower-voltage) points defines the VSWR, and the transmitter will "see" this.

In this case, we have reflected power... and we have a VSWR of higher than 1:1. However, the whole system is still balanced - it's physically and electrically symmetrical.

Now, let's set that example aside for a moment, and look at another one.

Let's consider a simple dipole (center-fed, non-folded), with an impedance of 72 ohms. This is a physically symmetrical (balanced) antenna.

Let's feed this with coax, having a characteristic of 72 ohms.

Is the coax balanced? Yes and no. In one sense, it's balanced... if you look at the current flow on the inside of the coax, you'll find that the flows on the center conductor, and the inside of the shield, are equal-and-opposite. Also, the EM fields created by the RF flow are entirely within the coax (if the shield has full coverage, as in a hardline), which means that RF doesn't "leak out" and inteference has a hard time "leaking in". This is why you can run coax through conduit or next to metal objects without causing problems.

In another sense, though, the coax is not balanced, because it consists of *three* conductive surfaces... the center conductor, the inside of the shield, and the outside of the shield. When current flowing up the coax reaches the end (e.g. the antenna feedpoint), the symmetry can be broken:

- Current flowing up the center conductor has only one place it can go - to one side of the antenna feedpoint.

- Current flowing up the inside of the shield has *two* paths to which it can flow. It can flow into the other side of the antenna feedpoint, *and* it can "wrap around" the end of the shield and flow back down the outside of the coax. It will tend to do both, in a complex ratio which depends on the impedances that it "sees" for each of these two paths.

RF flowing back down the outside of the coax will generate radiation, which will add to / interfere with the RF radiatiating from the dipole. This will tend to alter the antenna's pattern somewhat.

In this example (72-ohm coax connected to 72-ohm dipole), we won't necessarily see an even current flow into the dipole, with a nice clean 1:1 VSWR on the line. We can still see some reflected power.

Why? Because of the "third wire" - the outside of the coax. Its impedance will appear in parallel with that of one side of the dipole... it will 'accept' some RF current (in effect, diverting it from its side of the dipole) and this will alter the feedpoint impedance of the antenna system. The imbalance of the coax (the presence of the "third wire") has disrupted our nice pretty theoretical picture. We've got more current flowing into the center-conductor side of the antenna (where there's only one path) than we have flowing into the other side (since part of the current has been diverted to flow back down the outside of the coax), and the antenna is no longer behaving in a balanced fashion.

How do we prevent this from happening? By using a balun... a device which has an unbalanced (usually coaxial) feed on one side, and which *forces* an electrical balance on the other side. Some baluns force

equal-and-opposite voltages on the two terminals on the balanced side, while others force equal-and-opposite currents on either side.

Some baluns are designed to present the same impedance on each side (1:1 baluns) while others are designed to have different impedances connected to either side (the 4:1 balun is the best-known).

A series of ferrites, clamped around a coax, are a simple (and often very effective) form of current balun. There's no impedance transformation built into this design - it's a 1:1 type.

How does this "choke balun" create balance? Quite simply: it blocks current flow on the "third wire" (the outside of the coax) by placing a high RF impedance in series with any current flow on this path.

As an example: consider the 72-ohm coax-and-dipole example. Let's assume, for the sake of argument, that the RF impedance seen along the outside of the coax (the "third wire") is on the order of 100 ohms or so (not unreasonable if it's a couple of wavelengths long). Without a balun of some sort, there's going to be a fair amount of current flow back along this "third wire", because the impedance isn't all that much higher than the 36 ohms (that of one-half of the dipole) in which it is in parallel with.

Now, let's clamp a few nice ferrites onto the coax. These add *lots* of inductance to the "third wire"... for the sake of argument let's say it's on the order of 1000j ohms.

All of a sudden, the third wire presents a *much* higher impedance at the feedpoint than it used to... it's 30 times as high as that of the dipole segment to which it's connected. Only a tiny amount of current can flow into the "third wire".

Since the current flowing up the inside of the feedline is balanced, and since the current reaching the feedpoint now has only one place it can go effectively (into the antenna), the current flow into the antenna is symmetrical - balance has been restored. Because the feedpoint impedance is no longer being significantly affected by the "third wire", we see almost exactly a 1:1 VSWR.

If we've added enough inductance (or enough RF resistance) to the "third wire", and choked off the current flow to essentially nothing, then the power loss in the choke is negligible... because there isn't enough current flowing to generate power to dissipate.

>This is beginning to sound like the discussion about whether it's
>acceptable to use a high VSWR antenna. The standard answer is that if
>the transmitter can take it without going into protection or
>oscillation, then it's acceptable.

I think that's oversimplifed a bit. I think there are really three factors to consider:

- Will the transmitter be stable and happy (not self-protect, not oscillate, not burn up)?

- Will the transmitter actually deliver full rated power (or close to it) into the impedance that it "sees" as a result of the higher SWR? This impedance may be lower or higher than its rated load, and may have significant reactance in it.

- Will the additional ("excess") losses in the transmission line, as a result of the higher current at some points, be a problem?

> I don't have a problem with that,
>although I've never seen a Yagi-Uda antenna with a 50 ohm coax hung
>directly onto a folded dipole because there are usually easy ways to
>do the matching and balanced to unbalanced conversion.

The "Cheap Yagi" design is the closest to that... a half-folded dipole, with the directors and reflectors positioned so that the HFD has a 50-ohm feedpoint impedance. Direct coax connection (ferrite bead is optional).

>Digging a deeper hole, I've been assuming that if the ferrite beads
>were not there, the coax cable will radiate. After all, that's one
>purpose of a balun, to prevent coax radiation from mangling the
>pattern.

It could radiate, depending on the length of the coax.

> That's still a dubious proposition due to the large length
>of exposed center conductor at both ends of the coax piece, which
>certainly will radiate some. I can add that to the model, but I don't
>know how to model the ferrite beads.

I believe you'd want to model the coax balun as a combination of two elements: a pure transmission line, and a "third wire" connected at the antenna feedpoint and running back parallel to the transmission line (this being the effect of the outside of the coax).

To model the ferrite beads, add a lumped impedance in series with the third wire, at the point at which it connects to the antenna. As a wild-and-almost-certainly-wrong SWAG, try adding 100+100j (to mimic the purely inductive, and the lossy-resistive aspects of the ferrite).

--
Dave Platt <dplatt@radagast.org> AE6EO
Friends of Jade Warrior home page: http://www.radagast.org/jade-warrior
I do _not_ wish to receive unsolicited commercial email, and I will boycott any company which has the gall to send me such ads!

3185. Re: Matching on the MFJ-1800

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-20 20:13:03 UTC
From: Jeff Liebermann <jeffl@cruzio.com>
Message-ID: <06tdg51dofu5v6u96r3ok14io0egc20ckp@4ax.com>
Source record: 12047
Cross-posted to: rec.radio.amateur.antenna,alt.internet.wireless

On Fri, 20 Nov 2009 10:46:40 -0800, Richard Clark <kb7qhc@comcast.net>
wrote:

>>Show my your NEC2 deck and tell me what I did wrong, and maybe I'll
>>believe that it's 72 ohms. Incidentally, the possibility that I
>>screwed up somewhere in the model is quite real:
>><http://802.11junk.com/jeffl/antennas/mfj1800/mfj1800.txt>
>>(I'll convert this mess back to a macro form so it's easier to read
>>maybe this weekend).
>
>I don't have an option of NEC2 deck.

No problem. Just post or email me the .EZ file. 4NEC2 will import it
or I'll just switch to EZNEC. (I promise not to complain about your
using inches).

>One thing you might check, and
>is something I reported about, is does your model have the loop
>symmetrical to the plane of the directors/reflector?

Unfortunately, yes. I got lazy and planted the folded dipole centered
about the axis of the other elements. I don't think (guess) it would
make much difference, but I'll move it to the correct position this
weekend.

Got any theory as to why the vertical and horizontal patterns are so
different? That only appeared when I switched to the flat wire folded
dipole. They were symmetrical with the wire rod driven element.

>I followed all
>of Mike's dimensions and I note that your lobe characteristics don't
>show his lack of driven element symmetry - mine do. Again, I have
>modeled only the three elements (Ref/Dr/Dir) as the additional
>directors are unlikely to perturb drive point Z as much as to push it
>from 73 Ohms up to your high 200s (triple?).

Yes, something is different. In past tinkering, I've found that 3
elements is sufficient to characterize the feed impedance, where the
additional elements just improve the gain and pattern.

>Another point, as I have described, I used 1/4 inch diameter wire in
>place of larger flat sheet metal elements (which I note you try to
>replecate, but only once). True, 1/4 inch is not as big as any flat
>dimension, but as Roy reports on equivalence, flat is not the same as
>diameter, but flat performance is closer to a smaller diameter round
>wire. Hence the 1/4 inch.

Well, I used a rod with the same circumference as the flat
(asymetrical) elements. Methinks the element diameter would have an
effect on the bandwidth of the antenna, but not on its characteristic
impedance.

>73's
>Richard Clark, KB7QHC

thanks much...

--
Jeff Liebermann jeffl@cruzio.com
150 Felker St #D http://www.LearnByDestroying.com
Santa Cruz CA 95060 http://802.11junk.com
Skype: JeffLiebermann AE6KS 831-336-2558

3186. Re: Matching on the MFJ-1800

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-20 20:18:49 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <JQCNm.48664$Wf2.17759@newsfe23.iad>
Source record: 12048
Cross-posted to: rec.radio.amateur.antenna,alt.internet.wireless

Dave Platt wrote:
> A piece of coax, with several ferrite beads or cores around it, *IS* a
> balun. It's a 1:1 "current balun".

According to The ARRL Handbook, a "w2du balun",
popularized by Walter Maxwell.
--
73, Cecil, IEEE, OOTC, http://www.w5dxp.com

3187. Re: Matching on the MFJ-1800

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-21 00:26:17 UTC
From: amdx <amdx@knology.net>
Message-ID: <7e546$4b073e6f$18ec6dd7$28808@KNOLOGY.NET>
Source record: 12050
Cross-posted to: rec.radio.amateur.antenna,alt.internet.wireless

"Richard Clark" <kb7qhc@comcast.net> wrote in message
news:d9odg5lb37qsjfqfmptikm50okkftlitj1@4ax.com...
> On Fri, 20 Nov 2009 08:52:25 -0800, Jeff Liebermann <jeffl@cruzio.com>
> wrote:
>
>>On Thu, 19 Nov 2009 13:20:01 -0800, Richard Clark <kb7qhc@comcast.net>
>>wrote:
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>>>My model shows a more benign mismatch to a 72 Ohm load.
>>>Richard Clark, KB7QHC
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>>I built several models of the antenna folded dipole assembly. The
>>simple rectangular rod folded dipole yielded about 300 ohms. A
>>slightly better simulation of the rounded ends, but still using a
>>round rod, was about 260 ohms. Converting it to a flat wire ended up
>>about 280 ohms. I never got anything even close to 72 ohms. It's my
>><http://802.11junk.com/jeffl/antennas/mfj1800/>
>
> EZNEC shows:
> Impedance = 73.13 + J 18.78 ohms
> which, I suppose, could have the reactance driven out if I shift
> frequency.
>
>>Show my your NEC2 deck and tell me what I did wrong, and maybe I'll
>>believe that it's 72 ohms. Incidentally, the possibility that I
>>screwed up somewhere in the model is quite real:
>><http://802.11junk.com/jeffl/antennas/mfj1800/mfj1800.txt>
>>(I'll convert this mess back to a macro form so it's easier to read
>>maybe this weekend).
>
> I don't have an option of NEC2 deck. One thing you might check, and
> is something I reported about, is does your model have the loop
> symmetrical to the plane of the directors/reflector?

>I followed all of Mike's dimensions and I note that your lobe
>characteristics don't
> show his - mine do.
> 73's
> Richard Clark, KB7QHC

Hi Richard,
What do you mean by "lack of driven element symmetry" ?
Mike

3188. Re: Matching on the MFJ-1800

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-21 00:53:08 UTC
From: JIMMIE <JIMMIEDEE123@YAHOO.COM>
Message-ID: <b10da9ce-4239-46a0-a1d3-de28f2b7266a@v25g2000yqk.googlegroups.com>
Source record: 12049
Cross-posted to: rec.radio.amateur.antenna,alt.internet.wireless

On Nov 13, 8:28 am, "amdx" <a...@knology.net> wrote:
> Hi All,
> My original thread seems to have died, still wondering how the folded loop
> is matched to 50 ohms. (probably isn't? cheap, but works?)
> I've added a dimensional drawing and some more pics.
> If more info is needed let me know.
>
> Here is a drawing and some more pics.http://i395.photobucket.com/albums/pp37/Qmavam/MFJPaintFileJPG.jpghttp://i395.photobucket.com/albums/pp37/Qmavam/MFJCoaxconnection.jpghttp://i395.photobucket.com/albums/pp37/Qmavam/MFJRuledDE.jpghttp://i395.photobucket.com/albums/pp37/Qmavam/MFJruledcoax.jpg
> Hope I covered everything,
> Mike

The folded dipole is going to have about 4 times the impedance of a
plain old dipole.(POD) In this case if you used a POD with your yagi
antenna the feedpoint impedance would be in the neighborhood of 10
ohms
with a folded dipole it will be more like 40. Not a bad match for 50
ohm coax

Jimmie

3189. Re: Matching on the MFJ-1800

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-21 04:34:16 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <3breg5tc09033med090b2vaqub02qr1uq8@4ax.com>
Source record: 11901
Cross-posted to: rec.radio.amateur.antenna,alt.internet.wireless

On Fri, 20 Nov 2009 18:26:17 -0600, "amdx" <amdx@knology.net> wrote:

> Hi Richard,
> What do you mean by "lack of driven element symmetry" ?
> Mike

Hi Mike,

The driven loop is not symettrical to the plane of the directors and reflector, thus it peers down (or up, or to the side - depending on deployment).

Look boresight down the boom. The loop is off-center.

73's
Richard Clark, KB7QHC

3190. Re: Matching on the MFJ-1800

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-21 12:24:49 UTC
From: amdx <amdx@knology.net>
Message-ID: <182d$4b07dc11$18ec6dd7$18534@KNOLOGY.NET>
Source record: 11902
Cross-posted to: rec.radio.amateur.antenna,alt.internet.wireless

"Richard Clark" <kb7qhc@comcast.net> wrote in message
news:3breg5tc09033med090b2vaqub02qr1uq8@4ax.com...
> On Fri, 20 Nov 2009 18:26:17 -0600, "amdx" <amdx@knology.net> wrote:
>
>> Hi Richard,
>> What do you mean by "lack of driven element symmetry" ?
>> Mike
> Hi Mike,
>
> The driven loop is not symettrical to the plane of the directors and
> reflector, thus it peers down (or up, or to the side - depending on
> deployment).
> Look boresight down the boom. The loop is off-center.
>
> 73's
> Richard Clark, KB7QHC

Good, I thought that might be the answer but wanted to check.
Glad I added that detail to the drawing, do you think that is
engineered to control output impedance?
What happens to the impedance if you center it?

Could you post your model or send it to me, I have a fellow
ham that tried to model the FD and could not get it to work.
He would like to see one that does work and find out what he did wrong.
Eznec if you have it.
Thanks, Mike

3191. Re: Xmit loop antenna for all bands.Dbl helix cont'd

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-21 12:34:46 UTC
From: Dave <k1ttt@arrl.net>
Message-ID: <637b4c62-30ae-4114-97fb-e2fe95d3e218@s15g2000yqs.googlegroups.com>
Source record: 11903

On Nov 21, 4:32 am, Bill <k4...@arrl.net> wrote:
> http://forums.qrz.com/showthread.php?p=1772097#post1772097

he does like to spread his bs around doesn't he. maybe he didn't find
enough support on here.

3192. Re: Matching on the MFJ-1800

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-21 16:00:30 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <ae3gg51c088tmlfs5mjelkneiq1sqpsoqt@4ax.com>
Source record: 11904
Cross-posted to: rec.radio.amateur.antenna,alt.internet.wireless

On Sat, 21 Nov 2009 06:24:49 -0600, "amdx" <amdx@knology.net> wrote:

>Could you post your model or send it to me, I have a fellow
>ham that tried to model the FD and could not get it to work.
>He would like to see one that does work and find out what he did wrong.
>Eznec if you have it.
> Thanks, Mike
>

Hi Mike,

It has been posted to you as you asked. Jeff also has a copy.

Can you tell us what you mean about your buddy's model and how he
"could not get it to work?" Did he follow your dimensions?

73's
Richard Clark, KB7QHC

3193. Re: Matching on the MFJ-1800

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-21 16:21:34 UTC
From: amdx <amdx@knology.net>
Message-ID: <1ca25$4b0813ae$18ec6dd7$21913@KNOLOGY.NET>
Source record: 11905
Cross-posted to: rec.radio.amateur.antenna,alt.internet.wireless

"Richard Clark" <kb7qhc@comcast.net> wrote in message
news:ae3gg51c088tmlfs5mjelkneiq1sqpsoqt@4ax.com...
> On Sat, 21 Nov 2009 06:24:49 -0600, "amdx" <amdx@knology.net> wrote:
>
>>Could you post your model or send it to me, I have a fellow
>>ham that tried to model the FD and could not get it to work.
>>He would like to see one that does work and find out what he did wrong.
>>Eznec if you have it.
>> Thanks, Mike
>>
>
> Hi Mike,
>
> It has been posted to you as you asked. Jeff also has a copy.
>
> Can you tell us what you mean about your buddy's model and how he
> "could not get it to work?" Did he follow your dimensions?
>
> 73's
> Richard Clark, KB7QHC

He's out of town for a couple of days, when he returns I'll quiz him.
Mike

3194. Re: Matching on the MFJ-1800

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-21 17:12:56 UTC
From: Jeff Liebermann <jeffl@cruzio.com>
Message-ID: <op6gg59o8l4bjbfc0p3duilgudkgkvrt25@4ax.com>
Source record: 11906
Cross-posted to: rec.radio.amateur.antenna,alt.internet.wireless

On Fri, 20 Nov 2009 11:54:10 -0800, dplatt@radagast.org (Dave Platt)
wrote:

>A piece of coax, with several ferrite beads or cores around it, *IS* a
>balun. It's a 1:1 "current balun".
(...)

Wow. Now, the light comes on. I haven't had any experience with
current baluns (except with consumer grade cheap TV/FM tuner front
ends) and didn't recognize the name or understand how they worked.
Thanks for the very nice, clear, and detailed explanation. (I can't
even find anything in your explanation to complain about).

--
Jeff Liebermann jeffl@cruzio.com
150 Felker St #D http://www.LearnByDestroying.com
Santa Cruz CA 95060 http://802.11junk.com
Skype: JeffLiebermann AE6KS 831-336-2558

3195. How can one make a dummyload from a LC circuit ?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-21 17:56:07 UTC
From: Ronald <try@not.com>
Message-ID: <4b0829be$0$21031$6d4158fb@reader.xsnews.nl>
Source record: 11907

It started when the dummyload was too small for a job. It's for 40 mtrs.
But making it is barely possible. It should have a Zo of 50 ohms ? And what
about the Q factor ? Looking on my swr meter it gets better when i put my
hands near it and at a very small C rate but still in the red.
Anyone ?

3196. Re: How can one make a dummyload from a LC circuit ?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-21 18:31:39 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <qsbgg5l3296que78vm3gmhgal1jj46pov9@4ax.com>
Source record: 11908

On Sat, 21 Nov 2009 18:56:07 +0100, "Ronald" <try@not.com> wrote:

>
>It started when the dummyload was too small for a job. It's for 40 mtrs.
>But making it is barely possible. It should have a Zo of 50 ohms ? And what
>about the Q factor ? Looking on my swr meter it gets better when i put my
>hands near it and at a very small C rate but still in the red.
> Anyone ?

Hi Ronald,

If you mean by "dummy load" something with a 50 Ohm match and
resistive (somewhat redundant to the 50 Ohms) then it has to be a
resistor (department of triple redundancy).

Finding a resistor that is sufficiently power rated is not a simple
(cheap) chore. Making your own will take time and ingenuity.

Consult:
Caddock Electronics, Inc.
17271 North Umpqua Hwy
http://www.caddock.com

for resistors that will fill the bill - once you build the heatsink.

73's
Richard Clark, KB7QHC

3197. Re: Matching on the MFJ-1800

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-21 19:15:26 UTC
From: amdx <amdx@knology.net>
Message-ID: <47d56$4b083c4e$18ec6dd7$9123@KNOLOGY.NET>
Source record: 11909
Cross-posted to: rec.radio.amateur.antenna,alt.internet.wireless

"Jeff Liebermann" <jeffl@cruzio.com> wrote in message
news:op6gg59o8l4bjbfc0p3duilgudkgkvrt25@4ax.com...
> On Fri, 20 Nov 2009 11:54:10 -0800, dplatt@radagast.org (Dave Platt)
> wrote:
>
>>A piece of coax, with several ferrite beads or cores around it, *IS* a
>>balun. It's a 1:1 "current balun".
> (...)
>
> Wow. Now, the light comes on. I haven't had any experience with
> current baluns (except with consumer grade cheap TV/FM tuner front
> ends) and didn't recognize the name or understand how they worked.
> Thanks for the very nice, clear, and detailed explanation. (I can't
> even find anything in your explanation to complain about).
>
> --
> Jeff Liebermann
For those of us that need more help.
http://vk1od.net/balun/W2DU/index.htm

3198. Re: How can one make a dummyload from a LC circuit ?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-21 19:47:54 UTC
From: dplatt@radagast.org
Message-ID: <aoslt6-ivc.ln1@radagast.org>
Source record: 11910

>It started when the dummyload was too small for a job. It's for 40 mtrs.
>But making it is barely possible. It should have a Zo of 50 ohms ? And what
>about the Q factor ? Looking on my swr meter it gets better when i put my
>hands near it and at a very small C rate but still in the red.
> Anyone ?

An LC circuit won't make a good dummy load.

A "pure" LC circuit is lossless... both the L and the C are pure reactances, and neither will (or can) dissipate any power.

In practice, you could make an LC series circuit which would be 50 ohms resistive at a single frequency... you'd use a really lousy inductor (one wound with many turns of small wire) which has a pretty significant DC resistance. The series C would be just enough to tune out (resonate) the inductance at the frequency you're going to be using it with. The inductor's ESR at this frequency is going to be higher than its DC resistance, due to skin effect and other loss phenomena.

The resulting circuit would *not* be 50 ohms resistive at other frequencies. It'll have a capacitive reactance at lower frequencies and an inductive reactance at higher frequencies.

Seems like an expensive and annoying way to make a dummy load. Unless you've got other requirements you haven't mentioned, I'd suggest just making a halfway-decent dummy load from a bunch of noninductive resistors (e.g. in series-parallel) mounted on some sort of heatsink.

--
Dave Platt <dplatt@radagast.org> AE6EO
Friends of Jade Warrior home page: http://www.radagast.org/jade-warrior
I do _not_ wish to receive unsolicited commercial email, and I will
boycott any company which has the gall to send me such ads!

3199. Re: Xmit loop antenna for all bands.Dbl helix cont'd

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-21 20:49:23 UTC
From: Art Unwin <arthurunwin@gmail.com>
Message-ID: <2b691bbf-d4ee-476c-986e-cb354fd830ce@c3g2000yqd.googlegroups.com>
Source record: 11911

On Nov 21, 6:34 am, Dave <k1...@arrl.net> wrote:
> On Nov 21, 4:32 am, Bill <k4...@arrl.net> wrote:
>
> >http://forums.qrz.com/showthread.php?p=1772097#post1772097
>
> he does like to spread his bs around doesn't he. maybe he didn't find
> enough support on here.

That is because the only criticism was the same as my great
grandaughter would utter, because she lacks the logic of explaining
why! More than 6K viewed my post on the double helix antenna with no
where near the reliance on spam as as with this group.
It was for that reason I have placed a thread, on record, on how to
make the smallest radiator possible which is in contrast to the Yagi
design and where I also stated a theorem for radiation to which the
most efficient non electrical wavelength radiator conforms .

3200. Re: Comparision NO Feedback??

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-21 22:23:12 UTC
From: amdx <amdx@knology.net>
Message-ID: <70e97$4b086850$18ec6dd7$11171@KNOLOGY.NET>
Source record: 11912
Cross-posted to: rec.radio.amateur.antenna,alt.internet.wireless

>>> I'll try the
>>>comparision.
>>
>> Doing it on a boat might be a problem. You're too close to the water
>> which will probably be inside the Fresnel Zone. The water also acts
>> as a great reflector. Thinks also move on a vessel, making stable
>> readings difficult. I do my testing across a valley, where there's
>> little chance of ground reflections (and there's a convenient 2.4GHz
>> RF source from the local mountain top WISP). The path also has a wall
>> of 40 meter high trees on both side to attenuate any interference.
>
>>Jeff Liebermann
>
> All that may be true, sorry King, is true.
> My antennas are 14ft above the water and the signal only goes over water
> for about 30ft
> before a concrete parking lot fills the rest of the distance to my
> targets. Total target distance
> is about 600ft. The antennas are tipped upward about 10 degrees.
> Here's the test I performed, I aligned the panel and the yagi on a pole
> with about the 2ft between the yagi and the center of the panel. I aimed
> at the target as
> accurately a I could see. (Center of condo building) During testing I did
> not terminate the unused
> antenna.
> I used net stumbler for signal strength numbers, I received 42 signals
> with the Panel,
> and 44 signals with the yagi.
> The one signal I usually use went from -48db (panel) to -50db (yagi),
> That's +2db for the Panel.
> Then I did a Netstumbler screen print of the first 35 signals using the
> yagi and then the panel.
> I added all 35 signal strengths and divided by the 35, to get an average
> signal.
> (35 is all that fit the screen without scrolling)
> The Panel AVE = -58.11db, the Yagi AVE = 59.9db that is + 1.79db for the
> Panel.
> So if you have any faith in my method, it looks like the yagi is down
> about 2db from the Panel.
> I'm impressed, the MFJ-1800 yagi is advertised as a 15dbi antenna, the
> panel
> as 19dbi antenna.
> Here's the Panel seller for the 19dbi panel antenna.

> http://www.fab-corp.com/product.php?productid=549&cat=255&page=1
> At one time I found antenna plots for it, but can't locate them now.
> Here's the yagi seller.
> http://www.mfjenterprises.com/Product.php?productid=MFJ-1800
> Thanks, Mike
> PS.
> Previously a saw 33 signals, I had never tried to optimize by adjusting
> the antenna, 33 was
> good enough. While mounting the yagi I moved the position of the panel,
> looks like
> I found a better position. :-)
>
>
>
>

3201. Re: Matching on the MFJ-1800

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-21 22:52:16 UTC
From: Jeff Liebermann <jeffl@cruzio.com>
Message-ID: <lvqgg5dvviv2bvjeoli0deuun2pt1alfo4@4ax.com>
Source record: 11913
Cross-posted to: rec.radio.amateur.antenna,alt.internet.wireless

On Fri, 20 Nov 2009 13:18:15 -0600, "amdx" <amdx@knology.net> wrote:

>
>"Jeff Liebermann" <jeffl@cruzio.com> wrote in message
>news:2hjdg5tod7mvqkg4330351pf5aietfej95@4ax.com...
>> On Thu, 19 Nov 2009 18:46:59 -0600, "amdx" <amdx@knology.net> wrote:
>>
>>> Sure, as soon as I try to make you King you find work for me :-)
>>
>> I hate to tell you this, but that's what kings are paid to do. They
>> give orders. Do you require a public proclamation, executive order,
>> or pontifical bull (in Latin), in order to be properly inspired? Now,
>> pleae do some testing. After all this is your antenna, your question
>> and your problem.
>>
>>>Ya, I have quad panel on the boat, when I get some time I'll try the
>>>comparision.
>>
>> Doing it on a boat might be a problem. You're too close to the water
>> which will probably be inside the Fresnel Zone. The water also acts
>> as a great reflector. Thinks also move on a vessel, making stable
>> readings difficult. I do my testing across a valley, where there's
>> little chance of ground reflections (and there's a convenient 2.4GHz
>> RF source from the local mountain top WISP). The path also has a wall
>> of 40 meter high trees on both side to attenuate any interference.
>
>>Jeff Liebermann
>
> All that may be true, sorry King, is true.

What a king says is by definition true, even if it's wrong.

>My antennas are 14ft above the water and the signal only goes over water for
>about 30ft
>before a concrete parking lot fills the rest of the distance to my targets.
>Total target distance
>is about 600ft. The antennas are tipped upward about 10 degrees.

Sounds good. You're out of the Fresnel Zone and the parking lot isn't
going to contribute any reflections.

> Here's the test I performed, I aligned the panel and the yagi on a pole
>with about the 2ft between the yagi and the center of the panel.

Not so good. You can't leave a bunch of potentially resonant metal
hanging around that close to the antenna. The unsused antenna could
easily be re-radiating anything it pickups up from the other antenna.
One antenna at a time please.

>I aimed at
>the target as
>accurately a I could see. (Center of condo building) During testing I did
>not terminate the unused
>antenna.

Ugh. If you're shooting into what's essentially and indoor wireless
router, you're going to get reflections from the building and in
particular, from the room where the AP is located. Also, not so good.

>I used net stumbler for signal strength numbers, I received 42 signals with
>the Panel,
>and 44 signals with the yagi.

How steady were the readings? With my experience with Netstumbler, if
I wait a few minutes, the readings will move around perhaps 2-5dB. Are
you doing this on Channel 6 (middle of the band) or near the band
edges?

>The one signal I usually use went from -48db (panel) to -50db (yagi),
>That's +2db for the Panel.
>Then I did a Netstumbler screen print of the first 35 signals using the yagi
>and then the panel.
>I added all 35 signal strengths and divided by the 35, to get an average
>signal.
>(35 is all that fit the screen without scrolling)
>The Panel AVE = -58.11db, the Yagi AVE = 59.9db that is + 1.79db for the
>Panel.

Good idea but not really valid as you're probably measauring the side
lobes of the antennas. An antenna with many side lobes is going to
hear more stations than one with just a single major lobe.

>So if you have any faith in my method, it looks like the yagi is down about
>2db from the Panel.
> I'm impressed, the MFJ-1800 yagi is advertised as a 15dbi antenna, the
>panel
>as 19dbi antenna.

I have less faith in the RSSI linearity of thatever you're using for a
wireless device. -50dBm isn't particularly saturated, so presumably,
the comparison is valid. There might be some gain compression at high
signal levels, which explains why you're seeing 2dB difference instead
of 4dB. I would have predicted a larger difference as my NEC model of
the MFJ-1800 predicts a gain of about 13dBi. I would have expected an
even larger difference.

>Here's the Panel seller for the 19dbi panel antenna.
>http://www.fab-corp.com/product.php?productid=549&cat=255&page=1

>At one time I found antenna plots for it, but can't locate them now.
>Here's the yagi seller.
>http://www.mfjenterprises.com/Product.php?productid=MFJ-1800

--
Jeff Liebermann jeffl@cruzio.com
150 Felker St #D http://www.LearnByDestroying.com
Santa Cruz CA 95060 http://802.11junk.com
Skype: JeffLiebermann AE6KS 831-336-2558

3202. Re: Matching on the MFJ-1800

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-22 00:14:42 UTC
From: amdx <amdx@knology.net>
Message-ID: <1bfd2$4b088273$18ec6dd7$30477@KNOLOGY.NET>
Source record: 11914
Cross-posted to: rec.radio.amateur.antenna,alt.internet.wireless

"Jeff Liebermann" <jeffl@cruzio.com> wrote in message
news:lvqgg5dvviv2bvjeoli0deuun2pt1alfo4@4ax.com...
> On Fri, 20 Nov 2009 13:18:15 -0600, "amdx" <amdx@knology.net> wrote:
>
>>
>>"Jeff Liebermann" <jeffl@cruzio.com> wrote in message
>>news:2hjdg5tod7mvqkg4330351pf5aietfej95@4ax.com...
>>> On Thu, 19 Nov 2009 18:46:59 -0600, "amdx" <amdx@knology.net> wrote:
>>>
>>>> Sure, as soon as I try to make you King you find work for me :-)
>>>
>>> I hate to tell you this, but that's what kings are paid to do. They
>>> give orders. Do you require a public proclamation, executive order,
>>> or pontifical bull (in Latin), in order to be properly inspired? Now,
>>> pleae do some testing. After all this is your antenna, your question
>>> and your problem.
>>>
>>>>Ya, I have quad panel on the boat, when I get some time I'll try the
>>>>comparision.
>>>
>>> Doing it on a boat might be a problem. You're too close to the water
>>> which will probably be inside the Fresnel Zone. The water also acts
>>> as a great reflector. Thinks also move on a vessel, making stable
>>> readings difficult. I do my testing across a valley, where there's
>>> little chance of ground reflections (and there's a convenient 2.4GHz
>>> RF source from the local mountain top WISP). The path also has a wall
>>> of 40 meter high trees on both side to attenuate any interference.
>>
>>>Jeff Liebermann
>>
>> All that may be true, sorry King, is true.
>
> What a king says is by definition true, even if it's wrong.
>
>>My antennas are 14ft above the water and the signal only goes over water
>>for
>>about 30ft
>>before a concrete parking lot fills the rest of the distance to my
>>targets.
>>Total target distance
>>is about 600ft. The antennas are tipped upward about 10 degrees.
>
> Sounds good. You're out of the Fresnel Zone and the parking lot isn't

> going to contribute any reflections.
>
>> Here's the test I performed, I aligned the panel and the yagi on a pole
>>with about the 2ft between the yagi and the center of the panel.
>
> Not so good. You can't leave a bunch of potentially resonant metal
> hanging around that close to the antenna. The unsused antenna could
> easily be re-radiating anything it pickups up from the other antenna.
> One antenna at a time please.

Ok, measuring antennas is never easy, I'll hopefully get some time next
week.
I won't bore you with the details, but the campaign I'm running is
eventually going to have the party overthrow a king. :-)
I'll install one antenna at a time.

>>I aimed at
>>the target as
>>accurately a I could see. (Center of condo building) During testing I did
>>not terminate the unused
>>antenna.
>
> Ugh. If you're shooting into what's essentially and indoor wireless
> router, you're going to get reflections from the building and in
> particular, from the room where the AP is located. Also, not so good.
>

Well, I guess I'm $#%^ed.

Measuring antennas is never easy.

>>I used net stumbler for signal strength numbers, I received 42 signals
>>with
>>the Panel,
>>and 44 signals with the yagi.
>
> How steady were the readings? With my experience with Netstumbler, if
> I wait a few minutes, the readings will move around perhaps 2-5dB. Are
> you doing this on Channel 6 (middle of the band) or near the band
> edges?
>

I didn't see any changes but I only paid attention to the one signal I
normally use.

I received on the channel the source transmited on.

Here's a file of the two screenprints with channel and signal strength.

http://i395.photobucket.com/albums/pp37/Qmavam/Comparisionofwfiantennas.jpg

For what its worth.

>>The one signal I usually use went from -48db (panel) to -50db (yagi),
>>That's +2db for the Panel.
>>Then I did a Netstumbler screen print of the first 35 signals using the
>>yagi
>>and then the panel.
>>I added all 35 signal strengths and divided by the 35, to get an average
>>signal.
>>(35 is all that fit the screen without scrolling)
>>The Panel AVE = -58.11db, the Yagi AVE = 59.9db that is + 1.79db for the
>>Panel.
>
> Good idea but not really valid as you're probably measauring the side
> lobes of the antennas. An antenna with many side lobes is going to
> hear more stations than one with just a single major lobe.
>

Who knows, I think the whole condo is in the major lobe and nothing but
water

on one side and on the other side I doubt there are any signals. I do recall
one -80 db

signal so maybe something in the side lobe.

>>So if you have any faith in my method, it looks like the yagi is down
>>about
>>2db from the Panel.
>> I'm impressed, the MFJ-1800 yagi is advertised as a 15dbi antenna, the
>>panel
>>as 19dbi antenna.
>
> I have less faith in the RSSI linearity of thatever you're using for a
> wireless device. -50dBm isn't particularly saturated, so presumably,
> the comparison is valid. There might be some gain compression at high
> signal levels, which explains why you're seeing 2dB difference instead
> of 4dB. I would have predicted a larger difference as my NEC model of
> the MFJ-1800 predicts a gain of about 13dBi. I would have expected an
> even larger difference.

Measuring antennas is never easy.

I note my laptop within 20ft of the router has a -36db signal using
netstumbler.

Thanks for your help Jeff,

Mike

Thanks to Richard too.

3203. Re: Xmit loop antenna for all bands.Dbl helix cont'd

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-22 00:31:23 UTC
From: Dave <k1ttt@arrl.net>
Message-ID: <7260acfb-e1cf-49c3-b32a-933cc961628f@s31g2000yqs.googlegroups.com>
Source record: 11915

On Nov 21, 8:49 pm, Art Unwin <arthurun...@gmail.com> wrote:
> On Nov 21, 6:34 am, Dave <k1...@arrl.net> wrote:
>
> > On Nov 21, 4:32 am, Bill <k4...@arrl.net> wrote:
>
> > >http://forums.qrz.com/showthread.php?p=1772097#post1772097
>
> > he does like to spread his bs around doesn't he. maybe he didn't find
> > enough support on here.
>
> That is because the only criticism was the same as my great
> grandaughter would utter, because she lacks the logic of explaining
> why! More than 6K viewed my post on the double helix antenna with no
> where near the reliance on spam as as with this group.
> It was for that reason I have placed a thread, on record, on how to
> make the smallest radiator possible which is in contrast to the Yagi
> design and where I also stated a theorem for radiation to which the
> most efficient non electrical wavelength radiator conforms .

well, i'm glad you found a group that matches your level of
incompetance. enjoy them for they don't know what they don't know.

3204. Re: Xmit loop antenna for all bands.Dbl helix cont'd

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-22 00:46:12 UTC
From: tom <news4792@taring.org>
Message-ID: <4b0889cb$0$33857$8046368a@newsreader.iphouse.net>
Source record: 11916

Art Unwin wrote:
> On Nov 21, 6:34 am, Dave <k1...@arrl.net> wrote:
>> On Nov 21, 4:32 am, Bill <k4...@arrl.net> wrote:
>>
>>> http://forums.qrz.com/showthread.php?p=1772097#post1772097
>> he does like to spread his bs around doesn't he. maybe he didn't find
>> enough support on here.
>
> That is because the only criticism was the same as my great
> grandaughter would utter, because she lacks the logic of explaining
> why! More than 6K viewed my post on the double helix antenna with no
> where near the reliance on spam as as with this group.
> It was for that reason I have placed a thread, on record, on how to
> make the smallest radiator possible which is in contrast to the Yagi
> design and where I also stated a theorem for radiation to which the
> most efficient non electrical wavelength radiator conforms .

You claim amazing properties for your designs, and yet either you won't
tell us how to make them, or in this case, they are nonsensical junk.

And they are accompanied by made up physics, which is, at least,
entertaining science fiction.

Ah yes, Art Unwyn, SciFi master.

tom
K0TAR

3205. Re: Matching on the MFJ-1800

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-22 00:50:06 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <pk2hg59q12vue0iurjacrarbgivav9lcmh@4ax.com>
Source record: 11918
Cross-posted to: rec.radio.amateur.antenna,alt.internet.wireless

On Sat, 21 Nov 2009 18:14:42 -0600, "amdx" <amdx@knology.net> wrote:

> Here's a file of the two screenprints with channel and signal strength.
>
>http://i395.photobucket.com/albums/pp37/Qmavam/Comparisionofwfiantennas.jpg
>
>For what its worth.

Hi Mike,

Seems like hardly a difference (within half a dB) of each other.

73's
Richard Clark, KB7QHC

3206. Re: (OT) Inventing a Better Patent System

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-22 00:50:16 UTC
From: Art Unwin <arthurunwin@gmail.com>
Message-ID: <0b9eb539-b4df-4a5d-b8fe-57aaf4cdf675@d10g2000yqh.googlegroups.com>
Source record: 11917

On Nov 18, 11:00 am, Richard Clark <kb7...@comcast.net> wrote:
> On Wed, 18 Nov 2009 07:04:03 +0000 (UTC), "Geoffrey S. Mendelson"
>
> <g...@mendelson.com> wrote:
> >While it was very limited in its understanding of the problems,
> >at least it was an attempt to fix the problem instead of scrapping the
> >whole system or reducing its scope (e.g. eliminating software patents).
>
> Hi Geoffrey,
>
> I think they should be sent to the bit-bucket. This is a point where
> claims are specific and a huge amount of published patents have
> clearly been built from work existing in the Public Domain for
> decades.
>
> Going back to the populist nature of an "Inventor," too many are
> corporations hiding behind this cultural perception while they crush
> innovation with offices full of attorneys hammering down individuals
> who can't afford the cost of litigation.
>
> >First to invent has its problems too. Without a system of publication, one
> >can simply describe inventions in dated documentation and wait for other
> >people to patent them. Then you just show up with proof of first invention
> >and collect your patent someone else paid for.
>
> It doesn't work that way. What you are describing is an IP that has
> been ceded to the Public Domain, not patented as if it were a grab at
> the brass ring.
>
> >Possibly a system where patent applications are published within 30 days of
> >recepit and the amount of time to file claims of prior invention are limited
> >to a year or 18 months.
>
> Prior art is not a limited, moving window in time. Otherwise, we
> would be flooded with re-inventions of the telephone every year and
> half by your method.
>
> >This would also require the publication of provisional patent applications
> >which is currently never done.
>
> They are always done. For the bulk of invention, provisional patents
> are often copies of press releases, journal articles, degree work,
> papers for presentation and so on. And it hardly matters unless the
> party files an actual application. Again, this was put to bed in 1995

> and is supported by the international field. In fact, you need only
> attach one claim to a provisional patent and you have international
> protection. The claim can even be changed later!
>
> >The effect of the bonus system has been to change a patent application from
> >the final step in the process to one near the begining. This has been a
> >windfall for the top patent lawyers who can successfully navigate the appeal
> >process and a disaster for the small inventor or patent agent.
>
> Sound like the Patent system I was very much a part of in the 80s and
> 90s. Being a small inventor, it was actually quite to my advantage
> (the market practicalities aside).
>
> >I expect that one of the smaller countries with a minimally functioning
> >patent system will take over. They will, for a large fee, issue a patent
> >quickly and quietly. Something like for a $100k fee, they will issue a
> >patent without publication of the application, in 6-8 weeks.
>
> >Once they issue the patent, as US patent via the Patent Cooperation Treaty
> >is assured. It does not matter if the US application takes years or there
> >are any appeals and so on. You have what is in effect a US patent and just
> >have to wait for the paperwork to catch up.
>
> I would think that 14 years of experience would have revealed this
> anticipated grief by now. Getting a patent faster does not make the
> ideas come sooner to submit that fast-track application.
>
> 73's
> Richard Clark, KB7QHC

What is lost in this review of the frailty of our patent system is the
destructive interference
of what we refer to as justice. Not only does law change with the
current meaning of the word in this country other countries ensure
that the intent of the written word is determined
at the point that the law is made. It is for this reason that the U.S.
has more lawyers than any other country as all laws as with the
written word changes with the passing of time. At least in the eyes of
experienced debaters. Another deterent to fairness of patent
protection
is that other countries has that the "loser pays ALL costs generated
by the suit" !
In the U.S. for some reason each pays their own costs regardless if
the charge was malicious or not. Thus we have a continuance of suits
and countersuits depending on the finances of both or the amount of
money that can be made during the generated passing of time. Many
examples of this can be seen in the many pharmacutical cases.
Worst of all, with respect to fairness in the protection of patents,
is when the true owner of a patent has not the funds such that he can
keep pace with the challenger such that the time comes when he has not

the funds to appear in court and thus the challenger unjustly wins his case. Not on the merits of justice but on the amount of funds he is willing to spend compared to the losses incurred by violating patent law.
Present patent law attempts to combat these problems by giving prime responsabiulity to the PTO but we are finding that justices resent this action and are more than willing to accept cases where they gain back their original powers.which is not always dependent on justice.
From the congressional side of any so called change in justice, one cannot ignore that the patent system is a "cash cow", revenue that any congress is not willing to give up as part of his rescources for spending.

3207. Cobwebb element formula??

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-22 08:28:56 UTC
From: Lee <lo12a4519@blueyonder.co.uk>
Message-ID: <dD6Om.52612$Pi5.29703@newsfe08.ams2>
Source record: 11919

Is there a formula to set the gamma match on a Cobwebb type element??
as I have built a Cobwebb ant for the higher shortwave broadcast bands
using normal unmatched dipoles (468/f) but I don`t think it is optimal hence
the need to gamma match!!

Regards.

Lee ...G6ZSG.

3208. The antenna of AC7JF?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-23 00:32:47 UTC
From: "J. Mc Laughlin" <jcm@power-net.net>
Message-ID: <48idnR8BXqaoRZTWnZ2dnUVZ_tKdnZ2d@bright.net>
Source record: 11920

Dear Group:

A long time colleague of mine, who was once my student and is now retired, is also a great fan of antennas. While driving around Lake Havasu City, AZ, looking at antennas - do we not all do that when we travel - he spotted (and photographed) the antenna of AC7JF.

The antenna can be seen at: docpg.org

The antenna appears to have four, yagi style elements, to be feeding one element with a second element connected to the driven element with a transposed TL, and appears to be using stubs on the ends of the elements to effect tri-band performance.

Hy-Gain uses a similar scheme on one of their verticals.

I think that I have seen this antenna before, but I can no longer place it. Any suggestions?

73, Mac N8TT
--
J. McLaughlin; Michigan, USA
Home: JCM@power-net.net

3209. Re: The antenna of AC7JF?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-23 02:40:02 UTC
From: tom <news4792@taring.org>
Message-ID: <4b09f5f3$0$47480$8046368a@newsreader.iphouse.net>
Source record: 11921

J. Mc Laughlin wrote:
> Dear Group:
>
> A long time colleague of mine, who was once my student and is now retired,
> is also a great fan of antennas. While driving around Lake Havasu City, AZ,
> looking at antennas - do we not all do that when we travel - he spotted (and
> photographed) the antenna of AC7JF.
>
> The antenna can be seen at: docpg.org
>
> The antenna appears to have four, yagi style elements, to be feeding one
> element with a second element connected to the driven element with a
> transposed TL, and appears to be using stubs on the ends of the elements to
> effect tri-band performance.
>
> Hy-Gain uses a similar scheme on one of their verticals.
>
> I think that I have seen this antenna before, but I can no longer place it.
> Any suggestions?
>
> 73, Mac N8TT

It's a bit hard to see, but it looks like the feed (left to right in the
picture) is to the 2nd element with a crossed phase parallel line to the
third.

tom
K0TAR

3210. Re: The antenna of AC7JF?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-23 03:12:21 UTC
From: Ralph Mowery <rmowery28146@earthlink.net>
Message-ID: <aeSdncA3j_gbYJTWnZ2dnUVZ_sCdnZ2d@earthlink.com>
Source record: 11922

"J. Mc Laughlin" <jcm@power-net.net> wrote in message
news:48idnR8BXqaoRZTWnZ2dnUVZ_tKdnZ2d@bright.net...
> Dear Group:
>
> A long time colleague of mine, who was once my student and is now retired,
> is also a great fan of antennas. While driving around Lake Havasu City,
> AZ, looking at antennas - do we not all do that when we travel - he
> spotted (and photographed) the antenna of AC7JF.
>
> The antenna can be seen at: docpg.org
>
> The antenna appears to have four, yagi style elements, to be feeding one
> element with a second element connected to the driven element with a
> transposed TL, and appears to be using stubs on the ends of the elements
> to effect tri-band performance.
>
> Hy-Gain uses a similar scheme on one of their verticals.
>
> I think that I have seen this antenna before, but I can no longer place
> it. Any suggestions?
>
> 73, Mac N8TT

Probably this one:
http://www.hamanuals.com/MMans/KLM80.pdf

A KLM-34A.

I am not sure why they went out of business, but they seemed to make good
antennas. I have the OSCAR combination of the 2 meter and 432 mhz system.

3211. Re: The antenna of AC7JF?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-23 04:20:39 UTC
From: "J. Mc Laughlin" <jcm@power-net.net>
Message-ID: <EOednb32RIkKkJfWnZ2dnUVZ_t6dnZ2d@bright.net>
Source record: 11923

Dear Ralph Mowery, KU4PT:

Spot on! Thanks.

Complicated antenna. Would be a big challenge to model.

73, Mac N8TT

--
J. McLaughlin; Michigan, USA
Home: JCM@power-net.net
"Ralph Mowery" <rmowery28146@earthlink.net> wrote in message
news:aeSdncA3j_gbYJTWnZ2dnUVZ_sCdnZ2d@earthlink.com...
>
> "J. Mc Laughlin" <jcm@power-net.net> wrote in message
> news:48idnR8BXqaoRZTWnZ2dnUVZ_tKdnZ2d@bright.net...
>> Dear Group:
>>
>> A long time colleague of mine, who was once my student and is now
>> retired, is also a great fan of antennas. While driving around Lake
>> Havasu City, AZ, looking at antennas - do we not all do that when we
>> travel - he spotted (and photographed) the antenna of AC7JF.
>>
>> The antenna can be seen at: docpg.org
>>
>> The antenna appears to have four, yagi style elements, to be feeding one
>> element with a second element connected to the driven element with a
>> transposed TL, and appears to be using stubs on the ends of the elements
>> to effect tri-band performance.
>>
>> Hy-Gain uses a similar scheme on one of their verticals.
>>
>> I think that I have seen this antenna before, but I can no longer place
>> it. Any suggestions?
>>
>> 73, Mac N8TT
>
> Probably this one:
> http://www.hamanuals.com/MMans/KLM80.pdf
>
> A KLM-34A.
>
> I am not sure why they went out of business, but they seemed to make good
> antennas. I have the OSCAR combination of the 2 meter and 432 mhz
> system.

>
>
>

3212. Re: The antenna of AC7JF?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-23 04:38:10 UTC
From: Jeff Liebermann <jeffl@cruzio.com>
Message-ID: <p74kg558aooqb0mv69629hc2re8fbi3h9f@4ax.com>
Source record: 11924

On Sun, 22 Nov 2009 22:12:21 -0500, "Ralph Mowery"
<rmowery28146@earthlink.net> wrote:

>Probably this one:
>http://www.hamanuals.com/MMans/KLM80.pdf
>
>A KLM-34A.
>
>I am not sure why they went out of business, but they seemed to make good
>antennas. I have the OSCAR combination of the 2 meter and 432 mhz system.

This might explain some of it:
<http://www.qsl.net/wb6jnn/middle.htm>
"Unfortunately, the Ham Radio business isn't as lucrative as most hams
think it is, especially for a U.S. based manufacturer. While Japanese
companies have all of their million plus ham market plus Europe plus
the U.S., we had only the domestic market which at that time was not
in a growth mode. KLM was sold to a new owner in 1979. It later sold
again and ultimately adopted the Mirage label for its amplifier line
(based on Ken Holladay's designs, originally) and has since then split
up to seperate owners for the antenna and amplifier businesses. The
KLM antenna line, in fact, disappeared abruptly late in 1999."

--
Jeff Liebermann jeffl@cruzio.com
150 Felker St #D http://www.LearnByDestroying.com
Santa Cruz CA 95060 http://802.11junk.com
Skype: JeffLiebermann AE6KS 831-336-2558

3213. Re: Noise to signal ratio

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-23 14:26:19 UTC
From: Michael Coslo <mjc5@psu.edu>
Message-ID: <hee62b$b03e$1@tr22n12.aset.psu.edu>
Source record: 11925

Richard Clark wrote:
> On Thu, 19 Nov 2009 14:26:16 -0500, Michael Coslo <mjc5@psu.edu>
> wrote:
>
>> Out of 67 new posts, only one
>> didn't go to my bozo bin.
>
>
> ? ? ? ? ? ? ?
>
> Hi Mike,
>
> I've barely seen more than 4 posts all day: one from you (this) and
> mike, and two from Jeff. My two would boost that further - but 67?
>
> My filters haven't rung that loud.

Could have been a server burp. My news server does that occasionally.

- 73 de Mike N3LI -

3214. Re: How can one make a dummyload from a LC circuit ?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-23 18:15:13 UTC
From: Ronald <try@not.com>
Message-ID: <4b0ad14a$0$22757$6d4158fb@reader.xsnews.nl>
Source record: 11926

"Dave Platt" <> wrote to us
> >It started when the dummyload was too small for a job. It's for 40 mtrs.
>>But making it is barely possible. It should have a Zo of 50 ohms ? And what
>>about the Q factor ? Looking on my swr meter it gets better when i put my
>>hands near it and at a very small C rate but still in the red.
>> Anyone ?
> A "pure" LC circuit is lossless... both the L and the C are pure
> reactances, and neither will (or can) dissipate any power.

Not dissipate but surely radiate in a closed box!

>
> In practice, you could make an LC series circuit which would be 50
> ohms resistive at a single frequency...

Yes, it's for a single frequency. Since an antenne is also a LC-circuit
that doesn't get warm but radiates in fields.

I had it all open built so i suspect mantelwaves etc. But on paper a series
LC circuit forms a loading of a particular Zo. This statement is still right?
Lets say an input on a semiconductor p.a. stage with an LC series circuit..

3215. Re: How can one make a dummyload from a LC circuit ?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-23 18:18:37 UTC
From: Ronald <try@not.com>
Message-ID: <4b0ad20c$0$16983$6d4158fb@reader.xsnews.nl>
Source record: 11927

Suppose we feed 20 watts in a p.a. but don't want to use a dummyload
in the p.a. Come on this is done all the time.

3216. Re: How can one make a dummyload from a LC circuit ?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-23 18:39:52 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <q9llg5p88oad37m5bktn54422urf5iq88k@4ax.com>
Source record: 11928

On Mon, 23 Nov 2009 19:18:37 +0100, "Ronald" <try@not.com> wrote:

>
> Suppose we feed 20 watts in a p.a. but don't want to use a dummyload
> in the p.a. Come on this is done all the time.
>

Ronold,

Your discussion gives every impression that you don't know
1. what a dummy load is
2. what it is for
3. why it is principally resistive.

Your statement above is true on the face of it, but has no meaning
beyond a tautology: you don't use a dummy load IN a p.a. because you
don't use a dummy load in a p.a. So what?

So, the direct answer to the question in the Subject line:
How can one make a dummyload from a LC circuit ?
is:
You don't

You seem to be hedging around another purpose but don't want to tip
your hand. Obfuscation does not help find answers.

73's
Richard Clark, KB7QHC

3217. Re: How can one make a dummyload from a LC circuit ?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-23 19:39:39 UTC
From: christofire <christofire@btinternet.com>
Message-ID: <PvCdnYfjvt-ceJfWnZ2dnUVZ8iKdnZ2d@bt.com>
Source record: 11929

"Richard Clark" <kb7qhc@comcast.net> wrote in message
news:q9llg5p88oad37m5bktn54422urf5iq88k@4ax.com...
> On Mon, 23 Nov 2009 19:18:37 +0100, "Ronald" <try@not.com> wrote:
>
>>
>> Suppose we feed 20 watts in a p.a. but don't want to use a dummyload
>> in the p.a. Come on this is done all the time.
>>
>
> Ronold,
>
> Your discussion gives every impression that you don't know
> 1. what a dummy load is
> 2. what it is for
> 3. why it is principally resistive.
>
> Your statement above is true on the face of it, but has no meaning
> beyond a tautology: you don't use a dummy load IN a p.a. because you
> don't use a dummy load in a p.a. So what?
>
> So, the direct answer to the question in the Subject line:
> How can one make a dummyload from a LC circuit ?
> is:
> You don't
>
> You seem to be hedging around another purpose but don't want to tip
> your hand. Obfuscation does not help find answers.
>
> 73's
> Richard Clark, KB7QHC

I'd like to know more about the 'mantelwaves'!

Chris

3218. Re: How can one make a dummyload from a LC circuit ?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-23 19:53:39 UTC
From: Jeff Liebermann <jeffl@cruzio.com>
Message-ID: <uoplg51vg585fci7q6t9fm59mn5ogn4hkf@4ax.com>
Source record: 11930

On Mon, 23 Nov 2009 19:18:37 +0100, "Ronald" <try@not.com> wrote:

> Suppose we feed 20 watts in a p.a. but don't want to use a dummyload
> in the p.a. Come on this is done all the time.

The only reason that works is that the transmitter has a protection circuit that detects high VSWR and either reduces power or shuts down. The idea is to not destroy the output xisitors. Into an infinite VSWR load, you can easily find twice the collector voltage across the output stages, which on many radios, will destroy the xsistors. With other type of loads, the output stages could easily draw twice their rated current, this time destroying them with too much dissipation.

Judging by your wording, I don't think you have a clue what a dummy load does or where to install it. It's not "in" the PA stage. It's after the PA, after the low pass filter, after the T/R switch, and in place of the antenna. You use a dummy load for testing and measurement so that you don't pollute the airwaves or fry your radio tuning into an unknown load.

--
Jeff Liebermann jeffl@cruzio.com
150 Felker St #D http://www.LearnByDestroying.com
Santa Cruz CA 95060 http://802.11junk.com
Skype: JeffLiebermann AE6KS 831-336-2558

3219. Re: How can one make a dummyload from a LC circuit ?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-23 20:13:56 UTC
From: dplatt@radagast.org
Message-ID: <417rt6-bo6.ln1@radagast.org>
Source record: 11931

>> A "pure" LC circuit is lossless... both the L and the C are pure
>> reactances, and neither will (or can) dissipate any power.
>
> Not dissipate but surely radiate in a closed box!

It will not radiate efficiently.

The radiation resistance of a physically-small coil is going to be
very small... a small fraction of 1 ohm. What your transmitter is
going to "see" will consist of:

- The radiation resistance of the circuit (probably less than 1 ohm),

in series with

- The loss resistance (mostly in the coil)

in series with

- Whatever reactance remains after the series L and C resonate against
one another.

If the coil is "perfect" (lossless) and the L and C reactances are
equal and opposite, then all you'll be left with is the radiation
resistance.

If it's in a closed (shielded) box, matters get *worse*. The presence
of the reflections from the walls will reduce the radiation resistance
even further.

Will your transmitter be happy with a load which looks almost exactly
like a short circuit to ground.

> Yes, it's for a single frequency. Since an antenne is also a LC-circuit
> that doesn't get warm but radiates in fields.

And it radiates with reasonable efficiency, precisely because it's
physically large - it has a substantial radiation resistance.

This will not be the case for a physically-small LC circuit.

> I had it all open built so i suspect mantelwaves etc. But on paper a series
> LC circuit forms a loading of a particular Zo. This statement is still right?

No, I don't think so... at least, not in the way that you think.

If you show us the specific circuit you're thinking of (components and
their values, wires, and desired operating frequency) we can analyze it.

> Lets say an input on a semiconductor p.a. stage with an LC series circuit..

A series LC circuit is not, by itself, going to present a resistive
impedance.

--
Dave Platt <dplatt@radagast.org> AE6EO
Friends of Jade Warrior home page: http://www.radagast.org/jade-warrior
I do _not_ wish to receive unsolicited commercial email, and I will
boycott any company which has the gall to send me such ads!

3220. Re: How can one make a dummyload from a LC circuit ?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-23 20:17:37 UTC
From: dplatt@radagast.org
Message-ID: <187rt6-bo6.ln1@radagast.org>
Source record: 11932

> Suppose we feed 20 watts in a p.a. but don't want to use a dummyload
> in the p.a. Come on this is done all the time.

Sure. If one does not want to have a dummy load in the PA, one uses
an *external* dummy load.

A dummy load, almost by definition, is something which accepts RF, and
dissipates it as heat. An ideal dummy load doesn't radiate at all. If
it does radiate significantly, we call it an "antenna".

One *cannot* magically make those 20 watts disappear. They either
have to be radiated (out into space) or converted to heat and
dissipated.

A small LC circuit will not do a good job of either of these things...
won't radiate efficiently and won't have enough resistance to act as a
comfortable dummy load (e.g. Zo near 50+0j).

--
Dave Platt <dplatt@radagast.org> AE6EO
Friends of Jade Warrior home page: http://www.radagast.org/jade-warrior
I do _not_ wish to receive unsolicited commercial email, and I will
boycott any company which has the gall to send me such ads!

3221. Re: Cobwebb element formula??

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-23 21:30:21 UTC
From: steveeh131047 <google@karinya.net>
Message-ID: <d73e0dda-ba9c-4a05-9513-d4112300f35f@g31g2000vbr.googlegroups.com>
Source record: 11933

Lee,

The "bent dipole" elements used in the CobWebb have a low feedpoint impedance - around 10-12 ohms. So the elements are formed as "folded dipoles" to get a 4:1 impedance transformation and raise the feedpoint impedance close to 50 ohms.

When you use "twin flex" for those elements you have to place the shorting links in the right place to account for the **differential-mode** velocity factor of the cable; otherwise you create two low reactance stubs which shunt the feedpoint and modify the impedance.

Take a look at the detailed description on my web site and PM me if it's not clear:

http://www.karinya.net/g3txq/folded_dipole/

You can avoid the need for folded dipoles entirely by using single-wire elements and putting a 1:4 current balun at the feedpoint. Here's how I did it:

http://www.karinya.net/g3txq/cobweb/

73,
Steve G3TXQ

On Nov 22, 8:28 am, "Lee" <lo12a4...@blueyonder.co.uk> wrote:
> Is there a formula to set the gamma match on a Cobwebb type element??
> as I have built a Cobwebb ant for the higher shortwave broadcast bands
> using normal unmatched dipoles (468/f) but I don`t think it is optimal hence
> the need to gamma match!!
>
> Regards.
>
> Lee ...G6ZSG.

3222. Re: Cobwebb element formula??

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-24 04:55:50 UTC
From: Lee <lo12a4519@blueyonder.co.uk>
Message-ID: <tHJOm.14526$vv.13551@newsfe12.ams2>
Source record: 11934

Thankyou for reply Steve,

I will get back to you via your email address.

Regards.

Lee ... G6ZSG.

"steveeh131047" <google@karinya.net> wrote in message
news:d73e0dda-ba9c-4a05-9513-d4112300f35f@g31g2000vbr.googlegroups.com...
Lee,

The "bent dipole" elements used in the CobWebb have a low feedpoint
impedance - around 10-12 ohms. So the elements are formed as "folded
dipoles" to get a 4:1 impedance transformation and raise the
feedpoint impedance close to 50 ohms.

When you use "twin flex" for those elements you have to place the
shorting links in the right place to account for the **differential-
mode** velocity factor of the cable; otherwise you create two low
reactance stubs which shunt the feedpoint and modify the impedance.

Take a look at the detailed description on my web site and PM me if
it's not clear:

http://www.karinya.net/g3txq/folded_dipole/

You can avoid the need for folded dipoles entirely by using single-
wire elements and putting a 1:4 current balun at the feedpoint. Here's
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73,
Steve G3TXQ

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> using normal unmatched dipoles (468/f) but I don`t think it is optimal
> hence
> the need to gamma match!!
>
> Regards.
>
> Lee ...G6ZSG.

3223. Re: Cobwebb element formula??

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-24 12:57:25 UTC
From: steveeh131047 <google@karinya.net>
Message-ID: <8cb0ca5d-2412-4cf2-a4d4-7b2f4762f296@r31g2000vbi.googlegroups.com>
Source record: 11935

Lee,

My eMails to you keep "bouncing" so I've tried your QRZ HotMail
address instead. If that doesn't work I'll post a response here.

73,
Steve G3TXQ

3224. Re: How can one make a dummyload from a LC circuit ?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-24 15:40:57 UTC
From: Michael Coslo <mjc5@psu.edu>
Message-ID: <heguqa$8k4c$1@tr22n12.aset.psu.edu>
Source record: 11936

Ronald wrote:
>
> Suppose we feed 20 watts in a p.a. but don't want to use a dummyload
> in the p.a. Come on this is done all the time.

Done all the time, but usually with resistive loads.

Could you elucidate exactly why you want to do this? I can't think of any good reason to use LC. I suspect you might have some terms and principles a little mixed up.

A dummy load is used to absorb RF power at the end of the transmit circuitry. The transmitter does everything it's supposed to do, but the power goes into the dummy load, and is dissipated as heat. Ideally no RF makes it out of the load.

The ideal impedance for a transmitter is resistive. For that nothing can beat a resistor.

- 73 de Mike N3LI -

3225. Re: Cobwebb element formula??

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-24 15:52:09 UTC
From: Lee <lo12a4519@blueyonder.co.uk>
Message-ID: <LiTOm.37375$Qc5.34597@newsfe29.ams2>
Source record: 11937

OK Steve, it must be my firewall but the hotmal one got through fine and you have a reply ... sorry about that.

Thanks for the info, all understood.

Lee ...G6ZSG.

"steveeh131047" <google@karinya.net> wrote in message news:8cb0ca5d-2412-4cf2-a4d4-7b2f4762f296@r31g2000vbi.googlegroups.com...
> Lee,
>
> My eMails to you keep "bouncing" so I've tried your QRZ HotMail
> address instead. If that doesn't work I'll post a response here.
>
> 73,
> Steve G3TXQ

3226. Re: How can one make a dummyload from a LC circuit ?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-24 17:00:42 UTC
From: Ronald <try@not.com>
Message-ID: <4b0c1155$0$17636$6d4158fb@reader.xsnews.nl>
Source record: 11938

"Dave Platt" wrote to our discintent:
> A small LC circuit will not do a good job of either of these things...
> won't radiate efficiently and won't have enough resistance to act as a
> comfortable dummy load (e.g. Zo near 50+0j).

All amateurs here who i suppose 'believe' to much. Do you go to church
every sunday ?
- sometimes dummyloads are used in input stages of a valve or mosfet p.a.
because valves and mosfet only use the rf voltage NOT the power.
So the driver stage (xmttr) has to be dummyloaded and tapped.
Understand ?
-Then the remark : " a LC circuit won't radiate efficiently " . So what?
Thats exactly what i need here.
- so every LC series circuit you see in schematics, ï¿½f you see them, you call
shortcuts ??
- If you use an antennatuner for a 'nittingneedle' you will get a 1:1, and we don't care
the
bad radiation pff, and that antennatuner has a series LC circuit inside !!
So no shortcut at all, dummy.
So whats your point ? I only asked about the practice of the consept.

I see its easier the become doctor in the usa then farmer in Belgium ...

3227. Re: How can one make a dummyload from a LC circuit ?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-24 17:27:33 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <jr5og5511assq8kimm3ob7ujlmm27qg51p@4ax.com>
Source record: 11939

On Tue, 24 Nov 2009 18:00:42 +0100, "Ronald" <try@not.com> wrote:

>I see its easier the become doctor in the usa then farmer in Belgium ...

Classic trolling.

3228. Re: How can one make a dummyload from a LC circuit ?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-24 23:25:26 UTC
From: dplatt@radagast.org
Message-ID: <6k6ut6-u0o.ln1@radagast.org>
Source record: 11940

In article <4b0c1155$0$17636$6d4158fb@reader.xsnews.nl>,
Ronald <try@not.com> wrote:

> - sometimes dummyloads are used in input stages of a valve or mosfet p.a.
> because valves and mosfet only use the rf voltage NOT the power.
> So the driver stage (xmttr) has to be dummyloaded and tapped.
> Understand ?

Sure. And, if those are truly "dummy loads", they are *not* simply LC
circuits. They have a resistor of some sort incorporated into them,
which is responsible for providing the correct termination impedance
and which serves to dissipate the power from the driver stage.

In other cases, what you call "dummy loads" for driving a MOSFET are
not simply "dummy loads". Rather, they are impedance transformers,
to step up the RF voltage to the correct level needed to switch the
MOSFET or tube properly.

In many cases, an LCR input stage to a final amplifier may have both
of these functions... impedance transformation *and* load termination.

> -Then the remark : " a LC circuit won't radiate efficiently " . So what?
> Thats exactly what i need here.

In standard radio technology, a "dummy load" is a device which
dissipates most of the power fed to it.

An LC circuit isn't one. You *need* something with resistance in it,
if you want to terminate the driving signal properly (i.e. dissipate
its power).

> - so every LC series circuit you see in schematics, f you see them, you call
> shortcuts ??

How in the world did you come to that ridiculous conclusion? Please
don't put words into my mouth.

LC circuits have *many* useful functions in a radio schematic. Two of
the primary ones are impedance transformation (matching), and
filtering (bandpass or notch).

Acting as a dummy load (in the accepted sense of the term) is *not*
one of the good functions of an LC.

> - If you use an antennatuner for a 'nittingneedle' you will get a 1:1, and we don't care
the
> bad radiation pff, and that antennatuner has a series LC circuit inside !!

That antenna tuner has an LCR in it. The "R" is the loss in the coil... as I pointed out several postings ago, a coil does have a loss resistance.

In the case you're talking about, "matching" a nitting-needle load with a typical T-configured antenna tuner may result in an apparent match. What's happening, is that you're creating a rather high-Q resonance inside the tuner... and all of the power is being dissipated in the coil's loss resistance. Very little of the power is actually going into the load - it's not really "matched".

The coil heats up, and (if you've got a cheaply-made tuner) you melt the coil form and burn up the tuner.

The problem with depending on this sort of circuit (e.g. using a coil, and a couple of capacitors) to dissipate power (acting as a very crude sort of "dummy load") is that it's unpredictable, dangerous, and inefficient.

It's unpredictable because the series resistance of the coil is typically not specified by the manufacturer. In fact, the better the coil (heavier wire, open-spaced windings) the lower the series resistance and the losses, which means that you have to use a higher-Q tuning (more critical adjustment) to establish the match.

It's dangerous, because the sort of small coils you'd normally find in the driver-to-final network of an amplifier can't dissipate the amount of power you're talking about (20 watts). They'll burn up.

It's inefficient, because for the price of one adjustable coil which can be tuned in this way (with a couple of capacitors), will give the correct termination impedance (typically 50 ohms), and not melt down or catch fire or otherwise self-destruct, you can buy *dozens* of very well made 50-ohm noninductive resistors, which will give a good flat termination impedance over a *much* wider frequency range than a high-Q resonant circuit. Such resistors will be cheaper, smaller, and more reliable than a lossy-LC-circuit kluge, and won't require any tuning at all to work properly.

> So no shortcut at all, dummy.
> So whats your point ?

My point is, you're attempting to choose the *wrong* technical solution for your problem. You'll waste money, and end up with a device which is bigger, tricker to tune, and less reliable than is necessary.

> I only asked about the practice of the consept.

And, the accepted engineering practice of this concept is "This is a bad idea, we don't do it that way. We use resistors."

--
Dave Platt <dplatt@radagast.org> AE6EO
Friends of Jade Warrior home page: http://www.radagast.org/jade-warrior
I do _not_ wish to receive unsolicited commercial email, and I will

boycott any company which has the gall to send me such ads!

3229. Re: How can one make a dummyload from a LC circuit ?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-25 01:49:15 UTC
From: tom <news4792@taring.org>
Message-ID: <4b0c8d02$0$47479$8046368a@newsreader.iphouse.net>
Source record: 11941

Dave Platt wrote:
> In article <4b0c1155$0$17636$6d4158fb@reader.xsnews.nl>,
> Ronald <try@not.com> wrote:
>
>> So no shortcut at all, dummy.
>> So whats your point ?
>
> My point is, you're attempting to choose the *wrong* technical
> solution for your problem. You'll waste money, and end up with a
> device which is bigger, tricker to tune, and less reliable than is
> necessary.
>

Your self control is admirable. I would have lost my temper, at least a
bit. He is just a troll, after all.

tom
K0TAR

3230. Re: The antenna of AC7JF?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-25 09:07:48 UTC
From: Jeff Liebermann <jeffl@cruzio.com>
Message-ID: <04rpg55ovhmcgup5il9sq2dkq1947r57pd@4ax.com>
Source record: 11942

On Sun, 22 Nov 2009 22:12:21 -0500, "Ralph Mowery"
<rmowery28146@earthlink.net> wrote:

>"J. Mc Laughlin" <jcm@power-net.net> wrote in message
>news:48idnR8BXqaoRZTWnZ2dnUVZ_tKdnZ2d@bright.net...
>> The antenna can be seen at: http://docpg.org

>Probably this one:
>http://www.hamanuals.com/MMans/KLM80.pdf
>
>A KLM-34A.

Yep. The photo looks like the original by KLM known as the KT-34. The
shorting bars are heavier (thicker) on the version currently made by
M2, known as the KT-34M2. See:
<http://www.m2inc.com>
<http://www.m2inc.com/products/kt/kt34/kt34m2.html>
<http://www.m2inc.com/products/klmaddon/index.html>
Better photos:
<http://n4zi.net/kt34xa_upgrade_page.htm>

Mike Staal (W6MYC), one of the founders of KLM, runs M2
<http://www.cq-vhf.com/M2AntennaFall06.html>
and might offer some assistance.

Doing a bit more Googling, I found plenty of detail at:
<http://lists.contesting.com/archives//html/towertalk/2008-04/msg00135.html>
<http://lists.contesting.com/archives//html/Towertalk/2008-03/msg00478.html>
which indicates that a model may be a challenge:

> For entertainment, and with low expectations, I put together a model of
> the KT34A using MMANA, recognizing that, for free, you cannot get high
> quality results. I can supply the input file if anyone is interested.
> M2 indicates that more sophisticated models are need to handle the novel
> loading. Using capacitive loads in the model for the two traps, I
> experimented with values of capacitance that would produce resonances
> that were either my observed ones or M2 measured ones for the individual
> elements. Somewhat surprisingly, the required Cs are not terribly
> different from what you get by calculation for a co-cylinder cap of the
> actual dimensions. Note that the inductances for the traps are
> determined by the dimensions of the loops in the elements and these are
> probably modeled okay. The model has all the segments of the actual
> antenna, aside from capacitors.
(etc...)

--
Jeff Liebermann jeffl@cruzio.com
150 Felker St #D http://www.LearnByDestroying.com
Santa Cruz CA 95060 http://802.11junk.com
Skype: JeffLiebermann AE6KS 831-336-2558

3231. Re: How can one make a dummyload from a LC circuit ?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-25 15:08:09 UTC
From: Michael Coslo <mjc5@psu.edu>
Message-ID: <hejh8p$p85u$1@tr22n12.aset.psu.edu>
Source record: 11943

tom wrote:
> Dave Platt wrote:
>> In article <4b0c1155$0$17636$6d4158fb@reader.xsnews.nl>,
>> Ronald <try@not.com> wrote:
>>
>>> So no shortcut at all, dummy.
>>> So whats your point ?
>>
>> My point is, you're attempting to choose the *wrong* technical
>> solution for your problem. You'll waste money, and end up with a
>> device which is bigger, tricker to tune, and less reliable than is
>> necessary.
>>
>
> Your self control is admirable. I would have lost my temper, at least a
> bit. He is just a troll, after all.

I dunno. Not to call Richard or yourself incorrect, but it could just be
a language problem coupled with a short fuse.

- 73 de Mike N3LI -

3232. Re: How can one make a dummyload from a LC circuit ?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-25 15:49:45 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <4fjqg51vcn7ek3r41j72fs59sm50ej94d5@4ax.com>
Source record: 11944

On Wed, 25 Nov 2009 10:08:09 -0500, Michael Coslo <mjc5@psu.edu>
wrote:

>I dunno. Not to call Richard or yourself incorrect, but it could just be
>a language problem coupled with a short fuse.

Hi Mike,

The best evidence is from his postings. If there is a language
difficulty (we've been assaulted with paisano fruit seller dialect
from Italy when this is obviously Hollywood clichï¿½) then Ronald's
re-characterizations expressed in understood English are not
miscomprehensions of language.

Ronold: "A dummy load is an LC circuit."

anyone else: "A dummy load is NOT an LC circuit."

Such an interchange is more seriously logic limited if
"misunderstood." I think Google translate would cope easily here.
Negating the original phrase does not lead to the sophism of doctors
and farmers - trolling does.

If you want to be gracious, we have a Belgian CBer who is trying to
work 40M. That level of technical ability is NOT masked by
translation.

Reminds me of the dwarf's argument in the movie "In Bruges."

73's
Richard Clark, KB7QHC

3233. MFJ Antenna Analyzers hints, tips

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-26 08:28:12 UTC
From: hamradiolocator <hamradiolocator.554183d@radiobanter.com>
Message-ID: <hamradiolocator.554183d@radiobanter.com>
Source record: 11948

Hi everyone I am new at here I want to get the tips and hints for MFJ
Antenna Analyzers.

--
hamradiolocator

3234. China PCB Manufacturer

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-26 08:36:06 UTC
From: Ziv <lizhiren@gmail.com>
Message-ID: <32f8fa01-a9ff-48a4-9618-be6f76d95847@j9g2000prh.googlegroups.com>
Source record: 11945

I am the overseas sales manager of JOYHOLD GROUP LIMITED,which is a PCB (Printed Circuit Boards) manufacturer in Guangzhou,China. I write this letter to you as an introduction and extension of our hands of friendship and establishing a meaningful business relationship with you.

Following is our information:
We locates at Guangzhou City, Guangdong province, China. Our main service is developing, producing and marketing the high quality Single sided,Double Sided and multilayer printed circuit board.

We are UL(E306819) certified manufactory of Printed Circuit Boards. We focus on the quick turn prototype, small quantity and mass production in Double Sided and Multilayer PCB(1-20 layers).
1. We can provide Fr4 High frequency board, backplane, thick copper PCB and Metal base board(AI, Cu).
2. We can do surface as (lead free) HASL, Immersion Gold, HASL LF, Flash Gold, OSP.
3. We can print solder masker with green, red, yellow, black, blue, matt, and white colors.
4. We have perfect sales system and after service system with quick respond and good communication.
We hope to establish longtime and friendly business relationship with you. Good quality, reasonable price and the 5-Star service are guaranteed.

If you have any PCB to purchase,please contact me when you free.

Best regards,
Ziv.Lee

****
JOYHOLD GROUP LIMITED
Tel:0086-20-34739853
Mobile:+8613527669618
<Http://www.joyhold.net>
Email: sales@joyholdgroup.com
Company Addr:17,Nanping Rd,Longqi Industrial District,Shawan Town,Panyu,Guangzhou,China

3235. Looking for matching transformer.

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-26 08:51:48 UTC
From: Lostgallifreyan <no-one@nowhere.net>
Message-ID: <Xns9CCF5A293F21Bzoodlewurdle@216.196.109.145>
Source record: 11946

Originally posted to rec.radio.amateur.misc as advised by guidelines read in a monthly posting, but got no help there apart from a suggestion to post here...

This post has more to do with a firm selling radio stuff than the stuff itself, and their apparent want not to do business even with people who send on-topic and polite emails at infrequent intervals. That's strange, so I want help with that from someone who HAS done business with them, or knows something about why they refuse to answer a normal sales inquiry.

[Original message]
Hello, I'm after an antenna matching transformer from http://www.iceradioproducts.com and being in the UK, I need to ask them for shipping costs, and whether they take PayPal, as these are crucial matters for arranging international transactions with different currencies. They provide an email address, 'sales at TheirDomain.com' (Did that because I don't want web-archive spiders and Google-gropers to find that and spam it to hell). I've sent three polite, short requests to that email over the last 8 days or so and can't raise a response! Odd given that they supposedly want business. Can anyone reach them personally for me? Or perhaps point me to a UK supplier of what I'm after?

What I want is their 'Beverage' matching transformer 180A, or perhaps 183A for greater range at the longer wavelength end, (down to 100 KHz or so). I'm also trying to find John Doty's plans for winding my own, but the only mail addresses I've found for him so far have gone the way of the Norwegian Blue. John Doty says that the 180A is so good it makes good sense to buy it anyway, but right now I'm not at all sure I ever will without help.
[Original message ends]

3236. Re: Looking for matching transformer.

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-26 09:44:46 UTC
From: Lostgallifreyan <no-one@nowhere.net>
Message-ID: <Xns9CCF63246ADF8zoodlewurdle@216.196.109.145>
Source record: 11947

For the record, because there might be some people who will assume I damned myself and deserve no reply if I didn't get one right away from the people I tried to reach regarding that matching transformer, I insist on advancing a clarification so that such prejudice never arises. Below is a sample of the actual email to the firm I'm trying to buy it from. I'm doing this to make it absolutely clear than I am not a vulgar troll that deserves a total lack of response. If I get no response, so be it, but it had damn well better NOT be due to foolish prejudice. I don't mean to offend anyone here with this attitude, it's just that seeing the way business is often conducted in the electronics groups these days, I don't want that nonsense to prevent someone with a working brain from understanding that I need a helpful response, and I wonder if I don't head that nonsense off before it starts, it might happen anyway. I doubt people who resist that indulgence will feel offended by this post. What I'm trying to show is that as I have tried to research exactly what it is I need, and can demonstrate this, it is singularly odd that a professional firm selling exactly what I want fails to respond!

Sample of mail to http://www.iceradioproducts.com sales address follows:

Hello, I sent an email a few days ago but have no answer. Please answer me. I also need to know if you will take Paypal payments, as I can't otherwise think of an easy way to pay you in USD. (And I think it's actually the 183 that I'll need for wider range but the price is the same. If it's economical to ship, I'm considering two of them so I have backup, as one will be at moderate risk of weathering.

[Original message]
Hello, I'm interested in the matching transformer unit named in the email subject. Please tell me approximately what the cost is to send to the UK. And thankyou for using USPS. It's good to see that, after recently having to turn away from a great auction because a seller refused to ship with anything but UPS who in my experience are a bunch of mercenary ripoffs. FedEx by comparison are angelic, but I prefer to trust USPS and the Royal Mail, recorded. They rarely fail, and never overcharge.

In case you're wondering, I found your transformer in a web page archiving some old Usenet posts, while looking into 'MLB's to match a long wire to a 50ohm coax to improve shortwave recpetion. A guy called John Doty at MIT posted stating that your transformer is a better buy that the RF Systems 'original' MLB, and that of another firm, and from what he says in the message I think he is likely right.
His post archived here:
http://www.hard-core-dx.com/nordicdx/antenna/feed/magbal2.html
[Original message ends]

3237. Re: MFJ Antenna Analyzers hints, tips

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-26 13:51:20 UTC
From: Ian Wade G3NRW <g3nrw@yahoo.co.uk>
Message-ID: <ZWW5HJCYfoDLFwsV@ntlworld.com>
Source record: 11949

From: hamradiolocator <hamradiolocator.554183d@radiobanter.com>
Date: Thu, 26 Nov 2009 Time: 08:28:12
>
>Hi everyone I am new at here I want to get the tips and hints for MFJ
>Antenna Analyzers.
>

http://w5big.com/TestResultCombined.htm

Draw your own conclusions.

--
73
Ian, G3NRW

3238. Re: Looking for matching transformer.

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-26 16:14:03 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <l09tg5pkrbihavjbdlh85s6d8ugt9n8hil@4ax.com>
Source record: 11950

On Thu, 26 Nov 2009 03:44:46 -0600, Lostgallifreyan
<no-one@nowhere.net> wrote:

>For the record, because there might be some people who will assume I damned
>myself and deserve no reply

Hi Dr Who,

Well, possilby your problem is twofold:
1. You are anonymous (as few really know the referenece of your
moniker;
ii. You are extremely anonymous through the obfuscation of your email
C. You can't really expect much response given i. and 2.

>I'm doing this to make it
>absolutely clear than I am not a vulgar troll that deserves a total lack of
>response. If I get no response, so be it, but it had damn well better NOT be
>due to foolish prejudice. I don't mean to offend anyone here with this
>attitude, it's just that seeing the way business is often conducted in the
>electronics groups these days, I don't want that nonsense to prevent someone
>with a working brain from understanding that I need a helpful response, and I
>wonder if I don't head that nonsense off before it starts, it might happen
>anyway. I doubt people who resist that indulgence will feel offended by this
>post.

You haven't accounted for the general volume of posting lately that
leads to an interest in psychoanalysis - something you've devoted much
effort to above and deserves attention. Normally, this comes as
consequence of lengthy, rambling threads weaving complex theories spun
from whole cloth.

>What I'm trying to show is that as I have tried to research exactly
>what it is I need, and can demonstrate this, it is singularly odd that a
>professional firm selling exactly what I want fails to respond!

A logical conclusion arises - they are out of business.... (They is
probably he, as this is in all likelihood a one-man operation.) With
a page that hasn't been updated in two years, there's every impression
not all the lights are on in that office.

>
>
>Sample of mail to http://www.iceradioproducts.com sales address follows:
>
>Hello, I sent an email a few days ago but have no answer. Please answer me. I
>also need to know if you will take Paypal payments, as I can't otherwise
>think of an easy way to pay you in USD. (And I think it's actually the 183

>that I'll need for wider range but the price is the same. If it's economical
>to ship, I'm considering two of them so I have backup, as one will be at
>moderate risk of weathering.
>
>[Original message]
>Hello, I'm interested in the matching transformer unit named in the email
>subject. Please tell me approximately what the cost is to send to the UK. And
>thankyou for using USPS. It's good to see that, after recently having to turn
>away from a great auction because a seller refused to ship with anything but
>UPS who in my experience are a bunch of mercenary ripoffs. FedEx by
>comparison are angelic, but I prefer to trust USPS and the Royal Mail,
>recorded. They rarely fail, and never overcharge.
>
>In case you're wondering, I found your transformer in a web page archiving
>some old Usenet posts, while looking into 'MLB's to match a long wire to a
>50ohm coax to improve shortwave recpetion. A guy called John Doty at MIT
>posted stating that your transformer is a better buy that the RF Systems
>'original' MLB, and that of another firm, and from what he says in the
>message I think he is likely right.
>His post archived here:
>http://www.hard-core-dx.com/nordicdx/antenna/feed/magbal2.html
>[Original message ends]

Thanks for substantiation of this being very old. Your archive
reveals the message you rely on is 14 years old. There have been two
economic collapses since and a couple of wars (African/Balkan
genocides too).

You would be better served going to more active producers of matching
transformers priced in Euros. In this forum they are tolerated as
placebos.

Cheers,
The Master

3239. Re: Looking for matching transformer.

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-26 17:36:16 UTC
From: Lostgallifreyan <no-one@nowhere.net>
Message-ID: <Xns9CCFB313BF243zoodlewurdle@216.196.109.145>
Source record: 11851

Richard Clark <kb7qhc@comcast.net> wrote in
news:l09tg5pkrbihavjbdlh85s6d8ugt9n8hil@4ax.com:

> On Thu, 26 Nov 2009 03:44:46 -0600, Lostgallifreyan
> <no-one@nowhere.net> wrote:
>
>>For the record, because there might be some people who will assume I
>>damned myself and deserve no reply
>
> Hi Dr Who,
>
> Well, possilby your problem is twofold:
> 1. You are anonymous (as few really know the referenece of your
> moniker;
> ii. You are extremely anonymous through the obfuscation of your email
> C. You can't really expect much response given i. and 2.
>
>>I'm doing this to make it
>>absolutely clear than I am not a vulgar troll that deserves a total lack
>>of response. If I get no response, so be it, but it had damn well better
>>NOT be due to foolish prejudice. I don't mean to offend anyone here with
>>this attitude, it's just that seeing the way business is often conducted
>>in the electronics groups these days, I don't want that nonsense to
>>prevent someone with a working brain from understanding that I need a
>>helpful response, and I wonder if I don't head that nonsense off before
>>it starts, it might happen anyway. I doubt people who resist that
>>indulgence will feel offended by this post.
>
> You haven't accounted for the general volume of posting lately that
> leads to an interest in psychoanalysis - something you've devoted much
> effort to above and deserves attention. Normally, this comes as
> consequence of lengthy, rambling threads weaving complex theories spun
> from whole cloth.
>
>>What I'm trying to show is that as I have tried to research exactly
>>what it is I need, and can demonstrate this, it is singularly odd that a
>>professional firm selling exactly what I want fails to respond!
>
> A logical conclusion arises - they are out of business.... (They is
> probably he, as this is in all likelihood a one-man operation.) With
> a page that hasn't been updated in two years, there's every impression
> not all the lights are on in that office.
>
>>

>>
>>Sample of mail to http://www.iceradioproducts.com sales address follows:
>>
>>Hello, I sent an email a few days ago but have no answer. Please answer
>>me. I also need to know if you will take Paypal payments, as I can't
>>otherwise think of an easy way to pay you in USD. (And I think it's
>>actually the 183 that I'll need for wider range but the price is the
>>same. If it's economical to ship, I'm considering two of them so I have
>>backup, as one will be at moderate risk of weathering.
>>
>>[Original message]
>>Hello, I'm interested in the matching transformer unit named in the
>>email subject. Please tell me approximately what the cost is to send to
>>the UK. And thankyou for using USPS. It's good to see that, after
>>recently having to turn away from a great auction because a seller
>>refused to ship with anything but UPS who in my experience are a bunch
>>of mercenary ripoffs. FedEx by comparison are angelic, but I prefer to
>>trust USPS and the Royal Mail, recorded. They rarely fail, and never
>>overcharge.
>>
>>In case you're wondering, I found your transformer in a web page
>>archiving some old Usenet posts, while looking into 'MLB's to match a
>>long wire to a 50ohm coax to improve shortwave recpetion. A guy called
>>John Doty at MIT posted stating that your transformer is a better buy
>>that the RF Systems 'original' MLB, and that of another firm, and from
>>what he says in the message I think he is likely right.
>>His post archived here:
>>http://www.hard-core-dx.com/nordicdx/antenna/feed/magbal2.html
>>[Original message ends]
>
> Thanks for substantiation of this being very old. Your archive
> reveals the message you rely on is 14 years old. There have been two
> economic collapses since and a couple of wars (African/Balkan
> genocides too).
>
> You would be better served going to more active producers of matching
> transformers priced in Euros. In this forum they are tolerated as
> placebos.
>
> Cheers,
> The Master
>

Ah, I might have been you, you know. :) Lost, but never said which one.. It's
an old handle, I chose it because it was likely unique, never have to wonder
what to use on the web with that so the habit stayed. It's anon, but anon
doesn't always mean nuisance. I'm not asking for much, just some lead to
figure out if those transformers really are as currently available as they
appear to be. Once I have to shell out money I won't be anon. :)

Anyway, thanks for the reply. That post was 14 years old, but I did check out the transformer, the ICE Radio Products site still exists, it doesn't look old, let alone dead. They have a setup to take orders and receive secure payments. Only reason I didn't do that (wisely, it seems) is that I had to ask them to confirm details before I did so, and they aren't responding at all. The simplest explanation is they don't like outsiders to the US, period, and just won't acknowledge their (our?) existence. Would be a tad strange an attitude for people specialising in long distance radio, though.

The rambling cloth was something maybe I could have cut, but I went by instinct. I could either appear as a newcomer with a tiny terse question that might fade to oblivion in half an hour, or include enough context to make it memorable. Having drawn such a blank until you replied, I thought I might as well go for broke. Someone might see this, and also be someone who knows why I cannot reach that firm and buy that transformer. Or be someone who has a copy of John Doty's plans for winding our own... The extra protection built into the ready-made one, plus the build quality overall, means it's a good choice, so I want to get one. If you (or anyone else) knows a European source of a direct equivalent to the ICE 183A (or 180A) 'Beverage' matching transformer's spec, please point the way. I did try Googling at the end of a long day of Googling, so I ought to have picked up leads if they were easy to find. Most I did find were the non-isolating 'MLB' type 'baluns' that aren't really baluns, not what I'm after at all, in light of that 14 year old article which is technically surely current, given the misconceptions I encountered before I found it.

3240. Re: an ontopic post about code

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-26 18:10:21 UTC
From: kb9rqz@yahoooo.com
Message-ID: <c4htg5lnbpu04a14rngo0mvg0p992978n1@4ax.com>
Source record: 11852
Cross-posted to: alt.ham-radio.vhf-uhf,rec.radio.amateur.policy,rec.radio.amateur.antenna

On Fri, 01 Dec 2006 09:36:47 -0800, John Smith
<assemblywizard@gmail.com> wrote:

>K4YZ wrote:
>> Nope.
>>
>> The IP Address and servers are complete proof that I do NOT share
>> any annonymous character's "address".
>>
>> Sounds like Lennie, to me....
>>
>> Steve, K4YZ
>>
>
>To anyone with even an elementary understanding of anonymous proxies,
>anonymous remailers, zombie backdoors, etc., the ability to change ones
>IP address and header details is simplistic, indeed, with little time
>spent anyone can appear to be "coming" from anywhere in the world.
>
>You waste my time. Worse, you think us all idiots here. You remind me
>of the "street smart" prosecutors and defense attorneys who stack jurys
>with members of little or no technical knowledge and then call in
>"expert witnesses" and propose arguments of technical details to boggle
>their minds.
>
>You have only proven that you, yourself are either ignorant to such
>technical details, or else you are indeed street smart, I favor the
>latter in this case (however, if you in the dark about such things, 15
>minutes on google will enlighten you.)
>
>JS

"one useless man is disgrace 2 become a law firm 3 or more become a congress"
adams

woger you are a Congress all in your own head
"http://www.3ix.org/sys/aff.php?aff=7439" target="_blank"

altopia is never used by KB9RQZ
http://kb9rqz.cc.cc
http://kd8ctl.com
nor is Konstans@hotmail.com ever
btw i can be found at
17366 N River Rd

Chassel Mi

but the cowards asking lack the gut to act

3241. Re: Looking for matching transformer.

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-26 18:30:35 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <5hhtg5d4n0etnob4v4epg6fpa5cqerdkfi@4ax.com>
Source record: 11853

On Thu, 26 Nov 2009 11:36:16 -0600, Lostgallifreyan
<no-one@nowhere.net> wrote:

>Ah, I might have been you, you know. :) Lost, but never said which one.. It's
>an old handle, I chose it because it was likely unique, never have to wonder
>what to use on the web with that so the habit stayed. It's anon, but anon
>doesn't always mean nuisance. I'm not asking for much, just some lead to
>figure out if those transformers really are as currently available as they
>appear to be. Once I have to shell out money I won't be anon. :)

Hello Companion,

As I pointed out, you probably can do just as well closer to home - if
you can set the appropriate coordinates in the TARDIS.

>Anyway, thanks for the reply. That post was 14 years old, but I did check out
>the transformer, the ICE Radio Products site still exists, it doesn't look
>old, let alone dead. They have a setup to take orders and receive secure
>payments. Only reason I didn't do that (wisely, it seems) is that I had to
>ask them to confirm details before I did so, and they aren't responding at
>all. The simplest explanation is they don't like outsiders to the US, period,
>and just won't acknowledge their (our?) existence. Would be a tad strange an
>attitude for people specialising in long distance radio, though.

You have missed the point of a one-man-show. The website (if the
business is functional) is running on automatic. Emails are not the
conventional method of transaction.

>The rambling cloth was something maybe I could have cut, but I went by
>instinct. I could either appear as a newcomer with a tiny terse question that
>might fade to oblivion in half an hour, or include enough context to make it
>memorable. Having drawn such a blank until you replied, I thought I might as
>well go for broke. Someone might see this, and also be someone who knows why
>I cannot reach that firm and buy that transformer. Or be someone who has a
>copy of John Doty's plans for winding our own... The extra protection built
>into the ready-made one, plus the build quality overall, means it's a good
>choice, so I want to get one. If you (or anyone else) knows a European source
>of a direct equivalent to the ICE 183A (or 180A) 'Beverage' matching
>transformer's spec, please point the way. I did try Googling at the end of a
>long day of Googling, so I ought to have picked up leads if they were easy to
>find. Most I did find were the non-isolating 'MLB' type 'baluns' that aren't
>really baluns, not what I'm after at all, in light of that 14 year old
>article which is technically surely current, given the misconceptions I
>encountered before I found it.

As to the currency or correctness, that is a gamble. Many claims are made that go unchallenged, or worse, unverified. In this forum, you would be miles ahead if you simply specified your needs and let the chips fall. It saves time compared to first having to disillusion you, and then to re-educate you.

The first point of wrenching disillusion is there is no one-size-fits-all matching. Once you get past that, we generally have to drag out of you what "would do" once you relax your expectations of a supposed perfect solution. Much of that grief is shunted aside if you simply say what you require. [Citing a popular model only puts the grief back on the table.]

73's
Richard Clark, KB7QHC

3242. Re: MFJ Antenna Analyzers hints, tips

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-26 19:03:11 UTC
From: 'Doc <ltdoc@yahoo.com>
Message-ID: <79819c8f-ece6-4971-92e7-25716f3d5b84@r24g2000yqd.googlegroups.com>
Source record: 11854

Best advice is to not drop it. Bad news every time. From there, it
get's sort of "iffy"
- 'Doc

3243. Re: Looking for matching transformer.

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-26 19:42:56 UTC
From: K7ITM <k7itm@msn.com>
Message-ID: <a01fbd86-ac58-4cb5-a983-132722059ad6@x5g2000prf.googlegroups.com>
Source record: 11855

On Nov 26, 12:51 am, Lostgallifreyan <no-...@nowhere.net> wrote:
> Originally posted to rec.radio.amateur.misc as advised by guidelines read in
> a monthly posting, but got no help there apart from a suggestion to post
> here...
>
> This post has more to do with a firm selling radio stuff than the stuff
> itself, and their apparent want not to do business even with people who send
> on-topic and polite emails at infrequent intervals. That's strange, so I want
> help with that from someone who HAS done business with them, or knows
> something about why they refuse to answer a normal sales inquiry.

...

Just checked their web site. Their contact info lists "help@..."
instead of "sales@..." as the email address. Have you tried that?

My impression is that it's a pretty small operation. It might
literally have a staff of one. Who knows what might have happened--
vacation, illness, ...

I'd be a bit careful about ordering anything from a company that lists
so few specs on their equipment. I checked the "receiver preamps"
page and found no mention of some pretty important stuff like third
order intercept, noise figure, and some details of the filter
performance for the "single band" preamps.

Cheers,
Tom

3244. Re: an ontopic post about the looney-bin boi

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-26 21:09:15 UTC
From: Morky Daphne <mork.daphne@gmail.com>
Message-ID: <9ee2eb8d-d081-4919-9718-f7b3cc211c28@m25g2000yqc.googlegroups.com>
Source record: 11856
Cross-posted to: alt.2600,alt.ham-radio.vhf-uhf,rec.radio.amateur.policy,rec.radio.amateur.antenna,alt.usenet.kooks

KB9RQZ@Looney.Bin wrote:

he's out for the holidays !

3245. Re: an ontopic post about code

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-26 21:24:06 UTC
From: kb9rqz@yahoooo.com
Message-ID: <lfstg5h1is08r8pi9b7q5dr75i77mln775@4ax.com>
Source record: 11857
Cross-posted to: alt.ham-radio.vhf-uhf,rec.radio.amateur.policy,rec.radio.amateur.antenna

On Fri, 01 Dec 2006 09:36:47 -0800, John Smith
<assemblywizard@gmail.com> wrote:

>K4YZ wrote:
>> Nope.
>>
>> The IP Address and servers are complete proof that I do NOT share
>> any annonymous character's "address".
>>
>> Sounds like Lennie, to me....
>>
>> Steve, K4YZ
>>
>
>To anyone with even an elementary understanding of anonymous proxies,
>anonymous remailers, zombie backdoors, etc., the ability to change ones
>IP address and header details is simplistic, indeed, with little time
>spent anyone can appear to be "coming" from anywhere in the world.
>
>You waste my time. Worse, you think us all idiots here. You remind me
>of the "street smart" prosecutors and defense attorneys who stack jurys
>with members of little or no technical knowledge and then call in
>"expert witnesses" and propose arguments of technical details to boggle
>their minds.
>
>You have only proven that you, yourself are either ignorant to such
>technical details, or else you are indeed street smart, I favor the
>latter in this case (however, if you in the dark about such things, 15
>minutes on google will enlighten you.)
>
>JS

"one useless man is disgrace 2 become a law firm 3 or more become a congress"
adams

woger you are a Congress all in your own head
"http://www.3ix.org/sys/aff.php?aff=7439" target="_blank"

altopia is never used by KB9RQZ
http://kb9rqz.cc.cc
http://kd8ctl.com
nor is Konstans@hotmail.com ever
btw i can be found at
17366 N River Rd

Chassel Mi

but the cowards asking lack the gut to act

3246. Satelite Watching

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-27 01:47:07 UTC
From: amdx <amdx@knology.net>
Message-ID: <aa98f$4b0f2f97$18ec6dd7$27655@KNOLOGY.NET>
Source record: 11858
Cross-posted to: sci.electronics.design,rec.radio.amateur.antenna

I took my son out to watch the ISS (International Space Station) pass by
at 5:43 this evening. My son saw it first but we weren't sure because
something else was moving at the same speed. We quickly realized
yes both objects were moving across the sky. At arms length they were
about thumb to pinky (spread out) distance apart.
When we got home I started looking online to see what the second
object was. Turns out to be STS129, the space shuttle!
Open these in two different tabs and see how close they are to each other.
The ISS.
http://www.n2yo.com/?s=25544

The Space shuttle.
http://www.n2yo.com/?s=36094

I don't know how long they will track.
Well, I know not past 9:30 tommorrow,
the shuttle is supposed to land.
Mike

3247. Re: Satelite Watching

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-27 03:27:05 UTC
From: amdx <amdx@knology.net>
Message-ID: <d74a0$4b0f4705$18ec6dd7$21848@KNOLOGY.NET>
Source record: 11859
Cross-posted to: sci.electronics.design,rec.radio.amateur.antenna

"amdx" <amdx@knology.net> wrote in message
news:aa98f$4b0f2f97$18ec6dd7$27655@KNOLOGY.NET...
>I took my son out to watch the ISS (International Space Station) pass by
> at 5:43 this evening. My son saw it first but we weren't sure because
> something else was moving at the same speed. We quickly realized
> yes both objects were moving across the sky. At arms length they were
> about thumb to pinky (spread out) distance apart.
> When we got home I started looking online to see what the second
> object was. Turns out to be STS129, the space shuttle!
> Open these in two different tabs and see how close they are to each other.
> The ISS.
> http://www.n2yo.com/?s=25544
>
> The Space shuttle.
> http://www.n2yo.com/?s=36094
>
> I don't know how long they will track.
> Well, I know not past 9:30 tommorrow,
> the shuttle is supposed to land.
> Mike
This must have been a rare occurance, look how close the were.
Maximum altitude is at ISS 17:44:57 STS 17:45:19 Within 22 seconds
Altitude ISS 37° STS 38°
Within 1°
Azimuth ISS 44° STS 44°
Same
Distance ISS 549 km STS 545 km
Within 4 km.

```
ISS = International Space Station STS= The Space shuttle- STS 129
Mike
```

3248. Re: Satelite Watching

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-27 03:42:39 UTC
From: "miso@sushi.com" <miso@sushi.com>
Message-ID: <8760da78-d19a-4458-9cce-d10efb5867ae@p36g2000vbn.googlegroups.com>
Source record: 11860
Cross-posted to: sci.electronics.design,rec.radio.amateur.antenna

On Nov 26, 5:47 pm, "amdx" <a...@knology.net> wrote:
> I took my son out to watch the ISS (International Space Station) pass by
> at 5:43 this evening. My son saw it first but we weren't sure because
> something else was moving at the same speed. We quickly realized
> yes both objects were moving across the sky. At arms length they were
> about thumb to pinky (spread out) distance apart.
> When we got home I started looking online to see what the second
> object was. Turns out to be STS129, the space shuttle!
> Open these in two different tabs and see how close they are to each other.
> The ISS.http://www.n2yo.com/?s=25544
>
> The Space shuttle.http://www.n2yo.com/?s=36094
>
> I don't know how long they will track.
> Well, I know not past 9:30 tommorrow,
> the shuttle is supposed to land.
>   Mike

http://www.heavens-above.com/
Try this. It shows other birds that will be in your view. Remember
brightness is an inverse scale. Something negative is very bright.

3249. Re: Satellite Watching

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-27 03:54:27 UTC
From: amdx <amdx@knology.net>
Message-ID: <3e584$4b0f4d6f$18ec6dd7$24446@KNOLOGY.NET>
Source record: 11861
Cross-posted to: sci.electronics.design,rec.radio.amateur.antenna

<miso@sushi.com> wrote in message
news:8760da78-d19a-4458-9cce-d10efb5867ae@p36g2000vbn.googlegroups.com...
On Nov 26, 5:47 pm, "amdx" <a...@knology.net> wrote:
> I took my son out to watch the ISS (International Space Station) pass by
> at 5:43 this evening. My son saw it first but we weren't sure because
> something else was moving at the same speed. We quickly realized
> yes both objects were moving across the sky. At arms length they were
> about thumb to pinky (spread out) distance apart.
> When we got home I started looking online to see what the second
> object was. Turns out to be STS129, the space shuttle!
> Open these in two different tabs and see how close they are to each other.
> The ISS.http://www.n2yo.com/?s=25544
>
> The Space shuttle.http://www.n2yo.com/?s=36094
>
> I don't know how long they will track.
> Well, I know not past 9:30 tommorrow,
> the shuttle is supposed to land.
> Mike

>http://www.heavens-above.com/
>Try this. It shows other birds that will be in your view. Remember
>brightness is an inverse scale. Something negative is very bright.

Yes, That's what I used to find the ISS would be coming over.
Then when we saw two objects, I tried to get back on that sight
and it was to busy for the next few hours.
Mike

3250. Re: Satellite Watching

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-27 03:58:57 UTC
From: "miso@sushi.com" <miso@sushi.com>
Message-ID: <54765535-93db-40f5-9a26-ece453bb053d@v37g2000vbb.googlegroups.com>
Source record: 11862
Cross-posted to: sci.electronics.design,rec.radio.amateur.antenna

On Nov 26, 7:54 pm, "amdx" <a...@knology.net> wrote:
> <m...@sushi.com> wrote in message
>
> news:8760da78-d19a-4458-9cce-d10efb5867ae@p36g2000vbn.googlegroups.com...
> On Nov 26, 5:47 pm, "amdx" <a...@knology.net> wrote:
>
>
>
> > I took my son out to watch the ISS (International Space Station) pass by
> > at 5:43 this evening. My son saw it first but we weren't sure because
> > something else was moving at the same speed. We quickly realized
> > yes both objects were moving across the sky. At arms length they were
> > about thumb to pinky (spread out) distance apart.
> > When we got home I started looking online to see what the second
> > object was. Turns out to be STS129, the space shuttle!
> > Open these in two different tabs and see how close they are to each other.
> > The ISS.http://www.n2yo.com/?s=25544
>
> > The Space shuttle.http://www.n2yo.com/?s=36094
>
> > I don't know how long they will track.
> > Well, I know not past 9:30 tommorrow,
> > the shuttle is supposed to land.
> > Mike
> >http://www.heavens-above.com/
> >Try this. It shows other birds that will be in your view. Remember
> >brightness is an inverse scale. Something negative is very bright.
>
> Yes, That's what I used to find the ISS would be coming over.
> Then when we saw two objects, I tried to get back on that sight
> and it was to busy for the next few hours.
>   Mike

It helps to have an "atomic clock" when you do this kind of stuff.

3251. Re: Satellite Watching

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-27 04:10:57 UTC
From: amdx <amdx@knology.net>
Message-ID: <b44fb$4b0f514d$18ec6dd7$25871@KNOLOGY.NET>
Source record: 11863
Cross-posted to: sci.electronics.design,rec.radio.amateur.antenna

<miso@sushi.com> wrote in message
news:54765535-93db-40f5-9a26-ece453bb053d@v37g2000vbb.googlegroups.com...
On Nov 26, 7:54 pm, "amdx" <a...@knology.net> wrote:
> <m...@sushi.com> wrote in message
>
> news:8760da78-d19a-4458-9cce-d10efb5867ae@p36g2000vbn.googlegroups.com...
> On Nov 26, 5:47 pm, "amdx" <a...@knology.net> wrote:
>
>
>
> > I took my son out to watch the ISS (International Space Station) pass by
> > at 5:43 this evening. My son saw it first but we weren't sure because
> > something else was moving at the same speed. We quickly realized
> > yes both objects were moving across the sky. At arms length they were
> > about thumb to pinky (spread out) distance apart.
> > When we got home I started looking online to see what the second
> > object was. Turns out to be STS129, the space shuttle!
> > Open these in two different tabs and see how close they are to each
> > other.
> > The ISS.http://www.n2yo.com/?s=25544
>
> > The Space shuttle.http://www.n2yo.com/?s=36094
>
> > I don't know how long they will track.
> > Well, I know not past 9:30 tommorrow,
> > the shuttle is supposed to land.
> > Mike
> >http://www.heavens-above.com/
> >Try this. It shows other birds that will be in your view. Remember
> >brightness is an inverse scale. Something negative is very bright.
>
> Yes, That's what I used to find the ISS would be coming over.
> Then when we saw two objects, I tried to get back on that sight
> and it was to busy for the next few hours.
> Mike

>It helps to have an "atomic clock" when you do this kind of stuff.

My cellphone was close enough, but a compass would have helped
pinpoint the rising direction better. 4 hours later and I'm still excited!
Mike

3252. Re: Satellite Watching

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-27 04:28:51 UTC
From: "miso@sushi.com" <miso@sushi.com>
Message-ID: <fd857a97-ac34-4f90-8ec3-cb327c7ea440@h14g2000pri.googlegroups.com>
Source record: 11864
Cross-posted to: sci.electronics.design,rec.radio.amateur.antenna

On Nov 26, 8:10 pm, "amdx" <a...@knology.net> wrote:
> <m...@sushi.com> wrote in message
>
> news:54765535-93db-40f5-9a26-ece453bb053d@v37g2000vbb.googlegroups.com...
> On Nov 26, 7:54 pm, "amdx" <a...@knology.net> wrote:
>
>
>
> > <m...@sushi.com> wrote in message
>
> >news:8760da78-d19a-4458-9cce-d10efb5867ae@p36g2000vbn.googlegroups.com...
> > On Nov 26, 5:47 pm, "amdx" <a...@knology.net> wrote:
>
> > > I took my son out to watch the ISS (International Space Station) pass by
> > > at 5:43 this evening. My son saw it first but we weren't sure because
> > > something else was moving at the same speed. We quickly realized
> > > yes both objects were moving across the sky. At arms length they were
> > > about thumb to pinky (spread out) distance apart.
> > > When we got home I started looking online to see what the second
> > > object was. Turns out to be STS129, the space shuttle!
> > > Open these in two different tabs and see how close they are to each
> > > other.
> > > The ISS.http://www.n2yo.com/?s=25544
>
> > > The Space shuttle.http://www.n2yo.com/?s=36094
>
> > > I don't know how long they will track.
> > > Well, I know not past 9:30 tommorrow,
> > > the shuttle is supposed to land.
> > > Mike
> > >http://www.heavens-above.com/
> > >Try this. It shows other birds that will be in your view. Remember
> > >brightness is an inverse scale. Something negative is very bright.
>
> > Yes, That's what I used to find the ISS would be coming over.
> > Then when we saw two objects, I tried to get back on that sight
> > and it was to busy for the next few hours.
> > Mike
> >It helps to have an "atomic clock" when you do this kind of stuff.
>
> My cellphone was close enough, but a compass would have helped
> pinpoint the rising direction better. 4 hours later and I'm still excited!
>   Mike

http://www.cammenga.com/cammenga-products.php?category=1
The phosphorus version is good enough. I "juice it" with a flashlight since I'm not working SWAT or special ops. ;-) You can pay extra for tritium, but it wears out. You shouldn't buy one used for that reason. The phosphorus version is under $40 and it will last a lifetime, or until it is lost or stolen.

I have a GPS with a compass in it, but you have to remember to calibrate them. Really annoying.

Next up of course is that damn magnetic correction.

3253. Re: Looking for matching transformer.

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-27 04:32:48 UTC
From: Lostgallifreyan <no-one@nowhere.net>
Message-ID: <Xns9CD02E3E7DA6Azoodlewurdle@216.196.109.145>
Source record: 11865

Richard Clark <kb7qhc@comcast.net> wrote in
news:5hhtg5d4n0etnob4v4epg6fpa5cqerdkfi@4ax.com:

> As I pointed out, you probably can do just as well closer to home - if
> you can set the appropriate coordinates in the TARDIS.
>

Sadly the TARDIS is neither fully functional, nor anatomically correct. :)

> You have missed the point of a one-man-show. The website (if the
> business is functional) is running on automatic. Emails are not the
> conventional method of transaction.
>

sales@seller.com IS the usual method of communicating with a firm. They
actually provide such an address! They just don't respond to hails aimed at
it.

> As to the currency or correctness, that is a gamble. Many claims are
> made that go unchallenged, or worse, unverified. In this forum, you
> would be miles ahead if you simply specified your needs and let the
> chips fall. It saves time compared to first having to disillusion
> you, and then to re-educate you.
>
> The first point of wrenching disillusion is there is no
> one-size-fits-all matching. Once you get past that, we generally have
> to drag out of you what "would do" once you relax your expectations of
> a supposed perfect solution. Much of that grief is shunted aside if
> you simply say what you require. [Citing a popular model only puts
> the grief back on the table.]
>
> 73's
> Richard Clark, KB7QHC
>

Confucius say, "Show respect for Grasshopper. Do not pluck off wings while
assuming he cannot fly".

That ICE 180A (and 183A) general purpose longwire matching transformer has
taps for 600 ohms and lower, and output tapped for 50 and 75 ohms, current
isolation, and some lightning protection to help protect a sensitive input.
For the simple experiments I want to do with SW listening via longwires
arranged in whatever space I can find for them, this is appropriate, it's
what it's made for. If you're plucking off wings, you're also doing it to
John Doty and a long-term maker of transformers, not just me. Sometimes it's
wiser to just assume we know what we want and help us get it. A $40 matching

transformer isn't going to break the bank or our morale if we get it wrong, and we'll learn more from trying it than from any wordplay we can do here. I also asked if anyone has John Doty's DIY plans, because he seems to know his stuff.

Here's what he says, after replying to an initial question which is included at the start here:

Would like to hear if someone has tried the Magnetic Longwire Balun by RF Systems. Does it work? Does it work as good as the manufacturer claims?

I haven't tried it, but either its manufacturers are consciously misrepresenting its capabilities or do not understand what it does. It is *not* a balun: the so-called "Magnetic Longwire Balun" (MLB) has only three terminals, while a true balun requires four.
A balun prevents net current flow between a transmission line and an antenna, while allowing energy to pass between them. With only one terminal for the "antenna", the MLB cannot possibly transfer energy from the antenna to the transmission line without also allowing a net current to flow between them.
With a proper four terminal balun connected to a proper two terminal antenna, the antenna current can flow between the antenna terminals, the transmission line current can flow between the transmission line terminals, and energy can flow through the balun without a net current flow from antenna to line.
This is not to say that the MLB is useless: except at a few resonant frequencies a wire antenna is a poor impedance match to a coaxial line. A matching transformer can significantly improve the match over a broad band. I suspect that the MLB is an effective matching transformer.
The point of using coax to feed your antenna is that it keeps currents due to noise pickup in your house separated from the signal currents picked up by the antenna. A proper balun helps enforce this separation, but the MLB not only doesn't enforce it, it subverts it. Unless the MLB is directly and effectively grounded, the second terminal of an MLB-fed antenna is the shield of the coax cable itself! Noise pickup from the house flows on the outside of the coax out to the MLB which efficiently couples it to the inside of the coax and into your receiver.
The key to getting good noise rejection from coax used to feed a longwire is grounding the coax shield well. It makes little sense to extend the coax beyond the farthest ground point from your receiver, since beyond that last ground point the coax would pick up signal anyway, despite its shielding.
Thus, a low noise coax-fed longwire will typically fall within the spectrum ranging from verticals through tilted wires and inverted L's to Beverages (long, low, horizontal wires).
You can feed this sort of antenna directly, without a matching transformer, by attaching it to the coax center conductor. The resulting antenna will show very high efficiency at wavelengths where it is an odd multiple of 1/4 wavelength long, and very low efficiency at wavelengths where it is a multiple of 1/2 wavelength long. Another disadvantage of this configuration is that it offers no protection against electrostatic damage.
A transformer at the base of the antenna can smooth out the wild efficiency swings and also give static electricity a path to ground. I've posted instructions for winding such a transformer on this group several times. If

anyone wants to see them, send me mail.
Alternatively, you could use a commercial transformer. I recommend the ICE Model 180 "Beverage/Longwire Matching Unit". Unlike the MLB folks, ICE seems to actually understand what their product does. In addition to the inherent electrostatic protection offered by the transformer, this unit also has a gas discharge tube and a blocking capacitor to further reduce the danger of electrostatic discharge. It's very solidly constructed. Finally, at $32 it's less expensive than either the Palomar ($40) or RF Systems ($60) MLB's.
ICE products can be ordered on-line at the official ICE web site Here you will find datasheets as well as free publications on grounding and beverage antennas.
The usual disclaimer: I have no interest in ICE, I'm just a satisfied customer (I have three of these transformers: thanks go to Richard Steck for alerting me to the existence of this product).

3254. Re: Looking for matching transformer.

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-27 04:41:24 UTC
From: Lostgallifreyan <no-one@nowhere.net>
Message-ID: <Xns9CD02FB348AA8zoodlewurdle@216.196.109.145>
Source record: 11866

K7ITM <k7itm@msn.com> wrote in news:a01fbd86-ac58-4cb5-a983-132722059ad6@x5g2000prf.googlegroups.com:

> On Nov 26, 12:51 am, Lostgallifreyan <no-...@nowhere.net> wrote:
>> Originally posted to rec.radio.amateur.misc as advised by guidelines read
> in
>> a monthly posting, but got no help there apart from a suggestion to post
>> here...
>>
>> This post has more to do with a firm selling radio stuff than the stuff
>> itself, and their apparent want not to do business even with people who s
> end
>> on-topic and polite emails at infrequent intervals. That's strange, so I
> want
>> help with that from someone who HAS done business with them, or knows
>> something about why they refuse to answer a normal sales inquiry.
>
> ...
>
> Just checked their web site. Their contact info lists "help@..."
> instead of "sales@..." as the email address. Have you tried that?
>
> My impression is that it's a pretty small operation. It might
> literally have a staff of one. Who knows what might have happened--
> vacation, illness, ...
>
> I'd be a bit careful about ordering anything from a company that lists
> so few specs on their equipment. I checked the "receiver preamps"
> page and found no mention of some pretty important stuff like third
> order intercept, noise figure, and some details of the filter
> performance for the "single band" preamps.
>
> Cheers,
> Tom
>

Thankyou. I think I tried both addresses.. First thing after one failed would be to try the other.. :) You might be right, could be small enough that something went wrong and stopped business for a while. I was assuming that the amount of fabrication needed to make that transformer implied a small group of people but that IS just my assumption, as one person can 'farm out' that work with a good design. I take your point about the lack of data, but as I'm after a passive device recommended by someone who knows a lot more than I do (I cited one of his messages in my other post just now, it's old

but that shouldn't invalidate it, SW listening is an old exercise, surely close to 100 years by now), and as that 180A transformer is clearly good value and low(ish) cost, I think it's a good starting base, though if I can find John Doty's plans that is also a good start.

3255. Re: Satellite Watching

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-27 05:25:01 UTC
From: Jeff Liebermann <jeffl@cruzio.com>
Message-ID: <g2nug590th62p1n0mcc3sdhdb01942kji5@4ax.com>
Source record: 11867
Cross-posted to: sci.electronics.design,rec.radio.amateur.antenna

On Thu, 26 Nov 2009 20:28:51 -0800 (PST), "miso@sushi.com"
<miso@sushi.com> wrote:

>http://www.cammenga.com/cammenga-products.php?category=1
>The phosphorus version is good enough. I "juice it" with a flashlight
>since I'm not working SWAT or special ops. ;-) You can pay extra for
>tritium, but it wears out. You shouldn't buy one used for that reason.
>The phosphorus version is under $40 and it will last a lifetime, or
>until it is lost or stolen.

Yech. I do some TV antenna alignments and the usual point to point
wireless. I don't bother with a compass because they're not accurate
enough. What works best is a road map, a plywood board, and some
nails. Mark your position on the map with a nail, push pin, or pin.
Mark the position of a distant mountain, building, or landmark on the
map. Eyeball the line between the two nails to the distant mountain,
building or landmark. All maps have true north marked on them. The
direction of the map arrow is true north. I can usually locate true
north to within +/- 2 degrees depending on the size of the map and the
distance to the marker. Using multiple distant points improves the
accuracy.

If you're into astronomy, sighting the north star also works well.
Also, using a computer sky chart/map to locate easy to find stars.

One I establish true north, I like to mark it on the road, sidewalk,
or deck with a line or arrow. I have a brass marker arrow nailed to
my deck.

>I have a GPS with a compass in it, but you have to remember to
>calibrate them. Really annoying.

Calibrate? You have to be moving in order for it to work. Then, it
will only tell you the direction that you're moving. If you only go a
short distance, it's not going to be very accurate.

>Next up of course is that damn magnetic correction.

I don't do no stinkin magnetic correction cause I don't use no stinkin
magnetic or fluxgate compass.

Incidentally, I have a really handy item for watching expensive birds.
I made a panorama (stitched) photo of the view from my rooftop at
home, at the office, and at my favorite astronomy meeting places. I
then marked the azimuths every 10 degrees on the JPG. Although
difficult to see the remote hilltops at night, I now have the azimuth

of anything in the sky or between me and the surrounding hills.

--
Jeff Liebermann jeffl@cruzio.com
150 Felker St #D http://www.LearnByDestroying.com
Santa Cruz CA 95060 http://802.11junk.com
Skype: JeffLiebermann AE6KS 831-336-2558

3256. Re: Looking for matching transformer.

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-27 06:34:59 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <pcsug590r9ujac3tpvpp0n52u5mouggv0b@4ax.com>
Source record: 11868

On Thu, 26 Nov 2009 22:32:48 -0600, Lostgallifreyan
<no-one@nowhere.net> wrote:

>> [Citing a popular model only puts
>> the grief back on the table.]

>That ICE 180A (and 183A) general purpose longwire matching transformer has
>taps for 600 ohms and lower, and output tapped for 50 and 75 ohms, current
>isolation, and some lightning protection to help protect a sensitive input.

Thus was it always.

Well, enough here has been said, I suppose, and not enough from ICE,
the font of all blessings - a dilemma that is destined to be
unresolved without going into discussions of the evanescence of the
soul.

73's
Richard Clark, KB7QHC

3257. Re: Satellite Watching

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-27 09:58:09 UTC
From: "miso@sushi.com" <miso@sushi.com>
Message-ID: <046d231a-5f37-4d14-9398-f707cf9f918b@j9g2000prh.googlegroups.com>
Source record: 11869
Cross-posted to: sci.electronics.design,rec.radio.amateur.antenna

On Nov 26, 9:25 pm, Jeff Liebermann <je...@cruzio.com> wrote:
> On Thu, 26 Nov 2009 20:28:51 -0800 (PST), "m...@sushi.com"
>
> <m...@sushi.com> wrote:
> >http://www.cammenga.com/cammenga-products.php?category=1
> >The phosphorus version is good enough. I "juice it" with a flashlight
> >since I'm not working SWAT or special ops. ;-) You can pay extra for
> >tritium, but it wears out. You shouldn't buy one used for that reason.
> >The phosphorus version is under $40 and it will last a lifetime, or
> >until it is lost or stolen.
>
> Yech. I do some TV antenna alignments and the usual point to point
> wireless. I don't bother with a compass because they're not accurate
> enough. What works best is a road map, a plywood board, and some
> nails. Mark your position on the map with a nail, push pin, or pin.
> Mark the position of a distant mountain, building, or landmark on the
> map. Eyeball the line between the two nails to the distant mountain,
> building or landmark. All maps have true north marked on them. The
> direction of the map arrow is true north. I can usually locate true
> north to within +/- 2 degrees depending on the size of the map and the
> distance to the marker. Using multiple distant points improves the
> accuracy.
>
> If you're into astronomy, sighting the north star also works well.
> Also, using a computer sky chart/map to locate easy to find stars.
>
> One I establish true north, I like to mark it on the road, sidewalk,
> or deck with a line or arrow. I have a brass marker arrow nailed to
> my deck.
>
> >I have a GPS with a compass in it, but you have to remember to
> >calibrate them. Really annoying.
>
> Calibrate? You have to be moving in order for it to work. Then, it
> will only tell you the direction that you're moving. If you only go a
> short distance, it's not going to be very accurate.
>
> >Next up of course is that damn magnetic correction.
>
> I don't do no stinkin magnetic correction cause I don't use no stinkin
> magnetic or fluxgate compass.
>
> Incidentally, I have a really handy item for watching expensive birds.

> I made a panorama (stitched) photo of the view from my rooftop at
> home, at the office, and at my favorite astronomy meeting places. I
> then marked the azimuths every 10 degrees on the JPG. Although
> difficult to see the remote hilltops at night, I now have the azimuth
> of anything in the sky or between me and the surrounding hills.
>
> --
> Jeff Liebermann   je...@cruzio.com
> 150 Felker St #D   http://www.LearnByDestroying.com
> Santa Cruz CA 95060http://802.11junk.com
> Skype: JeffLiebermann   AE6KS   831-336-2558

The "virtual" compass requires you to move since it bases direction on differential GPS readings. OK in a car, semi-OK on foot, worthless if the going is slow since the delta of distance is not significant enough to get a good calculation.

The newer GPSs have sensors in them. To null out the nearby magnetic field, you need to slow spin it around. Two revolutions generally. Or you can spin your body around and look like an idiot. The trouble is the GPS has to be level unless you have a 3-D compass. [Garmin doesn't, Magellan does. Too many complaints about Magellan gear, so you just put up with Garmin.] The GPS has a threshold where it will shift from magnetic sensor to virtual compass. You can really screw yourself up if you don't know about this.

Your technique is fine if you spot from the same location. If you are on the move, you realy do need a compass. Occasionally I'll see something off in the distance.[OK, OK, in denied access area.] Log your position, take a vector, then study it on google earth or a map. Other times I am DFing radio signals. Again, the compass does the log. Log everything in magnetic, then use your mag in magnetic, and you won't go crazy. Attempt to correct your readings and you are either correct or you just added twice the adjustment factor to your reading. Really not a good idea.

Aviation long ago decided on doing everything magnetic, probably to get around the confusion. Of course, they still use AGL (above ground level) and MSL (mean sea level) for altitude. You may recall either a Thunderbird or Blue Angel getting into trouble with this.

I use your spotting technique at times too. It depends on if I can do the preparation. Your scheme works better in mountain areas, which is where I use it since I know the various peaks and where the campsite is located.

3258. Re: Satellite Watching

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-27 13:44:03 UTC
From: Jeff Liebermann <jeffl@cruzio.com>
Message-ID: <itivg5te8l35qqvp0frsht8k3v1u8l7cek@4ax.com>
Source record: 11870
Cross-posted to: sci.electronics.design,rec.radio.amateur.antenna

On Fri, 27 Nov 2009 01:58:09 -0800 (PST), "miso@sushi.com"
<miso@sushi.com> wrote:

>The "virtual" compass requires you to move since it bases direction on
>differential GPS readings. OK in a car, semi-OK on foot, worthless if
>the going is slow since the delta of distance is not significant
>enough to get a good calculation.

Actually, it's not too horrible for determining the general direction
of travel. However, totally useless for determining the azimuth of
something from a fixed location.

>The newer GPSs have sensors in them. To null out the nearby magnetic
>field, you need to slow spin it around. Two revolutions generally. Or
>you can spin your body around and look like an idiot. The trouble is
>the GPS has to be level unless you have a 3-D compass. [Garmin
>doesn't, Magellan does. Too many complaints about Magellan gear, so
>you just put up with Garmin.] The GPS has a threshold where it will
>shift from magnetic sensor to virtual compass. You can really screw
>yourself up if you don't know about this.

I spent some time trying to get sane readings from the fluxgate
"magnetic" compass in a borrowed Garmin GPS. The rotation method
worked quite well, until I moved. When standing next to a vehicle, it
was nearly useless.

>Your technique is fine if you spot from the same location. If you are
>on the move, you realy do need a compass.

Ummm.... orbital satellite spotting from a moving vehicle is rather
uncommon and dangerous.

>Occasionally I'll see
>something off in the distance.[OK, OK, in denied access area.]

Sigh. I suppose the alien technology that they're hiding is better
than a compass.

>Log
>your position, take a vector, then study it on google earth or a map.
>Other times I am DFing radio signals. Again, the compass does the log.
>Log everything in magnetic, then use your mag in magnetic, and you
>won't go crazy. Attempt to correct your readings and you are either
>correct or you just added twice the adjustment factor to your reading.
>Really not a good idea.

Ok. I'll admit to having added my declination instead subtracted more
than once. Still, some additional practice and a few sanity checks
against known locations should help.

>Aviation long ago decided on doing everything magnetic, probably to
>get around the confusion.

Mostly true. All US runways are magnetic. So is the VOR. However,
all sectional maps are based on true north. GPS navigation devices
can be either way. Magnetic is a big help when using a magnetic
compass for finding the runway.

Canadian aviation is really strange. The northern half uses true
north, while the southern half uses magnetic.

<http://en.wikipedia.org/wiki/Magnetic_declination>

>Of course, they still use AGL (above ground
>level) and MSL (mean sea level) for altitude. You may recall either a
>Thunderbird or Blue Angel getting into trouble with this.

Dunno. However, I've screwed up a few HAAT calculations on FCC
license applications when I was doing them with just a calculator:
<http://en.wikipedia.org/wiki/Height_above_average_terrain>

>I use your spotting technique at times too. It depends on if I can do
>the preparation. Your scheme works better in mountain areas, which is
>where I use it since I know the various peaks and where the campsite
>is located.

It works with any decent road map. You don't even need to sight the
distant mountain peaks. Just align the map with the local roadways
and it's already better than a magnetic compass. The most difficult
part is finding a large flat area on which to place the map. When
desperate, I use corrugated box cardboard and pins for markers.

Incidentally, I have a crude system of doing TDOA (time difference of
arrival) hyperbolic RDF location on a paper map using two nails and
some string. I'm slowly scribbling a web page on the subject, so no
details until I'm done.

Oh, if you want high tech location and mapping assistance, there's GPS
augmented reality.
<http://www.youtube.com/watch?v=4Fl718QO_xQ>

--
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Santa Cruz CA 95060 http://802.11junk.com
Skype: JeffLiebermann AE6KS 831-336-2558

3259. Re: MFJ Antenna Analyzers hints, tips

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-27 17:20:21 UTC
From: John Ferrell <jferrell13@triad.rr.com>
Message-ID: <hu10h594l7l3iq1dbj44qq1mk1qmuuqo87@4ax.com>
Source record: 11871

On Thu, 26 Nov 2009 08:28:12 +0000, hamradiolocator
<hamradiolocator.554183d@radiobanter.com> wrote:

>
>Hi everyone I am new at here I want to get the tips and hints for MFJ
>Antenna Analyzers.
I love my MFJ-269.
To fully appreciate it you need to download & study the manual. It
does a lot of things other than what you read in the advertisements.

For instance: All of the coax I have is pretty old. It was top notch
foam insulated Saxton cable and I was using it for 439mhz ATV work
nearly 30 years ago. In spite of age, the MFJ-269 indicates the loss
in 40 meter service is 0.3 db. Nice to know.

Measuring inductance & capacitance is vey simple. I don't spend much
time using it because it is so quick.

John Ferrell W8CCW

3260. Antenna Launcher

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-27 17:27:35 UTC
From: John Ferrell <jferrell13@triad.rr.com>
Message-ID: <aj20h555b3uiqj0ssoe9fgvab79fivda0b@4ax.com>
Source record: 11872

There is an artical by W4SSY in the March 2009 QST Magazine. I am planning to duplicate it for use at my QTH. I am interested in any comments, especially from anyone who may have already built one.

My available trees may be about 80 feet so that is my minimum expectations!

There is a lot of Google information available but I am trying to focus on this example.

John Ferrell W8CCW

3261. Re: an ontopic post about code

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-27 18:20:25 UTC
From: kb9rqz@yahoooo.com
Message-ID: <8360h5dkqd69t0ab27jig6sgqdf3fjql86@4ax.com>
Source record: 11873
Cross-posted to: alt.ham-radio.vhf-uhf,rec.radio.amateur.policy,rec.radio.amateur.antenna

On Fri, 01 Dec 2006 09:36:47 -0800, John Smith
<assemblywizard@gmail.com> wrote:

>K4YZ wrote:
>> Nope.
>>
>> The IP Address and servers are complete proof that I do NOT share
>> any annonymous character's "address".
>>
>> Sounds like Lennie, to me....
>>
>> Steve, K4YZ
>>
>
>To anyone with even an elementary understanding of anonymous proxies,
>anonymous remailers, zombie backdoors, etc., the ability to change ones
>IP address and header details is simplistic, indeed, with little time
>spent anyone can appear to be "coming" from anywhere in the world.
>
>You waste my time. Worse, you think us all idiots here. You remind me
>of the "street smart" prosecutors and defense attorneys who stack jurys
>with members of little or no technical knowledge and then call in
>"expert witnesses" and propose arguments of technical details to boggle
>their minds.
>
>You have only proven that you, yourself are either ignorant to such
>technical details, or else you are indeed street smart, I favor the
>latter in this case (however, if you in the dark about such things, 15
>minutes on google will enlighten you.)
>
>JS

"one useless man is disgrace 2 become a law firm 3 or more become a congress"
adams

woger you are a Congress all in your own head
"http://www.3ix.org/sys/aff.php?aff=7439" target="_blank"

altopia is never used by KB9RQZ
http://kb9rqz.cc.cc
http://kd8ctl.com
nor is Konstans@hotmail.com ever
btw i can be found at
17366 N River Rd

Chassel Mi

but the cowards asking lack the gut to act

3262. Re: Satellite Watching

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-27 19:20:48 UTC
From: "miso@sushi.com" <miso@sushi.com>
Message-ID: <5b1ce46a-329f-4f97-b4d4-0feac7e772c3@u16g2000pru.googlegroups.com>
Source record: 11874
Cross-posted to: sci.electronics.design,rec.radio.amateur.antenna

On Nov 27, 5:44 am, Jeff Liebermann <je...@cruzio.com> wrote:
> On Fri, 27 Nov 2009 01:58:09 -0800 (PST), "m...@sushi.com"
>
> <m...@sushi.com> wrote:
> >The "virtual" compass requires you to move since it bases direction on
> >differential GPS readings. OK in a car, semi-OK on foot, worthless if
> >the going is slow since the delta of distance is not significant
> >enough to get a good calculation.
>
> Actually, it's not too horrible for determining the general direction
> of travel. However, totally useless for determining the azimuth of
> something from a fixed location.
>
> >The newer GPSs have sensors in them. To null out the nearby magnetic
> >field, you need to slow spin it around. Two revolutions generally. Or
> >you can spin your body around and look like an idiot. The trouble is
> >the GPS has to be level unless you have a 3-D compass. [Garmin
> >doesn't, Magellan does. Too many complaints about Magellan gear, so
> >you just put up with Garmin.] The GPS has a threshold where it will
> >shift from magnetic sensor to virtual compass. You can really screw
> >yourself up if you don't know about this.
>
> I spent some time trying to get sane readings from the fluxgate
> "magnetic" compass in a borrowed Garmin GPS. The rotation method
> worked quite well, until I moved. When standing next to a vehicle, it
> was nearly useless.

I wish I could turn the damn sensor off at times.

>
> >Your technique is fine if you spot from the same location. If you are
> >on the move, you realy do need a compass.
>
> Ummm.... orbital satellite spotting from a moving vehicle is rather
> uncommon and dangerous.

I was speaking in the general sense of navigation.
>
> >Occasionally I'll see
> >something off in the distance.[OK, OK, in denied access area.]
>
> Sigh. I suppose the alien technology that they're hiding is better
> than a compass.

Anyone that tracks my posts knows I sniff around Groom Lake. Knowing
the terrain makes it easy to know where to point the binocs or
telescope.

>
> >Log
> >your position, take a vector, then study it on google earth or a map.
> >Other times I am DFing radio signals. Again, the compass does the log.
> >Log everything in magnetic, then use your mag in magnetic, and you
> >won't go crazy. Attempt to correct your readings and you are either
> >correct or you just added twice the adjustment factor to your reading.
> >Really not a good idea.
>
> Ok. I'll admit to having added my declination instead subtracted more
> than once. Still, some additional practice and a few sanity checks
> against known locations should help.

I've concluded I'm certifiable! ;-)
>
> >Aviation long ago decided on doing everything magnetic, probably to
> >get around the confusion.
>
> Mostly true. All US runways are magnetic. So is the VOR. However,
> all sectional maps are based on true north. GPS navigation devices
> can be either way. Magnetic is a big help when using a magnetic
> compass for finding the runway.
>
> Canadian aviation is really strange. The northern half uses true
> north, while the southern half uses magnetic.
>
> <http://en.wikipedia.org/wiki/Magnetic_declination>
>
> >Of course, they still use AGL (above ground
> >level) and MSL (mean sea level) for altitude. You may recall either a
> >Thunderbird or Blue Angel getting into trouble with this.
>
> Dunno. However, I've screwed up a few HAAT calculations on FCC
> license applications when I was doing them with just a calculator:
> <http://en.wikipedia.org/wiki/Height_above_average_terrain>
>
> >I use your spotting technique at times too. It depends on if I can do
> >the preparation. Your scheme works better in mountain areas, which is
> >where I use it since I know the various peaks and where the campsite
> >is located.
>
> It works with any decent road map. You don't even need to sight the
> distant mountain peaks. Just align the map with the local roadways
> and it's already better than a magnetic compass. The most difficult
> part is finding a large flat area on which to place the map. When
> desperate, I use corrugated box cardboard and pins for markers.
>
> Incidentally, I have a crude system of doing TDOA (time difference of

> arrival) hyperbolic RDF location on a paper map using two nails and
> some string. I'm slowly scribbling a web page on the subject, so no
> details until I'm done.

Those old schemes where you quickly switch between antennas work well
for voice signals. I've found data channels don't do so well. I was
told that it has to do with how the data channels are nearly always at
full modulation. One of these days I'm going to hack two radios so
they share one local oscillator and see if I can DF based on phase
comparison of the last IF output.
>
> Oh, if you want high tech location and mapping assistance, there's GPS
> augmented reality.
> <http://www.youtube.com/watch?v=4Fl718QO_xQ>
>
> --
> Jeff Liebermann   je...@cruzio.com
> 150 Felker St #D   http://www.LearnByDestroying.com
> Santa Cruz CA 95060http://802.11junk.com
> Skype: JeffLiebermann   AE6KS   831-336-2558

3263. Re: Satelite Watching

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-27 19:54:07 UTC
From: Rob <nomail@example.com>
Message-ID: <slrnhh0biv.2uba.nomail@xs7.xs4all.nl>
Source record: 11875
Cross-posted to: sci.electronics.design,rec.radio.amateur.antenna

amdx <amdx@knology.net> wrote:
> This must have been a rare occurance, look how close the were.
> Maximum altitude is at ISS 17:44:57 STS 17:45:19 Within 22 seconds
> Altitude ISS 37° STS 38°
> Within 1°
> Azimuth ISS 44° STS 44°
> Same
> Distance ISS 549 km STS 545 km
> Within 4 km.

The difference in distance between you and ISS and between you and STS
was 4 km. This does not mean they are 4km apart. That would only be
true if they were on a straight line from you to those objects.

3264. Re: Satellite Watching

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-27 20:52:20 UTC
From: Jeff Liebermann <jeffl@cruzio.com>
Message-ID: <fhc0h5hcgm2kps5pg0ar13qnh1rsph5nbc@4ax.com>
Source record: 11876
Cross-posted to: sci.electronics.design,rec.radio.amateur.antenna

On Fri, 27 Nov 2009 11:20:48 -0800 (PST), "miso@sushi.com"
<miso@sushi.com> wrote:

>Those old schemes where you quickly switch between antennas work well
>for voice signals. I've found data channels don't do so well.

A "Homer" works fine for continuous uni-directional data. It doesn't
work well for half duplex such as Wi-Fi. They're really awful for
situations where you hear multiple xmitters with the added bonus of
collisions (i.e. packet data). There are workarounds, but all require
decoding the data first and using a computah to keep track of which
xmitter you're hearing.

>I was
>told that it has to do with how the data channels are nearly always at
>full modulation. One of these days I'm going to hack two radios so
>they share one local oscillator and see if I can DF based on phase
>comparison of the last IF output.

It will work with one big catch. You'll have to replace the IF
crystal filters with one that has a fairly stable group delay across
the IF bandwidth. If you're working with data that has modulation
components all the way to the edge of the IF filter, you're going to
go through huge variations in phase shift between the carrier and the
filter skirts. Building two matched receivers just adds to the
complexity. OAR (Ocean Applied Research, now part of Cubic) once made
an Adcock antenna DF system that had 3 receivers for measuring the
phase and displaying the direction on a scope.
<http://www.cubic.com/cda1/Prod_&_Serv/C4ISR_Prod_&_Sys/DF_Products/df_processors.html>
<http://www.cubic.com/cda1/pdf/aa1319.pdf>

Personally, I think you would do better with multiple remote receivers
and measuring the TDOA (time difference of arrival) at each receiver.
Each burst of RF is time coded and packaged along with signal
strength, GPS phase, and decoded data, and sent off to a central
computah for processing. The time codes are critical as that allows
storage, replay, and post processing. Spewing RF around Area 51 is
probably a bad idea, so post processing make sense. Collect the time
coded data on thumb drives, stuff the data into a computah on your way
out, compute, and replay the captured data later.

Drivel: If you're thinking of doing it with a Doppler ADF, then
please read my previous rants before blundering onward:
<http://www.qsl.net/n9zia/doppler_notes1.txt>
<http://www.qsl.net/n9zia/doppler_notes2.txt>

<http://802.11junk.com/jeffl/AN-SRD-22/>
Those are 15 year old postings about a 35 year old product, but it's
still generally accurate.

Did you ever build and try the 1090 Mhz AMOS/Franklin antenna?

--
Jeff Liebermann jeffl@cruzio.com
150 Felker St #D http://www.LearnByDestroying.com
Santa Cruz CA 95060 http://802.11junk.com
Skype: JeffLiebermann AE6KS 831-336-2558

3265. Re: Satellite Watching

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-27 21:07:48 UTC
From: "Paul Hovnanian P.E." <paul@hovnanian.com>
Message-ID: <Jsudnd82Mq7ioo3WnZ2dnUVZ_uadnZ2d@posted.isomediainc>
Source record: 11877
Cross-posted to: sci.electronics.design,rec.radio.amateur.antenna

Jeff Liebermann wrote:

[snip]
>
> I spent some time trying to get sane readings from the fluxgate
> "magnetic" compass in a borrowed Garmin GPS. The rotation method
> worked quite well, until I moved. When standing next to a vehicle, it
> was nearly useless.

An example of British humor: I saw an old (1950s era?) British military training film clip on how to use a compass. The instructor stated that it was necessary to remove metal objects that could distort the readings from the vicinity. He proceeded to remove pocket knives, coins, pens and his belt buckle prior to reading his compass. He was standing next to a locomotive.

--
Paul Hovnanian paul@hovnanian.com

Have gnu, will travel.

3266. Re: Looking for matching transformer.

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-27 21:08:16 UTC
From: K7ITM <k7itm@msn.com>
Message-ID: <158d982c-afaa-4d24-bec7-578a6a5f704c@h14g2000pri.googlegroups.com>
Source record: 11878

On Nov 26, 8:41 pm, Lostgallifreyan <no-...@nowhere.net> wrote:
> K7ITM <k7...@msn.com> wrote in news:a01fbd86-ac58-4cb5-a983-
> 132722059...@x5g2000prf.googlegroups.com:
>
>
>
> > On Nov 26, 12:51 am, Lostgallifreyan <no-...@nowhere.net> wrote:
> >> Originally posted to rec.radio.amateur.misc as advised by guidelines read
> > in
> >> a monthly posting, but got no help there apart from a suggestion to post
> >> here...
>
> >> This post has more to do with a firm selling radio stuff than the stuff
> >> itself, and their apparent want not to do business even with people who s
> > end
> >> on-topic and polite emails at infrequent intervals. That's strange, so I
> > want
> >> help with that from someone who HAS done business with them, or knows
> >> something about why they refuse to answer a normal sales inquiry.
>
> > ...
>
> > Just checked their web site. Their contact info lists "help@..."
> > instead of "sales@..." as the email address. Have you tried that?
>
> > My impression is that it's a pretty small operation. It might
> > literally have a staff of one. Who knows what might have happened--
> > vacation, illness, ...
>
> > I'd be a bit careful about ordering anything from a company that lists
> > so few specs on their equipment. I checked the "receiver preamps"
> > page and found no mention of some pretty important stuff like third
> > order intercept, noise figure, and some details of the filter
> > performance for the "single band" preamps.
>
> > Cheers,
> > Tom
>
> Thankyou. I think I tried both addresses.. First thing after one failed would
> be to try the other.. :) You might be right, could be small enough that
> something went wrong and stopped business for a while. I was assuming that
> the amount of fabrication needed to make that transformer implied a small
> group of people but that IS just my assumption, as one person can 'farm out'
> that work with a good design. I take your point about the lack of data, but

> as I'm after a passive device recommended by someone who knows a lot more
> than I do (I cited one of his messages in my other post just now, it's old
> but that shouldn't invalidate it, SW listening is an old exercise, surely
> close to 100 years by now), and as that 180A transformer is clearly good
> value and low(ish) cost, I think it's a good starting base, though if I can
> find John Doty's plans that is also a good start.

Just gave them (ICE) a call on their US toll-free number and they
answered immediately. The fellow said the 180A is a stock item that
can ship immediately. They don't currently take pay-pal but expect to
in the near future. He said air shipping across the pond would be
about $22 for the 1-lb package. Finally, he gave me another email
that he said should work well: iceltd@earthlink.net. (Took me way
less time to make the call than to write too many words here... ;-)

Cheers,
Tom

3267. Re: Satellite Watching

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-28 00:29:22 UTC
From: "miso@sushi.com" <miso@sushi.com>
Message-ID: <2aff511f-0761-44b9-9718-d524ce332e93@13g2000prl.googlegroups.com>
Source record: 11879
Cross-posted to: sci.electronics.design,rec.radio.amateur.antenna

On Nov 27, 12:52 pm, Jeff Liebermann <je...@cruzio.com> wrote:
> On Fri, 27 Nov 2009 11:20:48 -0800 (PST), "m...@sushi.com"
>
> <m...@sushi.com> wrote:
> >Those old schemes where you quickly switch between antennas work well
> >for voice signals. I've found data channels don't do so well.
>
> A "Homer" works fine for continuous uni-directional data. It doesn't
> work well for half duplex such as Wi-Fi. They're really awful for
> situations where you hear multiple xmitters with the added bonus of
> collisions (i.e. packet data). There are workarounds, but all require
> decoding the data first and using a computah to keep track of which
> xmitter you're hearing.
>
> >I was
> >told that it has to do with how the data channels are nearly always at
> >full modulation. One of these days I'm going to hack two radios so
> >they share one local oscillator and see if I can DF based on phase
> >comparison of the last IF output.
>
> It will work with one big catch. You'll have to replace the IF
> crystal filters with one that has a fairly stable group delay across
> the IF bandwidth. If you're working with data that has modulation
> components all the way to the edge of the IF filter, you're going to
> go through huge variations in phase shift between the carrier and the
> filter skirts. Building two matched receivers just adds to the
> complexity. OAR (Ocean Applied Research, now part of Cubic) once made
> an Adcock antenna DF system that had 3 receivers for measuring the
> phase and displaying the direction on a scope.
> <http://www.cubic.com/cda1/Prod_&_Serv/C4ISR_Prod_&_Sys/DF_Products/df...>
> <http://www.cubic.com/cda1/pdf/aa1319.pdf>
>
> Personally, I think you would do better with multiple remote receivers
> and measuring the TDOA (time difference of arrival) at each receiver.
> Each burst of RF is time coded and packaged along with signal
> strength, GPS phase, and decoded data, and sent off to a central
> computah for processing. The time codes are critical as that allows
> storage, replay, and post processing. Spewing RF around Area 51 is
> probably a bad idea, so post processing make sense. Collect the time
> coded data on thumb drives, stuff the data into a computah on your way
> out, compute, and replay the captured data later.
>
> Drivel: If you're thinking of doing it with a Doppler ADF, then

> please read my previous rants before blundering onward:
> <http://www.qsl.net/n9zia/doppler_notes1.txt>
> <http://www.qsl.net/n9zia/doppler_notes2.txt>
> <http://802.11junk.com/jeffl/AN-SRD-22/>
> Those are 15 year old postings about a 35 year old product, but it's
> still generally accurate.
>
> Did you ever build and try the 1090 Mhz AMOS/Franklin antenna?
>
> --
> Jeff Liebermann   je...@cruzio.com
> 150 Felker St #D   http://www.LearnByDestroying.com
> Santa Cruz CA 95060http://802.11junk.com
> Skype: JeffLiebermann   AE6KS   831-336-2558

I fiddled with the AMOS 1090 and didn't like the big dip in the vertical axis. No amount of running the optimizer could get rid of it. I do appreciate the NEC file as it helped me understand the program.

After studying all the AMOS designs, the best plan would be to use the 3 element inverted AMOS. It is a natural 200 ohm antenna, so I assume you could skip the combiner and the associated loss. That is, just slap 4 in parallel to make 50 ohms. I'll probably be bugging you off-line on this, but I want to hack more myself er since it builds character. .-) [Of course it also wastes time, but I consider the wasted time education.] The 3 element AMOS creates a near perfect "blob" in the vertical. I could see the quad 3-element inverted AMOS working for satellite use.

Regarding TDOA, I bought two Trimble (Datum) StarLoc disciplined 10Mhz time references at Livermore. New old stock at $30 a pop. What I fool that I didn't wipe the vendor out since he had three. But at the time I didn't know if I could make it work. Anyway, I think TDOA using time stamp and synchronization via GPS disciplined clocks would make TDOA work well, even if after the fact. If I had three, I'd be TDOAing. As it stands, I was nice enough to sell one at cost to a friend, so now I need two more. I wasn't thinking TDOA at the time.

If you look at Plane Plotter, they have a MLAT for 1090. [Not every plane reports position.] The big drawback is the MLAT position reference is some other plane in the sky that is position reporting. Some airports have a constant mode-s, so I suspect there may be a FAA MLAT in the works. However, if they built the 1090 receivers with capability to use GPS timing, it would work with a simple TDOA.

3268. Re: Satellite Watching

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-28 01:08:01 UTC
From: Jeff Liebermann <jeffl@cruzio.com>
Message-ID: <3ks0h5lgn89tk3aq0j9k7nepbt4899a6j0@4ax.com>
Source record: 11880
Cross-posted to: sci.electronics.design,rec.radio.amateur.antenna

On Fri, 27 Nov 2009 16:29:22 -0800 (PST), "miso@sushi.com"
<miso@sushi.com> wrote:

>I fiddled with the AMOS 1090 and didn't like the big dip in the
>vertical axis. No amount of running the optimizer could get rid of it.

<http://802.11junk.com/jeffl/antennas/AMOS-5-1090MHz/>
for the curious. Yeah, the side lobes are not going to go away with
the 5 element model. However, if you add elements, such as the 7
element model:
<http://802.11junk.com/jeffl/antennas/AMOS-7/>
the side lobes are somewhat reduced. With 40dB difference between the
major lobe and any of the side lobes, I don't think you'll have a
problem.

--
Jeff Liebermann jeffl@cruzio.com
150 Felker St #D http://www.LearnByDestroying.com
Santa Cruz CA 95060 http://802.11junk.com
Skype: JeffLiebermann AE6KS 831-336-2558

3269. Re: Antenna Launcher

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-28 01:13:50 UTC
From: Gary <jgboyles@aol.com>
Message-ID: <003c0c67-a3dd-41ce-a5a9-949aa7da2e4b@m25g2000yqc.googlegroups.com>
Source record: 11881

On Nov 27, 11:27 am, John Ferrell <jferrel...@triad.rr.com> wrote:
> There is an artical by W4SSY in the March 2009 QST Magazine. I am
> planning to duplicate it for use at my QTH. I am interested in any
> comments, especially from anyone who may have already built one.
>
> My available trees may be about 80 feet so that is my minimum
> expectations!
>
> There is a lot of Google information available but I am trying to
> focus on this example.
>
> John Ferrell W8CCW

Hi John, I have not built one yet but am contemplating. Mine will use a Rain Bird 1" Auto Sprinkler Valve, electrically actuated (24 VAC or DC). I plan to use a Harbor Freigth 5 in one power source for the air compressor, the pressure gage, and the 24 VAC actuator supply. The power source is $60-$90 depending on the sale going on, it is also handy for lots of other stuff.

This will be my first shot because I have this available. As far as the PVC, tire valve, fishing reel, ect. don't have that much experience. As far as line, I have had one break on me after a nice launch with a sling shot. Make sure your line is of good quality. Happy launching.

Gary N4AST

3270. Re: Satellite Watching

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-28 06:02:21 UTC
From: "miso@sushi.com" <miso@sushi.com>
Message-ID: <b92ec6e3-2ed0-4390-974b-d42e5463c6aa@m33g2000pri.googlegroups.com>
Source record: 11882
Cross-posted to: sci.electronics.design,rec.radio.amateur.antenna

On Nov 27, 5:08 pm, Jeff Liebermann <je...@cruzio.com> wrote:
> On Fri, 27 Nov 2009 16:29:22 -0800 (PST), "m...@sushi.com"
>
> <m...@sushi.com> wrote:
> >I fiddled with the AMOS 1090 and didn't like the big dip in the
> >vertical axis. No amount of running the optimizer could get rid of it.
>
> <http://802.11junk.com/jeffl/antennas/AMOS-5-1090MHz/>
> for the curious. Yeah, the side lobes are not going to go away with
> the 5 element model. However, if you add elements, such as the 7
> element model:
> <http://802.11junk.com/jeffl/antennas/AMOS-7/>
> the side lobes are somewhat reduced. With 40dB difference between the
> major lobe and any of the side lobes, I don't think you'll have a
> problem.
>
> --
> Jeff Liebermann   je...@cruzio.com
> 150 Felker St #D   http://www.LearnByDestroying.com
> Santa Cruz CA 95060http://802.11junk.com
> Skype: JeffLiebermann   AE6KS   831-336-2558

No, it's not the side lobes as much as the gain dips as you sweep
elevation, i.e. starting from the horizon and going to vertical. Mode-
s is very different from your typical point to point comms. You need
coverage at all elevations. Perhaps I'm not explaining this well.
Maybe vertical plane is a better term. With mode-s, the targets are
3D. All around you, plus up and down. It is like satellite reception,
only worse since you want to cover horizon to horizon.

Think of the Lindenblad antenna, but with more gain.
http://www.amsat.org/amsat/articles/w6shp/lindy.html
The FAA has played with these, as shown in the article, but I've never
seen one at an airport. The Lindy has the advantage in that it's
circularly polarized. The mode-s transmitter is on the belly of the
bird, so you would think it's vertically polarized, but unless you
want a lot of angry passengers, you tend to fly level to the earth.
So distant plane's antenna would appear to be tilted from the
distance observer.

There are stacked Lindenblads, but I'm pretty sure that can't be done
strictly passive. There is also that variant of the J-pole that has
circular polarization, which broadcast FM sometimes uses in stacks.

All that said, my gut feeling is parallel the 3 element inverted Amos will probably do the trick. The stock antenna, which is 3dbi at the horizon, does 200nm. A receiver is at best only a few thousand above average terrain. The last time I did the math, I got a line of sight to the highest flying plane of about 330m. Using a square law relationship, that means a linear increase of about 2.7., or 4.3db. OK, make it about 7dbi.

http://yu1aw.ba-karlsruhe.de/invertamos.pdf
Figure 12 shows nearly 11db for the 3 dipole inverted amos.

3271. Re: Looking for matching transformer.

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-28 08:20:16 UTC
From: Lostgallifreyan <no-one@nowhere.net>
Message-ID: <Xns9CD154D0A76E6zoodlewurdle@216.196.109.145>
Source record: 11883

K7ITM <k7itm@msn.com> wrote in news:158d982c-afaa-4d24-bec7-578a6a5f704c@h14g2000pri.googlegroups.com:

> Just gave them (ICE) a call on their US toll-free number and they
> answered immediately. The fellow said the 180A is a stock item that
> can ship immediately. They don't currently take pay-pal but expect to
> in the near future. He said air shipping across the pond would be
> about $22 for the 1-lb package. Finally, he gave me another email
> that he said should work well: iceltd@earthlink.net. (Took me way
> less time to make the call than to write too many words here... ;-)
>
> Cheers,
> Tom
>

That's great, thanks for that. I'll also look into a European or ideally UK source too, but that 180A was recommended by someone whose postings lead me to think they were right to do so, and unless I find better nearer to me, I'll buy it. If that thing has been a stock item for at least 14 years I think I can assume that it's right for a lot of people.

I'm still holding out for a way to reach John Doty (whose posts I read), or at least a copy of his plans for winding our own matching transformers and baluns. Got to be good to learn from those...

Lastly, I'm still wondering why Richard was so insistent on the 'grief' that comes from mentioning a stock commercial item. Surely the whole point of standardising impedance values is so that it IS reasonable to assume that a 'stock' item, chosen fopr a specific purpose, is acceptable. As this one has several choices of impedance built into it, even more so, no? Can every buyer in 14+ years also be wrong? And if so, what should they be doing instead. I've already said I also want to see John Doty's plans to understand this better. Is this also wrong? :)

3272. Shortwave frequency lists.

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-28 08:22:57 UTC
From: user <dag@allemaale.be>
Message-ID: <heqml2$s1j$1@news.eternal-september.org>
Source record: 11884
Cross-posted to: rec.radio.shortwave,rec.radio.amateur.antenna

The "simple" man goes away with the first 3 links ;-) ::

http://users.fulladsl.be/~spb13810/radio/swlist/ for languages, click on
an hour for tx in that hour & language

http://users.fulladsl.be/~spb13810/radio/txlist/ for stations, click on an
hour for tx in that hour & from that station

Use of the (previous and) following list: It's 3PM, where's VOA now?? Where
can I hear Spanish at 19UTC??
http://users.fulladsl.be/~spb13810/radio/timelist/ complete hourly lists
of sw tx (with crosslinks to language/ station)

The source for this data is Eibi.

I put Aoki here;:
http://users.fulladsl.be/~spb13810/radio/swlistaoki/ for languages
http://users.fulladsl.be/~spb13810/radio/txlistaoki/ for stations

Space limits made me decide to drop hourly lists for Aoki.

There are more than 700 stations, more than 300 languages, that makes about
24 hours x (300 + 700) = 24000 files on the site.

I also made a comparison of the 2 sources: aoki and eibi: (frequency order)
http://users.fulladsl.be/~spb13810/radio/indexsrc.htm

--
--
What's on Shortwave guide: choose an hour, go!
http://shortwave.tk
700+ Radio Stations on SW http://swstations.tk
300+ languages on SW http://radiolanguages.tk

3273. Re: MFJ Antenna Analyzers hints, tips

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-28 15:12:00 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <d5bQm.13095$_b5.1326@newsfe22.iad>
Source record: 11805

John Ferrell wrote:
> To fully appreciate it you need to download & study the manual.

Ditto! I believe the manual was written by W8JI
and he did an excellent job.
--
73, Cecil, IEEE, OOTC, http://www.w5dxp.com

3274. Re: some teena pic from teh kosher ham techical blog tip and trick i hope u indeed find usefull

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-28 15:16:13 UTC
From: G0BLV <G0BLV@mymail.com>
Message-ID: <heresq$61h$3@news.eternal-september.org>
Source record: 11885
Cross-posted to: rec.radio.amateur.policy,rec.radio.amateur.antenna

kb9rqz wrote:
> hear they are a cuple more tomarrow
> http://techkb9rqz.blogspot.com/2009/05/some-teena-pic.html
>
>
Is English your second language?

3275. radials for Cushcraft AV5

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-28 15:42:41 UTC
From: Daniel Ferrato - IK2SGL <dferrato@infinito.it>
Message-ID: <4b1144f1$0$696$5fc30a8@news.tiscali.it>
Source record: 11886

Dear all, I hope this is the right NG. I have an old Cushcraft AV5 vertical antenna but I can't find the radials nor the manual. I would need to know the number of radials and lenghts of them,

Thank you in advance

73 de IK2SGL
Daniel

3276. Re: radials for Cushcraft AV5

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-28 16:02:34 UTC
From: Bert Hyman <bert@iphouse.com>
Message-ID: <Xns9CD166298A44EVeebleFetzer@216.250.188.141>
Source record: 11887

In news:4b1144f1$0$696$5fc30a8@news.tiscali.it "Daniel Ferrato - IK2SGL"
<dferrato@infinito.it> wrote:

> Dear all, I hope this is the right NG. I have an old Cushcraft AV5
> vertical antenna but I can't find the radials nor the manual. I would
> need to know the number of radials and lenghts of them,

Here's the manual for the AV3/4/5. Radial info is on page 6.

http://www.cushcraftamateur.com/pdffiles/av3482.pdf

--
Bert Hyman St. Paul, MN bert@iphouse.com

3277. Re: Satelite Watching

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-28 16:40:51 UTC
From: amdx <amdx@knology.net>
Message-ID: <b1f6a$4b11528e$18ec6dd7$1937@KNOLOGY.NET>
Source record: 11888
Cross-posted to: sci.electronics.design,rec.radio.amateur.antenna

"Rob" <nomail@example.com> wrote in message
news:slrnhh0biv.2uba.nomail@xs7.xs4all.nl...
> amdx <amdx@knology.net> wrote:
>> This must have been a rare occurance, look how close the were.
>> Maximum altitude is at ISS 17:44:57 STS 17:45:19 Within 22
>> seconds
>> Altitude ISS 37° STS 38°
>> Within 1°
>> Azimuth ISS 44° STS 44°
>> Same
>> Distance ISS 549 km STS 545 km
>> Within 4 km.
>
> The difference in distance between you and ISS and between you and STS
> was 4 km. This does not mean they are 4km apart. That would only be
> true if they were on a straight line from you to those objects.

I understand that, at one time they were docked with each other.
Mike

3278. Re: Antenna Launcher

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-28 16:45:12 UTC
From: John Ferrell <jferrell13@triad.rr.com>
Message-ID: <n4k2h5hp5a0d08it96a610b5k5atqv7i18@4ax.com>
Source record: 11889

On Fri, 27 Nov 2009 17:13:50 -0800 (PST), Gary <jgboyles@aol.com>
wrote:

>On Nov 27, 11:27?am, John Ferrell <jferrel...@triad.rr.com> wrote:
>> There is an artical by W4SSY in the March 2009 QST Magazine. I am
>> planning to duplicate it for use at my QTH. I am interested in any
>> comments, especially from anyone who may have already built one.
>>
>> My available trees may be about 80 feet so that is my minimum
>> expectations!
>>
>> There is a lot of Google information available but I am trying to
>> focus on this example.
>>
>> John Ferrell W8CCW
>
>Hi John, I have not built one yet but am contemplating. Mine will
>use a Rain Bird 1" Auto Sprinkler Valve, electrically actuated (24 VAC
>or DC). I plan to use a Harbor Freigth 5 in one power source for the
>air compressor, the pressure gage, and the 24 VAC actuator supply.
>The power source is $60-$90 depending on the sale going on, it is also
>handy for lots of other stuff.
>
>This will be my first shot because I have this available. As far as
>the PVC, tire valve, fishing reel, ect. don't have that much
>experience. As far as line, I have had one break on me after a nice
>launch with a sling shot. Make sure your line is of good quality.
>Happy launching.
>
>Gary N4AST
I bought most of the supplies last night at Home Depot. The Orbit
sprinkler valve was only about $12. It is an inline type valve like
the one in the artical. I was thinking I would use a long piece of
pipe as the accumulator but after doing the math I have decided to go
back and get a piece of 3 inch pipe to use. BTW, the cement and primer
is available in a single package for about $6.50. I am a little
concerned about the loose fit of the projectile in the 1-1/2 inch
barrel.

I will report back as I continue.
John Ferrell W8CCW

3279. Re: radials for Cushcraft AV5

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-28 20:09:17 UTC
From: Daniel Ferrato - IK2SGL <dferrato@infinito.it>
Message-ID: <4b11836f$0$6839$5fc30a8@news.tiscali.it>
Source record: 11890

Thank you Bert, I remembered more radials.. I'm getting older...those were the days..

73 de IK2SGL

Daniel
"Bert Hyman" <bert@iphouse.com> ha scritto nel messaggio
news:Xns9CD166298A44EVeebleFetzer@216.250.188.141...
> In news:4b1144f1$0$696$5fc30a8@news.tiscali.it "Daniel Ferrato - IK2SGL"
> <dferrato@infinito.it> wrote:
>
>> Dear all, I hope this is the right NG. I have an old Cushcraft AV5
>> vertical antenna but I can't find the radials nor the manual. I would
>> need to know the number of radials and lenghts of them,
>
> Here's the manual for the AV3/4/5. Radial info is on page 6.
>
> http://www.cushcraftamateur.com/pdffiles/av3482.pdf
>
> --
> Bert Hyman St. Paul, MN bert@iphouse.com

3280. Re: Looking for matching transformer.

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-28 23:36:08 UTC
From: K7ITM <k7itm@msn.com>
Message-ID: <79a92c5a-d528-46cf-a24f-dd347d52a476@d21g2000yqn.googlegroups.com>
Source record: 11891

On Nov 28, 12:20 am, Lostgallifreyan <no-...@nowhere.net> wrote:
> K7ITM <k7...@msn.com> wrote in news:158d982c-afaa-4d24-bec7-
> 578a6a5f7...@h14g2000pri.googlegroups.com:
>
> > Just gave them (ICE) a call on their US toll-free number and they
> > answered immediately. The fellow said the 180A is a stock item that
> > can ship immediately. They don't currently take pay-pal but expect to
> > in the near future. He said air shipping across the pond would be
> > about $22 for the 1-lb package. Finally, he gave me another email
> > that he said should work well: ice...@earthlink.net. (Took me way
> > less time to make the call than to write too many words here... ;-)
>
> > Cheers,
> > Tom
>
> That's great, thanks for that. I'll also look into a European or ideally UK
> source too, but that 180A was recommended by someone whose postings lead me
> to think they were right to do so, and unless I find better nearer to me,
> I'll buy it. If that thing has been a stock item for at least 14 years I
> think I can assume that it's right for a lot of people.
>
> I'm still holding out for a way to reach John Doty (whose posts I read), or
> at least a copy of his plans for winding our own matching transformers and
> baluns. Got to be good to learn from those...
>
> Lastly, I'm still wondering why Richard was so insistent on the 'grief' that
> comes from mentioning a stock commercial item. Surely the whole point of
> standardising impedance values is so that it IS reasonable to assume that a
> 'stock' item, chosen fopr a specific purpose, is acceptable. As this one has
> several choices of impedance built into it, even more so, no? Can every buyer
> in 14+ years also be wrong? And if so, what should they be doing instead.
> I've already said I also want to see John Doty's plans to understand this
> better. Is this also wrong? :)

As one who designs all sorts of RF filters and then builds one-off
versions (if as an aid for my own bench-testing of things like
distortion in receiver circuits) or specifies parts for ones put into
production, I'd probably elect to wind my own such transformer if I
needed one, but I can certainly see the appeal of buying one.
Considering the packaging alone, it's worth it to go that way. But I
also think it's great that you're looking into postings of folk who
have words of wisdom to offer. I have the strong feeling that you're
plenty bright enough to not simply accept those postings on faith, but
will test what you learn from them against your own experiences, and

thus build your knowledge on a firm foundation.

Technical (and semi-technical) books are generally safer sources than postings, but even they are not infallible. I'm thinking here in particular about one popular book about design and winding of RF transformers on ferrite toroidal cores. You can learn a lot from the book, but it's not 100% accurate.

Best wishes for success in improving your (RF) reception -- and in learning!

Cheers,
Tom

3281. Re: Looking for matching transformer.

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-29 02:25:46 UTC
From: "J. Mc Laughlin" <jcm@power-net.net>
Message-ID: <Ds6dnbuMW_g4RozWnZ2dnUVZ_oOdnZ2d@bright.net>
Source record: 11892

Dear Lostgallifreyan - no call sign - somewhere in UK:

Dr. Doty appears not to have published any papers for a few years, so it is
not clear if he is still active. Here is his contact information as
provided by MIT:
name: Doty, John P
email: jpd@SPACE.MIT.EDU
phone: (617) 253-3169
phone2: (617) 253-7464
address: 37-538
address2: 37-518
department: Kavli Institute for Astrophysics & Space Research
title: Research Affiliate
I suggest that you not be anonymous when you contact him. Regards, Mac
N8TT
--
J. McLaughlin; Michigan, USA
Home: JCM@power-net.net

"Lostgallifreyan" <no-one@nowhere.net> wrote in message
news:Xns9CD154D0A76E6zoodlewurdle@216.196.109.145...
>>

>
> I'm still holding out for a way to reach John Doty (whose posts I read),
> or
> at least a copy of his plans for winding our own matching transformers and
> baluns. Got to be good to learn from those...
>

> I've already said I also want to see John Doty's plans to understand this
> better. Is this also wrong? :)

3282. Re: Antenna Launcher

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-29 02:36:20 UTC
From: Gary <jgboyles@aol.com>
Message-ID: <efbd401b-c13e-40c6-97b0-e87a52acc55f@r31g2000vbi.googlegroups.com>
Source record: 11893

On Nov 28, 10:45 am, John Ferrell <jferrel...@triad.rr.com> wrote:
> On Fri, 27 Nov 2009 17:13:50 -0800 (PST), Gary <jgboy...@aol.com>
> wrote:
>
>
>
>
>
> >On Nov 27, 11:27?am, John Ferrell <jferrel...@triad.rr.com> wrote:
> >> There is an artical by W4SSY in the March 2009 QST Magazine. I am
> >> planning to duplicate it for use at my QTH. I am interested in any
> >> comments, especially from anyone who may have already built one.
>
> >> My available trees may be about 80 feet so that is my minimum
> >> expectations!
>
> >> There is a lot of Google information available but I am trying to
> >> focus on this example.
>
> >> John Ferrell W8CCW
>
> >Hi John, I have not built one yet but am contemplating. Mine will
> >use a Rain Bird 1" Auto Sprinkler Valve, electrically actuated (24 VAC
> >or DC). I plan to use a Harbor Freigth 5 in one power source for the
> >air compressor, the pressure gage, and the 24 VAC actuator supply.
> >The power source is $60-$90 depending on the sale going on, it is also
> >handy for lots of other stuff.
>
> >This will be my first shot because I have this available. As far as
> >the PVC, tire valve, fishing reel, ect. don't have that much
> >experience. As far as line, I have had one break on me after a nice
> >launch with a sling shot. Make sure your line is of good quality.
> >Happy launching.
>
> >Gary N4AST
>
> I bought most of the supplies last night at Home Depot. The Orbit
> sprinkler valve was only about $12. It is an inline type valve like
> the one in the artical. I was thinking I would use a long piece of
> pipe as the accumulator but after doing the math I have decided to go
> back and get a piece of 3 inch pipe to use. BTW, the cement and primer
> is available in a single package for about $6.50. I am a little
> concerned about the loose fit of the projectile in the 1-1/2 inch

> barrel.
>
> I will report back as I continue.
> John Ferrell W8CCW- Hide quoted text -
>
> - Show quoted text -

I am sure you saw when Goggling that many use a Tennis ball with pennies stuffed inside for weigth. That is what I intend to try, will take a bit larger barrel than the one in the article. The tennis ball will cause less damage if it comes down on a car window, or someones head! Be interested to hear how yours works.

Gary N4AST

3283. MFJ-1800 2.4GHz 15dBi Yagi, again.

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-29 03:02:45 UTC
From: Jeff Liebermann <jeffl@cruzio.com>
Message-ID: <rvo3h5hhhhscg4r1vi5mm95dnma0tpp9fs@4ax.com>
Source record: 11894
Cross-posted to: rec.radio.amateur.antenna,alt.internet.wireless

I did some cleanup, error correcting, and tinkering with the model of
the MFJ-1800 2.4GHz Yagi-Uda antenna. Mostly, I tried to make the
model as close to the original antenna as possible and recovering the
macros to make it easier to tweak:
<http://802.11junk.com/jeffl/antennas/mfj1800/>
The NEC2 file is under the "main" mfj-1800.jpg page. Cut-n-paste
works.

Data sheet, of sorts:
<http://www.mfjenterprises.com/Product.php?productid=MFJ-1800>

One remaining issue is that the stamped 2mm sheet aluminum does not
have a circular cross section suitable for easy modeling. By trial
and lots of errors, I finally settled on a diameter equal to the 2mm
thickness of the sheet metal. This is probably not correct, but does
result in the best looking gain pattern and VSWR curve.

My thanks to Richard Clark KB7QHC for help with the cross section
problem, and answering my questions.

Note that the antenna shows about a 200 ohms impedance at mid band.
That settles the debate as to whether the antenna, without the current
balun, is 50 or 200 ohms. It's 200 ohms and the 1:1 current balun is
quite inappropriate for matching or whatever. The exposed center
conductor forms a series inductance or radiator, and certainly doesn't
help. With a proper 4:1 matching xformer, the antenna seems quite
usable, but as is, it's junk. If I had one to play with (and my
HP8620c sweeper elects to cooperate), I could sweep the antenna to be
sure.

The coax is RGS-303 PTFE 50 ohms:
<http://wireandcable.thermaxcdt.com/item/high-performance-coaxial-cables/mil-c-17-coaxial-
and-twinaxial-cables/m17-111-rg303-id-70-?&seo=110>

Additional photos:
<http://s395.photobucket.com/albums/pp37/Qmavam/>

--
Jeff Liebermann jeffl@cruzio.com
150 Felker St #D http://www.LearnByDestroying.com
Santa Cruz CA 95060 http://802.11junk.com
Skype: JeffLiebermann AE6KS 831-336-2558

3284. Learn the RLC circuit

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-29 03:36:06 UTC
From: brent <bulegoge@columbus.rr.com>
Message-ID: <b2eb0f9d-d73c-4d82-ba17-7c22bc36c44f@p32g2000vbi.googlegroups.com>
Source record: 11895

I have created a tutorial on the series RLC circuit. It uses
interactive flash programs with embedded audio. It is located here:

http://www.fourier-series.com/RLC-Circuit/index.html

It consists of three parts:

Program 1: The transient response of the series rlc circuit. It
includes user interaction plus all the math behind deriving the
specific transient response with initial conditions is included

Program 2: The steady state response of the rlc circuit. See how to
interpret the transfer function. Do you know how to interpret the
transfer function when it has complex numbers in it? You can learn by
seeing how negative frequency must be considered. Furthermore, you
will see not only the magnitude response of the steady state response,
but also the phase response! All math explained

Program3: See how the impulse response is derived. Use the
interactive controls to make different rlc circuits and see the
impulse response. Next use convolution to put in various input
waveforms to see the output response of the rlc circuit. You will see
how convolution actually works. The math involved in deriving the
impulse response is explained.

3285. Re: Antenna Launcher

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-29 07:06:45 UTC
From: Howard K0ACF <howardk0acf@knology.net>
Message-ID: <4c2a8$4b121d86$d8feea72$5900@KNOLOGY.NET>
Source record: 11896

The pipe for the barrel is 1 1/4 in. 24 in. long. The end caps for the
projectile are 3/4 in. so there is not to much of a loose fit. I haven't
made one myself but a friend of mine has & it does just like the article
say's, use with caution & safety. I'm interested how it works with a tennis
ball, that sounds real neat. Howard K0ACF
"John Ferrell" <jferrell13@triad.rr.com> wrote in message
news:n4k2h5hp5a0d08it96a610b5k5atqv7i18@4ax.com...
> On Fri, 27 Nov 2009 17:13:50 -0800 (PST), Gary <jgboyles@aol.com>
> wrote:
>
>>On Nov 27, 11:27?am, John Ferrell <jferrel...@triad.rr.com> wrote:
>>> There is an artical by W4SSY in the March 2009 QST Magazine. I am
>>> planning to duplicate it for use at my QTH. I am interested in any
>>> comments, especially from anyone who may have already built one.
>>>
>>> My available trees may be about 80 feet so that is my minimum
>>> expectations!
>>>
>>> There is a lot of Google information available but I am trying to
>>> focus on this example.
>>>
>>> John Ferrell W8CCW
>>
>>Hi John, I have not built one yet but am contemplating. Mine will
>>use a Rain Bird 1" Auto Sprinkler Valve, electrically actuated (24 VAC
>>or DC). I plan to use a Harbor Freigth 5 in one power source for the
>>air compressor, the pressure gage, and the 24 VAC actuator supply.
>>The power source is $60-$90 depending on the sale going on, it is also
>>handy for lots of other stuff.
>>
>>This will be my first shot because I have this available. As far as
>>the PVC, tire valve, fishing reel, ect. don't have that much
>>experience. As far as line, I have had one break on me after a nice
>>launch with a sling shot. Make sure your line is of good quality.
>>Happy launching.
>>
>>Gary N4AST
> I bought most of the supplies last night at Home Depot. The Orbit
> sprinkler valve was only about $12. It is an inline type valve like
> the one in the artical. I was thinking I would use a long piece of
> pipe as the accumulator but after doing the math I have decided to go
> back and get a piece of 3 inch pipe to use. BTW, the cement and primer
> is available in a single package for about $6.50. I am a little
> concerned about the loose fit of the projectile in the 1-1/2 inch

> barrel.
>
> I will report back as I continue.
> John Ferrell W8CCW

3286. Re: Looking for matching transformer.

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-29 08:05:13 UTC
From: Lostgallifreyan <no-one@nowhere.net>
Message-ID: <Xns9CD2524377406zoodlewurdle@216.196.109.145>
Source record: 11897

"J. Mc Laughlin" <jcm@power-net.net> wrote in
news:Ds6dnbuMW_g4RozWnZ2dnUVZ_oOdnZ2d@bright.net:

> Dear Lostgallifreyan - no call sign - somewhere in UK:
>
> Dr. Doty appears not to have published any papers for a few years, so it
> is not clear if he is still active. Here is his contact information as
> provided by MIT:
> name: Doty, John P
> email: jpd@SPACE.MIT.EDU
> phone: (617) 253-3169
> phone2: (617) 253-7464
> address: 37-538
> address2: 37-518
> department: Kavli Institute for Astrophysics & Space Research
> title: Research Affiliate
> I suggest that you not be anonymous when you contact him. Regards,
> Mac N8TT

Thankyou. I already tried that one though..
Remote host said: 550 5.1.6 <jpd@space.mit.edu>... User is no longer here at
CSR

I might try the phone (not keen on phones though, especially on multi-
thousand mile lines), but it's also possible I've attracted his attention by
now anyway, so if he wants to help he might. If he doesn't I won't push hard
enough to risk annoyance.

3287. Re: Looking for matching transformer.

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-29 08:22:38 UTC
From: Lostgallifreyan <no-one@nowhere.net>
Message-ID: <Xns9CD255378F3D6zoodlewurdle@216.196.109.145>
Source record: 11898

K7ITM <k7itm@msn.com> wrote in news:79a92c5a-d528-46cf-a24f-dd347d52a476@d21g2000yqn.googlegroups.com:

> As one who designs all sorts of RF filters and then builds one-off
> versions (if as an aid for my own bench-testing of things like
> distortion in receiver circuits) or specifies parts for ones put into
> production, I'd probably elect to wind my own such transformer if I
> needed one, but I can certainly see the appeal of buying one.
> Considering the packaging alone, it's worth it to go that way.

Indeed. I make stuff from acetal and other plastics using a bandsaw and drilled and threaded holes, it's great for tough enclosures to my own design, but quickly shows how much saving can be had if I find anything that saves me a lot of construction work. The cost of that transformer can easily be recovered elsewhere.

> But I
> also think it's great that you're looking into postings of folk who
> have words of wisdom to offer. I have the strong feeling that you're
> plenty bright enough to not simply accept those postings on faith, but
> will test what you learn from them against your own experiences, and
> thus build your knowledge on a firm foundation.
>

I hope so. :) I read several. I chose John Doty's guidance for two reasons: he didn't conflict with good advice I was taught several years ago, long before I had (or built) a computer and found the net, and the other is that many good things have come out of the MIT and I think this could be in the same vein. (Sam's LaserFAQ being one of the most memorable guides).

> Technical (and semi-technical) books are generally safer sources than
> postings, but even they are not infallible. I'm thinking here in
> particular about one popular book about design and winding of RF
> transformers on ferrite toroidal cores. You can learn a lot from the
> book, but it's not 100% accurate.
>

That's certainly true... I found two commercial books on DIY laser building that were so incomplete that they amounted to little more than commercial exploiting of stuff the LaserFAQ offers for free. If I hadn't read as much as I could handle of the great amount of freely available info, I'd not have realised the extent of weakness in those two books. On my own, I'd only made a small improvement in a flashlamp circuit at schematic level but flaws glared once I learned stuff from the LaserFAQ. Another great and mighty reference tome turned out to be mostly anecdotal and frequently lacking in basic reference material, but conversely some small books written by RM

Marston turned out to be references I return to several times a year, finding them more convenient than any web-sited guidance I know. I think there's a book by Bernard Babani publishing (maybe by the man himself) on the subject of ferrite cores. Not sure if that's the one you mean but I can find it easily.

> Best wishes for success in improving your (RF) reception -- and in
> learning!
>
> Cheers,
> Tom

Thankyou. I'm hoping to catch a nice receiver this very day on eBay (been watching a few pass by recently), if I'm lucky enough with the price, then I'll work out what to do for an aerial..

3288. Re: Antenna Launcher

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-29 15:17:37 UTC
From: Ralph Mowery <rmowery28146@earthlink.net>
Message-ID: <hoidnZYPg6QdDY_WnZ2dnUVZ_uydnZ2d@earthlink.com>
Source record: 11899

"Howard K0ACF" <howardk0acf@knology.net> wrote in message
news:4c2a8$4b121d86$d8feea72$5900@KNOLOGY.NET...
> The pipe for the barrel is 1 1/4 in. 24 in. long. The end caps for the
> projectile are 3/4 in. so there is not to much of a loose fit. I haven't
> made one myself but a friend of mine has & it does just like the article
> say's, use with caution & safety. I'm interested how it works with a
> tennis ball, that sounds real neat. Howard K0ACF
> "John Ferrell" <jferrell13@triad.rr.com> wrote in message

I don't have that QST but I built one like this:
http://www.qsl.net/k5lxp/projects/Launcher/Launcher.html

I did wrap a couple of layers of electrical tape over the end caps I used.
Found some orange electrical tape that I thought would make it easier to
see..
Still sort of loose in the pipe. At 35 psi it will shoot them to about 60
feet or more. My first trial shot put it over my triband beam that is about
55 feet up. Did not mean to do that but just wanted to get the feel of how
much psi I should use. I have found 45 psi will put it over the tops of the
trees here that are over 70 feet tall.

3289. Re: Sunspot news

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-29 17:42:45 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <noyQm.48024$X01.17594@newsfe07.iad>
Source record: 11900

http://www.telegraph.co.uk/comment/columnists/christopherbooker/6679082/Climate-change-this-is-the-worst-scientific-scandal-of-our-generation.html
--
73, Cecil, IEEE, OOTC, http://www.w5dxp.com

3290. Re: Antenna Launcher

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-29 23:48:13 UTC
From: John Ferrell <jferrell13@triad.rr.com>
Message-ID: <tj06h51d2idaga7i8u6nes9s9ecs2ufotf@4ax.com>
Source record: 11701

On Sat, 28 Nov 2009 11:45:12 -0500, John Ferrell
<jferrell13@triad.rr.com> wrote:

>On Fri, 27 Nov 2009 17:13:50 -0800 (PST), Gary <jgboyles@aol.com>
>wrote:
>
>>On Nov 27, 11:27?am, John Ferrell <jferrel...@triad.rr.com> wrote:
>>> There is an artical by W4SSY in the March 2009 QST Magazine. I am
>>> planning to duplicate it ...
.. snip...
>I bought most of the supplies last night at Home Depot. The Orbit
>sprinkler valve was only about $12. It is an inline type valve like
>the one in the artical. I was thinking I would use a long piece of
>pipe as the accumulator but after doing the math I have decided to go
>back and get a piece of 3 inch pipe to use. BTW, the cement and primer
>is available in a single package for about $6.50. I am a little
>concerned about the loose fit of the projectile in the 1-1/2 inch
>barrel.
>
>I will report back as I continue.
>John Ferrell W8CCW

It is a 1-1/4" X 24" barrel, the projectiles are two 3/4" end caps on
about a 4" scrap of 3/4" PVC....

Test fire at 30 PSI dry.. it huffs and honks!
Next: 35 PSI and projectile nearly straight up... disappointing!
Next: 45 PSI and leaning towards the woods. Still not too impressing.
Next: 52 PSI about 75 degrees toward the woods. Whacked the tree
smartly at bout 60 feet or so...
Next: 55 PSI a little more vertical... overshot the tree with lots of
clearance and passed over several others and rattled down in the
woods. I saw it come down but still lost it in the leaves. It is time
to get the fishing reel in place! The tire pressure gauge I measured
with may not be accurate, it is about 25 years old.

BTW: The Orbit sprinkler valve has a manual switch function that opens
the valve with a quarter twist of the solenoid. It works so well I may
not bother to use the electrical switch. With an air compressor in my
garage it will be a while before I test it with a hand pump!

I believe there are many ways to boost this thing to more power but
keeping the 3X12 tank minimizes the air requirements (pumping) and the
24" barrel is adequate to get the job done. Initial testing leads me
to believe that this device will serve my needs!

John Ferrell W8CCW

3291. Re: Antenna Launcher

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-30 00:01:52 UTC
From: John Ferrell <jferrell13@triad.rr.com>
Message-ID: <t426h5l8b19gp207nemn7cr0a2h4qu4b46@4ax.com>
Source record: 11702

On Sun, 29 Nov 2009 10:17:37 -0500, "Ralph Mowery"
<rmowery28146@earthlink.net> wrote:

>
>"Howard K0ACF" <howardk0acf@knology.net> wrote in message
>news:4c2a8$4b121d86$d8feea72$5900@KNOLOGY.NET...
>> The pipe for the barrel is 1 1/4 in. 24 in. long. The end caps for the
>> projectile are 3/4 in. so there is not to much of a loose fit. I haven't
>> made one myself but a friend of mine has & it does just like the article
>> say's, use with caution & safety. I'm interested how it works with a
>> tennis ball, that sounds real neat. Howard K0ACF
>> "John Ferrell" <jferrell13@triad.rr.com> wrote in message
>
>I don't have that QST but I built one like this:
>http://www.qsl.net/k5lxp/projects/Launcher/Launcher.html
>
>I did wrap a couple of layers of electrical tape over the end caps I used.
>Found some orange electrical tape that I thought would make it easier to
>see..
>Still sort of loose in the pipe. At 35 psi it will shoot them to about 60
>feet or more. My first trial shot put it over my triband beam that is about
>55 feet up. Did not mean to do that but just wanted to get the feel of how
>much psi I should use. I have found 45 psi will put it over the tops of the
>trees here that are over 70 feet tall.
>
>
That is the model that I planned to use if the available Sprinkler
valve had that particular configuration. I was concerned about this
model because of the barrel and the tank being of equal volume. It is
good to have the testimony that it works as well! I be live it would
be easier to build and cost a little less as well. I would lean toward
the 1-1/4" barrel bore and the 3/4" tubing projectiles because I have
yet to see the 1" end caps described locally.

I may get to try a paper towel for a "patch" as used in Black powder
fire arms tomorrow. I am anxious to get up the 160 meter inverted L.

John Ferrell W8CCW

3292. Re: Antenna Launcher

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-30 01:11:29 UTC
From: Ralph Mowery <rmowery28146@earthlink.net>
Message-ID: <mbSdnV5ZtZEzho7WnZ2dnUVZ_qKdnZ2d@earthlink.com>
Source record: 11703

"John Ferrell" <jferrell13@triad.rr.com> wrote in message news> Next: 55 PSI
a little more vertical... overshot the tree with lots of
> clearance and passed over several others and rattled down in the
> woods. I saw it come down but still lost it in the leaves. It is time
> to get the fishing reel in place! The tire pressure gauge I measured
> with may not be accurate, it is about 25 years old.
>
>

I found 12 volt DC would work my valve just fine. I used one of the
emergency battery boster packs to power mine.

It is usually beter to shoot from the woods to an open area if you can.

I found a open face spinning reel with some low test line on it. I did
not think it would be heavy enough to pull the line over the trees, but it
was for a very light line that I used to pull a heavy line back over with.

If you use hose clamps to hold the reel on with, clamp it to the air chamber
side. I found that if I used the barrel side the clamps restricted the
bore.

You do not need the projectile to be very tight.
I just used some electrical tape to make it fit beter. Used orange as I
though it might make it easier to find .

3293. Re: get kelp

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-30 06:46:22 UTC
From: Mork Cowage <mork.cowage@gmail.com>
Message-ID: <8d4a68a5-f355-4148-b8a5-40aca815a3cc@b15g2000yqd.googlegroups.com>
Source record: 11704
Cross-posted to: alt.ham-radio.vhf-uhf,alt.usenet.kooks,rec.radio.amateur.policy,rec.radio.amateur.antenna

On Nov 27, 12:20 pm, kb9...@yahoooo.com wrote:
> On Fri, 01 Dec 2006 09:36:47 -0800, John Smith
>
>
>
>
>
> <assemblywiz...@gmail.com> wrote:
> >K4YZ wrote:
> >> Nope.
>
> >> The IP Address and servers are complete proof that I do NOT share
> >> any annonymous character's "address".
>
> >> Sounds like Lennie, to me....
>
> >> Steve, K4YZ
>
> >To anyone with even an elementary understanding of anonymous proxies,
> >anonymous remailers, zombie backdoors, etc., the ability to change ones
> >IP address and header details is simplistic, indeed, with little time
> >spent anyone can appear to be "coming" from anywhere in the world.
>
> >You waste my time. Worse, you think us all idiots here. You remind me
> >of the "street smart" prosecutors and defense attorneys who stack jurys
> >with members of little or no technical knowledge and then call in
> >"expert witnesses" and propose arguments of technical details to boggle
> >their minds.
>
> >You have only proven that you, yourself are either ignorant to such
> >technical details, or else you are indeed street smart, I favor the
> >latter in this case (however, if you in the dark about such things, 15
> >minutes on google will enlighten you.)
>
> >JS
>
> "one useless man is disgrace 2 become a law firm 3 or more become a congress"
> adams
>
> woger you are a Congress all in your own head
> "http://www.3ix.org/sys/aff.php?aff=7439" target="_blank"
>

> altopia is never used by KB9RQZhttp://kb9rqz.cc.cchttp://kd8ctl.com
> nor is Konst...@hotmail.com ever
> btw i can be found at
> 17366 N River Rd
> Chassel Mi
>
> but the cowards asking lack the gut to act- Hide quoted text -
>
http://ve7kfm.com/

3294. Re: an ontopic post about code

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-30 17:12:39 UTC
From: kb9rqz@yahoooo.com
Message-ID: <68v7h5djj130dim8nkv464d47cg6c6p1ur@4ax.com>
Source record: 11705
Cross-posted to: alt.ham-radio.vhf-uhf,rec.radio.amateur.policy,rec.radio.amateur.antenna

On Fri, 01 Dec 2006 09:36:47 -0800, John Smith
<assemblywizard@gmail.com> wrote:

>K4YZ wrote:
>> Nope.
>>
>> The IP Address and servers are complete proof that I do NOT share
>> any annonymous character's "address".
>>
>> Sounds like Lennie, to me....
>>
>> Steve, K4YZ
>>
>
>To anyone with even an elementary understanding of anonymous proxies,
>anonymous remailers, zombie backdoors, etc., the ability to change ones
>IP address and header details is simplistic, indeed, with little time
>spent anyone can appear to be "coming" from anywhere in the world.
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>You waste my time. Worse, you think us all idiots here. You remind me
>of the "street smart" prosecutors and defense attorneys who stack jurys
>with members of little or no technical knowledge and then call in
>"expert witnesses" and propose arguments of technical details to boggle
>their minds.
>
>You have only proven that you, yourself are either ignorant to such
>technical details, or else you are indeed street smart, I favor the
>latter in this case (however, if you in the dark about such things, 15
>minutes on google will enlighten you.)
>
>JS

"one useless man is disgrace 2 become a law firm 3 or more become a congress"
adams

woger you are a Congress all in your own head
"http://www.3ix.org/sys/aff.php?aff=7439" target="_blank"

altopia is never used by KB9RQZ
http://kb9rqz.cc.cc
http://kd8ctl.com
nor is Konstans@hotmail.com ever
btw i can be found at
17366 N River Rd

Chassel Mi

but the cowards asking lack the gut to act

3295. Re: Antenna Launcher

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-30 18:31:12 UTC
From: Jim Lux <james.p.lux@jpl.nasa.gov>
Message-ID: <hf1327bji2@news.jpl.nasa.gov>
Source record: 11706

Gary wrote:
> On Nov 27, 11:27 am, John Ferrell <jferrel...@triad.rr.com> wrote:
>> There is an artical by W4SSY in the March 2009 QST Magazine. I am
>> planning to duplicate it for use at my QTH. I am interested in any
>> comments, especially from anyone who may have already built one.
>>
>> My available trees may be about 80 feet so that is my minimum
>> expectations!
>>
>> There is a lot of Google information available but I am trying to
>> focus on this example.
>>
>> John Ferrell W8CCW
>
> Hi John, I have not built one yet but am contemplating. Mine will
> use a Rain Bird 1" Auto Sprinkler Valve, electrically actuated (24 VAC
> or DC). I plan to use a Harbor Freigth 5 in one power source for the
> air compressor, the pressure gage, and the 24 VAC actuator supply.

3 9V batteries in series makes a fine source to actuate a sprinkler valve. Put a 0.1 uf (or thereabouts, non critical) capacitor across the pushbutton contacts to make it last a bit longer.

> The power source is $60-$90 depending on the sale going on, it is also
> handy for lots of other stuff.
>
> This will be my first shot because I have this available. As far as
> the PVC, tire valve, fishing reel, ect. don't have that much
> experience. As far as line, I have had one break on me after a nice
> launch with a sling shot. Make sure your line is of good quality.
> Happy launching.
>
> Gary N4AST

3296. Faraday shields and radiation and misinterpretations

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-30 20:10:16 UTC
From: Art Unwin <arthurunwin@gmail.com>
Message-ID: <799f9609-5d11-4df8-b79a-8422406c6f15@l35g2000vba.googlegroups.com>
Source record: 11707

I have been reading the groups archives on shield antennas and Faraday shields and the different auguments regarding how shielding or the Faraday shield works. Frankly it is a total mess and should be removed so that hams are not mislead.
Shielding is very simple.
A particle with a electromagnetic field strikes the outside of the shield.
The magnetic field of same passes thru the shield some might say it is coupled to the inside of the shield.
The magnetic vector component is out of phase with the electrical field so it will be just a static particle at rest on the inside but no inline with the electrical field vector which is now a staic particle at rest on the outside
We now have a arbitrary boundary as discused by Gauss
For equilibrium all vectors impinging on the boundary must be aligned such that they cancel.
To accomplish this the inner vector or charge MUST move sideways

THE CHARGE WHEN ACCELERATED CREATES A TIME VARYING CURRENT ALONE WHILE THE OTHER FIELD VECTORS CANCEL OUT
(I believe that this was the object intended in the cross field antenna)

As with a applied varying current leaves a xmitter to create radiation, so must the receiver obtain a time varying current.

Maxwells equations show equations with the electric field, the magnetic field and a time varying current. When you have a electrical field or vector of a static particle at rest outside the boundary opposing the static vector on the inside of the boundary you have nothing left EXCEPT a time varying current in the closed circuit.
For informative descriptions of how radiation occurs view the QRZ forum of (antenna construction and design) threads (3) on the double helix
antenna (see you there)
Somebody some where should re write the above such that a definition is left for those who follow and remove the garbage which is now in place

3297. Re: Faraday shields and radiation and misinterpretations

Newsgroup: rec.radio.amateur.antenna
Date: 2009-11-30 23:56:06 UTC
From: Dave <k1ttt@arrl.net>
Message-ID: <e21c68ac-908c-4eea-bcda-c88c6502eeb1@c34g2000yqn.googlegroups.com>
Source record: 11708

On Nov 30, 8:10 pm, Art Unwin <arthurun...@gmail.com> wrote:
> I have been reading the groups archives on shield antennas and Faraday
> shields and the different auguments regarding how shielding or the
> Faraday shield works. Frankly it is a total mess and should be removed
> so that hams are not mislead.
> Shielding is very simple.
> A particle with a electromagnetic field strikes the outside of the
> shield.
> The magnetic field of same passes thru the shield some might say it is
> coupled to the inside of the shield.
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> field so it will be just a static particle at rest on the inside but
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> (I believe that this was the object intended in the cross field
> antenna)
>
> As with a applied varying current leaves a xmitter to create
> radiation, so must the receiver obtain a time varying current.
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> Maxwells equations show equations with the electric field, the
> magnetic field and a time varying current. When you have a electrical
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> For informative descriptions of how radiation occurs view the QRZ
> forum of (antenna construction and design) threads (3) on the
> double helix
> antenna (see you there)
> Somebody some where should re write the above such that a definition
> is left for those who follow and remove the garbage which is now in
> place

hey there groups archivist, if there is such a thing... remove this
post in accordance with his own request that such garbage be removed.

3298. Re: Faraday shields and radiation and misinterpretations

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-01 00:46:46 UTC
From: tom <news4792@taring.org>
Message-ID: <4b14676c$0$47480$8046368a@newsreader.iphouse.net>
Source record: 11709

Art Unwin wrote:
> I have been reading the groups archives on shield antennas and Faraday
> shields and the different auguments regarding how shielding or the
> Faraday shield works. Frankly it is a total mess and should be removed
> so that hams are not mislead.
> Shielding is very simple.
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> We now have a arbitrary boundary as discused by Gauss
> For equilibrium all vectors impinging on the boundary must be aligned
> such that they cancel.
> To accomplish this the inner vector or charge MUST move sideways
>

<snip crap, but left plenty>

WOW!!!

Look everybody he's totally making up physics again!

Art - get back on your meds, you're nuts again.

tom
K0TAR

3299. Re: Faraday shields and radiation and misinterpretations

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-01 02:15:53 UTC
From: orfus <orfus@orfus.net>
Message-ID: <y%_Qm.76171$Xf2.57597@newsfe12.iad>
Source record: 11710

Art Unwin wrote:
> I have been reading the groups archives on shield antennas and Faraday
> shields and the different auguments regarding how shielding or the
> Faraday shield works. Frankly it is a total mess and should be removed
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> (I believe that this was the object intended in the cross field
> antenna)
>
> As with a applied varying current leaves a xmitter to create
> radiation, so must the receiver obtain a time varying current.
>
> Maxwells equations show equations with the electric field, the
> magnetic field and a time varying current. When you have a electrical
> field or vector of a static particle at rest outside the boundary
> opposing the static vector on the inside of the boundary you have
> nothing left EXCEPT a time varying current in the closed circuit.
> For informative descriptions of how radiation occurs view the QRZ
> forum of (antenna construction and design) threads (3) on the
> double helix
> antenna (see you there)
> Somebody some where should re write the above such that a definition
> is left for those who follow and remove the garbage which is now in
> place
TROLL!

3300. Re: Faraday shields and radiation and misinterpretations

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-01 03:19:23 UTC
From: tom <news4792@taring.org>
Message-ID: <4b148b31$0$47482$8046368a@newsreader.iphouse.net>
Source record: 11711

orfus wrote:
> Art Unwin wrote:
>> I have been reading the groups archives on shield antennas and Faraday
>> shields and the different auguments regarding how shielding or the
>> Faraday shield works. Frankly it is a total mess and should be removed
>> so that hams are not mislead.
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>> double helix
>> antenna (see you there)
>> Somebody some where should re write the above such that a definition
>> is left for those who follow and remove the garbage which is now in
>> place
> TROLL!

Nope. Local loony.

You, however, are a troll until proven otherwise.

tom
K0TAR

3301. Re: Faraday shields and radiation and misinterpretations

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-01 05:05:16 UTC
From: Lostgallifreyan <no-one@nowhere.net>
Message-ID: <Xns9CD433C1171Dzoodlewurdle@216.196.109.145>
Source record: 11712

tom <news4792@taring.org> wrote in
news:4b148b31$0$47482$8046368a@newsreader.iphouse.net:

> orfus wrote:
>> Art Unwin wrote:
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>>> shields and the different auguments regarding how shielding or the
>>> Faraday shield works. Frankly it is a total mess and should be removed
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>> TROLL!

>
> Nope. Local loony.
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> You, however, are a troll until proven otherwise.
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> tom
> K0TAR
>

Ok, at the risk of stirring muddy water, I'm curious now, I'm new to this group, and the subject as there clearly seems to be more to it than I knew. I also don't know of those archives mentioned so I haven't seen the context.

So in simple terms (hopefully) what is the truth of it? As far as I knew, a photon at RF with energy but no mass will produce a current that changes over time in a metal that it hits, though I imagine that as metal has resistance there must also be a voltage too. I've also heard of the 'skin effect' that means that at high RF frequencies, current flow tends to stay on the surface, so clearly the picture isn't as simple as DC and Ohm's law. I also know that when photons in optical fibres meet boundaries between layers they don't reflect simply on one side, within one region of specific refractive index, there's apparently some more complex information exchange that amounts to the photon crossing the border before returning. Which makes me suspect that equally exotic action happens when RF photons hit metal sheilds. So what IS correct? And even if there is more to it, does the aggregate of many photons, and the wave analysis of their behaviour, reduce to a simple model that makes the OP correct?

I'm asking this because calls of 'troll' and 'loony' aren't working for me.

3302. Re: Sunspot news

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-01 05:38:23 UTC
From: Peter <pm@hotmail.com>
Message-ID: <0Iydnb7BRZNMNonWnZ2dnUVZ8l-dnZ2d@westnet.com.au>
Source record: 11713

"Cecil Moore" <nospam@w5dxp.com> wrote in message
news:noyQm.48024$X01.17594@newsfe07.iad...
> http://www.telegraph.co.uk/comment/columnists/christopherbooker/6679082/Climate-change-this-is-the-worst-scientific-scandal-of-our-generation.html
> --
> 73, Cecil, IEEE, OOTC, http://www.w5dxp.com

We defiantly live in interesting times. As soon as politicians, big money
and vested interest got involved it became impossible to know the truth,
inconvenient or otherwise. I've heard here in Australia and likely it's the
same around the western world that if you wanted to improve your chances of
a government research grant, just link it some how to climate change and if
it affirmed climate change all the better.
It has always raises suspicions with me when I hear statements like all the
science is in and if you challenge us we will call you names rather than
argue the challenge.
I'm a sceptic and that includes what these so called leaked emails actually
mean!

Interesting times;
The y2k bug demonstrated the corruption of engineering.
WMDs demonstrated the corruption of the intelligence communities.
World Financial Crisis demonstrated the corruption of the financial system.
And now science!

Cheers

--
Peter VK6YSF

http://members.optushome.com.au/vk6ysf/vk6ysf/main.htm

3303. Crossposting Permitted to rec.radio.amateur.moderated

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-01 07:00:08 UTC
From: rram@panix.com
Message-ID: <radio/ham-radio/moderated/crossposting-1-1259650800@panix.com>
Source record: 11714
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.dx,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.policy,rec.radio.amateur.space,rec.radio.info

```
Posted-By: auto-faq 3.3.2 beta (PGPMoose V2.0, Perl 5.005)
Archive-name: radio/ham-radio/moderated/crossposting
Revision: 1.1 2009/04/12 19:42:04
Posting-Frequency: posted monthly
URL: http://www.panix.com/~rram/usenet/rram/index.html

Changes followed by "|".

After a 30-day public discussion and feedback period to gauge reader
opinions in March of 2009:

http://groups.google.com/group/rec.radio.amateur.moderated/browse_thread/thread/d7d337db35
f23326

the rec.radio.amateur.moderated Moderation Team has decided to consider
amending its charter, and permit limited simultaneous crossposting to
rec.radio.amateur.moderated and one other unmoderated
amateur-radio-related discussion newsgroup. We are currently trying
this on a temporary basis (90 days, through early July 2009), and adopt
it permanently if successful.

Approved rec.radio.amateur.* newsgroups are those that are currently
listed in the latest version of the "List of Big Eight Newsgroups" which
is crossposted monthly to news.announce.newgroups, news.groups, and
news.lists.misc.

Approved alt.radio.amateur.* and alt.ham-radio.* newsgroups are those
that have been created consistent with the suggestions in "So You Want
to Create an Alt Newsgroup" at:

http://www.faqs.org/faqs/alt-creation-guide/

Approved regional hierarchy newsgroups are those that contain either
"radio.amateur" or "ham-radio" in their names, including
uk.radio.amateur and aus.radio.amateur.misc.

We will make every reasonable effort to keep our list of approved
newsgroups up-to-date. In case we have overlooked any, and a submission
is rejected in error as a result, the rejected submitter can E-mail us
at our administrative contact address (in the signature at the bottom of
this article, and the default Reply-To for the rejection message)
requesting that it be added, and that the article be approved. We may
still choose to reject articles crossposted to any alt.* newsgroup with
an inappropriate name, including obscene language, embedded
name-calling, or encouragement of unlawful conduct.
```

Please direct any comments, questions, or criticisms to
rec-radio-amateur-moderated-request@panix.com.

3304. Re: Faraday shields and radiation and misinterpretations

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-01 07:45:29 UTC
From: K7ITM <k7itm@msn.com>
Message-ID: <c52a1b1d-ef32-4d69-bf61-64940f7334c5@r24g2000prf.googlegroups.com>
Source record: 11715

On Nov 30, 9:05 pm, Lostgallifreyan <no-...@nowhere.net> wrote:
> tom <news4...@taring.org> wrote innews:4b148b31$0$47482$8046368a@newsreader.iphouse.net:
>
>
>
> > orfus wrote:
> >> Art Unwin wrote:
> >>> I have been reading the groups archives on shield antennas and Faraday
> >>> shields and the different auguments regarding how shielding or the
> >>> Faraday shield works. Frankly it is a total mess and should be removed
> >>> so that hams are not mislead.
> >>> Shielding is very simple.
> >>> A particle with a electromagnetic field strikes the outside of the
> >>> shield.
> >>> The magnetic field of same passes thru the shield some might say it is
> >>> coupled to the inside of the shield.
> >>> The magnetic vector component is out of phase with the electrical
> >>> field so it will be just a static particle at rest on the inside but
> >>> no inline with the electrical field vector which is now a staic
> >>> particle at rest on the outside
> >>> We now have a arbitrary boundary as discused by Gauss
> >>> For equilibrium all vectors impinging on the boundary must be aligned
> >>> such that they cancel.
> >>> To accomplish this the inner vector or charge MUST move sideways
>
> >> THE CHARGE WHEN ACCELERATED CREATES A TIME VARYING CURRENT ALONE
> >>> WHILE THE OTHER FIELD VECTORS CANCEL OUT
> >>> (I believe that this was the object intended in the cross field
> >>> antenna)
>
> >>> As with a applied varying current leaves a xmitter to create
> >>> radiation, so must the receiver obtain a time varying current.
>
> >>> Maxwells equations show equations with the electric field, the
> >>> magnetic field and a time varying current. When you have a electrical
> >>> field or vector of a static particle at rest outside the boundary
> >>> opposing the static vector on the inside of the boundary you have
> >>> nothing left EXCEPT a time varying current in the closed circuit.
> >>> For informative descriptions of how radiation occurs view the QRZ
> >>> forum of (antenna construction and design) threads (3) on the
> >>> double helix
> >>> antenna (see you there)
> >>> Somebody some where should re write the above such that a definition
> >>> is left for those who follow and remove the garbage which is now in

> >>> place
> >> TROLL!
>
> > Nope. Local loony.
>
> > You, however, are a troll until proven otherwise.
>
> > tom
> > K0TAR
>
> Ok, at the risk of stirring muddy water, I'm curious now, I'm new to this
> group, and the subject as there clearly seems to be more to it than I knew. I
> also don't know of those archives mentioned so I haven't seen the context.
>
> So in simple terms (hopefully) what is the truth of it? As far as I knew, a
> photon at RF with energy but no mass will produce a current that changes over
> time in a metal that it hits, though I imagine that as metal has resistance
> there must also be a voltage too. I've also heard of the 'skin effect' that
> means that at high RF frequencies, current flow tends to stay on the surface,
> so clearly the picture isn't as simple as DC and Ohm's law. I also know that
> when photons in optical fibres meet boundaries between layers they don't
> reflect simply on one side, within one region of specific refractive index,
> there's apparently some more complex information exchange that amounts to the
> photon crossing the border before returning. Which makes me suspect that
> equally exotic action happens when RF photons hit metal sheilds. So what IS
> correct? And even if there is more to it, does the aggregate of many photons,
> and the wave analysis of their behaviour, reduce to a simple model that makes
> the OP correct?
>
> I'm asking this because calls of 'troll' and 'loony' aren't working for me.

It's fairly straightforward, actually, if you believe in Faraday's law
of magnetic induction. That law says that for any closed loop
(through air, through a conductor, through anything), there is an
electromotive force (a voltage source, if you will) whose magnitude is
proportional to the rate of change of magnetic flux enclosed by the
loop. As there is no voltage drop along a perfect conductor, if your
closed loop follows the path of a perfect conductor, there is no
voltage drop around that loop, and therefore the rate of change of the
total magnetic flux enclosed by that loop must be zero. If the
perfect conductor is a closed box, then you can draw loops anywhere
through that conductor and you will never see a changing magnetic
field enclosed by that loop. Thus, the inside of the box and the
outside are magnetically independent; things happening on one side
(magnetically) are not sensed on the other side.

You can understand how this works if you realize that a changing
magnetic field outside the box that would penetrate the box if it
weren't there will induce currents in the conducting box (or even just
in a closed loop of wire). Those currents will (in a perfect
conductor) be exactly the right magnitude to cause a magnetic field

that cancels the external one everywhere inside the closed box (or the net flux enclosed by a loop of wire). An example: if you short the secondary of a mains transformer, the primary will draw lots of current at its rated voltage: it's very difficult for the primary to change the magnetic flux in the core.

Does the electric field shielding from a perfect conductor need any explanation?

Of course, an imperfect conductor will be an imperfect magnetic shield. But a perfect conductor won't let any change of field through, no matter how slow (no matter how low an EMF it generates), so a perfect conductor works as a shield all the way down to DC. A box made with an imperfect conductor is essentially a perfect shield if the box's wall thickness is at least many skin-depths thick at the frequency of interest.

That's a quick beginning. You can find lots more about this in E&M texts. There's even useful stuff about it on the web. ;-)

Cheers,
Tom

3305. Re: Faraday shields and radiation and misinterpretations

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-01 09:18:12 UTC
From: Ian White GM3SEK <gm3sek@ifwtech.co.uk>
Message-ID: <xYMHdfMU9NFLFA51@ifwtech.co.uk>
Source record: 11716

K7ITM wrote:
>> I'm asking this because calls of 'troll' and 'loony' aren't working for me.
>
>It's fairly straightforward, actually, if you believe in Faraday's law
>of magnetic induction. That law says that for any closed loop (through
>air, through a conductor, through anything), there is an electromotive
>force (a voltage source, if you will) whose magnitude is proportional
>to the rate of change of magnetic flux enclosed by the loop. As there
>is no voltage drop along a perfect conductor, if your closed loop
>follows the path of a perfect conductor, there is no voltage drop
>around that loop, and therefore the rate of change of the total
>magnetic flux enclosed by that loop must be zero. If the perfect
>conductor is a closed box, then you can draw loops anywhere through
>that conductor and you will never see a changing magnetic field
>enclosed by that loop. Thus, the inside of the box and the outside are
>magnetically independent; things happening on one side (magnetically)
>are not sensed on the other side.
>
>You can understand how this works if you realize that a changing
>magnetic field outside the box that would penetrate the box if it
>weren't there will induce currents in the conducting box (or even just
>in a closed loop of wire). Those currents will (in a perfect
>conductor) be exactly the right magnitude to cause a magnetic field
>that cancels the external one everywhere inside the closed box (or the
>net flux enclosed by a loop of wire). An example: if you short the
>secondary of a mains transformer, the primary will draw lots of current
>at its rated voltage: it's very difficult for the primary to change the
>magnetic flux in the core.
>
>Does the electric field shielding from a perfect conductor need any
>explanation?
>
>Of course, an imperfect conductor will be an imperfect magnetic shield.
>But a perfect conductor won't let any change of field through, no
>matter how slow (no matter how low an EMF it generates), so a perfect
>conductor works as a shield all the way down to DC. A box made with an
>imperfect conductor is essentially a perfect shield if the box's wall
>thickness is at least many skin-depths thick at the frequency of interest.
>
>That's a quick beginning. You can find lots more about this in E&M
>texts. There's even useful stuff about it on the web. ;-)
>

Here is a link to a generalized proof of the skin effect:

http://www.ifwtech.co.uk/g3sek/misc/skin.htm

This is exactly equivalent to Tom's explanation above. The detailed proof is quite mathematical but it is solidly based in classical physics - Faraday's Law and Ampere's theorem (both of which are embodied in Maxwell's equations). This derivation produces the well-known equations for current density as a function of depth, conductivity and permeability.

The special feature of this particular proof is that it's much more general than the ones you see in better-known textbooks - and therefore much more powerful. It shows that if RF current is flowing in/on *any* conducting surface, for *any* reason, then the skin effect will be present.

The possible reasons why RF current may be flowing can be divided into two main groups:

* "Circuit conditions" - the conductor is part of a circuit that makes RF current flow.

* "Electromagnetic induction" - the conductor is intercepting an incident electromagnetic wave which induces a current.

In either case, an RF current flows... and wherever that happens, there you will also find the skin effect.

--

73 from Ian GM3SEK
http://www.ifwtech.co.uk/g3sek

3306. Re: Faraday shields and radiation and misinterpretations

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-01 09:42:13 UTC
From: Lostgallifreyan <no-one@nowhere.net>
Message-ID: <Xns9CD462B567346zoodlewurdle@216.196.109.145>
Source record: 11717

K7ITM <k7itm@msn.com> wrote in news:c52a1b1d-ef32-4d69-bf61-64940f7334c5@r24g2000prf.googlegroups.com:

> It's fairly straightforward, actually, if you believe in Faraday's law
> of magnetic induction. That law says that for any closed loop
> (through air, through a conductor, through anything), there is an
> electromotive force (a voltage source, if you will) whose magnitude is
> proportional to the rate of change of magnetic flux enclosed by the
> loop. As there is no voltage drop along a perfect conductor, if your
> closed loop follows the path of a perfect conductor, there is no
> voltage drop around that loop, and therefore the rate of change of the
> total magnetic flux enclosed by that loop must be zero. If the
> perfect conductor is a closed box, then you can draw loops anywhere
> through that conductor and you will never see a changing magnetic
> field enclosed by that loop. Thus, the inside of the box and the
> outside are magnetically independent; things happening on one side
> (magnetically) are not sensed on the other side.
>
> You can understand how this works if you realize that a changing
> magnetic field outside the box that would penetrate the box if it
> weren't there will induce currents in the conducting box (or even just
> in a closed loop of wire). Those currents will (in a perfect
> conductor) be exactly the right magnitude to cause a magnetic field
> that cancels the external one everywhere inside the closed box (or the
> net flux enclosed by a loop of wire). An example: if you short the
> secondary of a mains transformer, the primary will draw lots of
> current at its rated voltage: it's very difficult for the primary to
> change the magnetic flux in the core.
>
> Does the electric field shielding from a perfect conductor need any
> explanation?
>
> Of course, an imperfect conductor will be an imperfect magnetic
> shield. But a perfect conductor won't let any change of field
> through, no matter how slow (no matter how low an EMF it generates),
> so a perfect conductor works as a shield all the way down to DC. A
> box made with an imperfect conductor is essentially a perfect shield
> if the box's wall thickness is at least many skin-depths thick at the
> frequency of interest.
>
> That's a quick beginning. You can find lots more about this in E&M
> texts. There's even useful stuff about it on the web. ;-)
>
> Cheers,

> Tom

Thanks, that helps, especially the paragraph about creating a magnetic field in response that tends to cancel the original one, and the thickness of metal with regard to frequency. The OP (Art Unwin) mentioned cancellation in more complex terms, so I'm still not clear if this validates what he said or not. It appears to but he mentions stuff I'm not likely to grasp in just an hour or two of effort.. What I'm getting at is that I'm not sure if his calling orthodoxy into question is all that drew the flak, or if there's something obviously wrong in his post that I'm missing.

Also (though I'll likely find out about this when I look deeper), why is it often ok for a Faraday cage to have holes in it? :) Braided screens, meshes, perforated metal sheets, etc, I've seen many shields that are not a complete 'seal'... UHF TV cables especially seem to be very loosely shielded but they work. Conversely, I found some nice coax in a skip once that had two heavy braids amounting to almost complete coverage around a single fine stranded core. (Found outside a telephone exchange, but I don't know what frequency they were intended for, though I used some for an outdoor VHF receiving quarter wave dipole with good results, and I suspect it will do for a SW longwire once I get a matching transformer for it).

3307. Re: Faraday shields and radiation and misinterpretations

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-01 09:50:07 UTC
From: Lostgallifreyan <no-one@nowhere.net>
Message-ID: <Xns9CD4640C49A6zoodlewurdle@216.196.109.145>
Source record: 11718

Ian White GM3SEK <gm3sek@ifwtech.co.uk> wrote in
news:xYMHdfMU9NFLFA51@ifwtech.co.uk:

> http://www.ifwtech.co.uk/g3sek/misc/skin.htm
>
> This is exactly equivalent to Tom's explanation above. The detailed
> proof is quite mathematical but it is solidly based in classical physics
> - Faraday's Law and Ampere's theorem (both of which are embodied in
> Maxwell's equations). This derivation produces the well-known equations
> for current density as a function of depth, conductivity and
> permeability.
>

Thanks, that linking of laws and theories will help me (and the confirmation that classical physics will be enough to describe it, as I hoped). The OP mentioned Maxwell too... so did he make some error I have yet to grasp? Other than taking pot shots at an establishment, that is... :)

> The special feature of this particular proof is that it's much more
> general than the ones you see in better-known textbooks - and therefore
> much more powerful. It shows that if RF current is flowing in/on *any*
> conducting surface, for *any* reason, then the skin effect will be
> present.
>

That appeals to me. I think the more something can be seen to apply generally, the more it helps. Proportion can't be gauged with a model that denies it.

3308. Re: Faraday shields and radiation and misinterpretations

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-01 10:49:48 UTC
From: Gaius <bin@127.0.0.1>
Message-ID: <4b14f4cc$0$2480$db0fefd9@news.zen.co.uk>
Source record: 11719

Lostgallifreyan wrote:

Conversely, I found some nice coax in a skip once that had two heavy
> braids amounting to almost complete coverage around a single fine stranded
> core. (Found outside a telephone exchange, but I don't know what frequency
> they were intended for, though I used some for an outdoor VHF receiving
> quarter wave dipole with good results, and I suspect it will do for a SW
> longwire once I get a matching transformer for it).

If it was a UK (BT) telephone exchange, then it probably was "Cable
coaxial 2003".
Used for critical video and general HF use. I don't know what it's
officially spec'd to, but it would work well up to several hundred MHz.
Characteristic impedance of 75ohms, and easily capable of 100W into a
decent match.

3309. Re: Faraday shields and radiation and misinterpretations

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-01 11:01:11 UTC
From: Lostgallifreyan <no-one@nowhere.net>
Message-ID: <Xns9CD47006A9E22zoodlewurdle@216.196.109.145>
Source record: 11720

Gaius <bin@127.0.0.1> wrote in
news:4b14f4cc$0$2480$db0fefd9@news.zen.co.uk:

> Lostgallifreyan wrote:
>
> Conversely, I found some nice coax in a skip once that had two heavy
>> braids amounting to almost complete coverage around a single fine
>> stranded core. (Found outside a telephone exchange, but I don't know
>> what frequency they were intended for, though I used some for an
>> outdoor VHF receiving quarter wave dipole with good results, and I
>> suspect it will do for a SW longwire once I get a matching transformer
>> for it).
>
> If it was a UK (BT) telephone exchange, then it probably was "Cable
> coaxial 2003".
> Used for critical video and general HF use. I don't know what it's
> officially spec'd to, but it would work well up to several hundred MHz.
> Characteristic impedance of 75ohms, and easily capable of 100W into a
> decent match.
>
>

Sounds like the same stuff, though I have 2002 on mine (which in absence of other markings was cryptic enough that I was unsure of it, though I think it might have been earlier than 2002 when I found it. :) I thought it might be 75 ohm but I had no idea it might efficiently carry high power. But I knew it was well over-spec'd for the uses I put it to. I was lucky to find it. The staff there were happy enough for me to raid the skip, too... Should try it again sometime. That stuff seems to last forever even outside in strong daily temperature changes and direct sunlight.

3310. Re: Faraday shields and radiation and misinterpretations

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-01 11:05:07 UTC
From: Lostgallifreyan <no-one@nowhere.net>
Message-ID: <Xns9CD470B1589CEzoodlewurdle@216.196.109.145>
Source record: 11721

Lostgallifreyan <no-one@nowhere.net> wrote in
news:Xns9CD47006A9E22zoodlewurdle@216.196.109.145:

> Gaius <bin@127.0.0.1> wrote in
> news:4b14f4cc$0$2480$db0fefd9@news.zen.co.uk:
>
>> Lostgallifreyan wrote:
>>
>> Conversely, I found some nice coax in a skip once that had two heavy
>>> braids amounting to almost complete coverage around a single fine
>>> stranded core. (Found outside a telephone exchange, but I don't know
>>> what frequency they were intended for, though I used some for an
>>> outdoor VHF receiving quarter wave dipole with good results, and I
>>> suspect it will do for a SW longwire once I get a matching transformer
>>> for it).
>>
>> If it was a UK (BT) telephone exchange, then it probably was "Cable
>> coaxial 2003".
>> Used for critical video and general HF use. I don't know what it's
>> officially spec'd to, but it would work well up to several hundred MHz.
>> Characteristic impedance of 75ohms, and easily capable of 100W into a
>> decent match.
>>
>>
>
> Sounds like the same stuff, though I have 2002 on mine (which in absence
> of other markings was cryptic enough that I was unsure of it, though I
> think it might have been earlier than 2002 when I found it. :) I thought
> it might be 75 ohm but I had no idea it might efficiently carry high
> power. But I knew it was well over-spec'd for the uses I put it to. I
> was lucky to find it. The staff there were happy enough for me to raid
> the skip, too... Should try it again sometime. That stuff seems to last
> forever even outside in strong daily temperature changes and direct
> sunlight.
>

I forgot to mention that I also used some for a pair of DIY scope leads for a
100 MHz scope, and they worked right even without the little capacitative
adjuster usually supplied on properly made probes. A bit clumsy, but a nice
find all the same.

3311. Re: Faraday shields and radiation and misinterpretations

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-01 11:55:28 UTC
From: Gaius <bin@127.0.0.1>
Message-ID: <4b150431$0$2474$db0fefd9@news.zen.co.uk>
Source record: 11722

Lostgallifreyan wrote:
> Sounds like the same stuff, though I have 2002 on mine (which in absence of
> other markings was cryptic enough that I was unsure of it, though I think it
> might have been earlier than 2002 when I found it. :) I thought it might be
> 75 ohm but I had no idea it might efficiently carry high power. But I knew it
> was well over-spec'd for the uses I put it to. I was lucky to find it. The
> staff there were happy enough for me to raid the skip, too... Should try it
> again sometime. That stuff seems to last forever even outside in strong daily
> temperature changes and direct sunlight.

If it has 2002 printed on it, that means it's "Cable coaxial 2002",
which is one down the scale in loss terms from 2003. 2002 (nothing to do
with the date!) is as good quality as 2003 (which is thicker), but the
loss is a bit higher. The three usual types were AFAIR -

2001 - single screened, foam dielectric. Quite thin - used for short
runs and jumpers.
2002 - General purpose, high quality. Solid dielectric.
2003 - Top quality (in loss terms). Solid dielectric.

All are 75ohms - like pretty well all telecom coax. (50 ohm is usually
only found in antenna feeders and traditional ethernet). The normal PVC
jacket colour was "Light straw" (yellowish cream), but other colours
were occasionally used for special purposes.

3312. Re: Faraday shields and radiation and misinterpretations

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-01 12:16:03 UTC
From: Lostgallifreyan <no-one@nowhere.net>
Message-ID: <Xns9CD47CCAE3CBEzoodlewurdle@216.196.109.145>
Source record: 11723

Gaius <bin@127.0.0.1> wrote in
news:4b150431$0$2474$db0fefd9@news.zen.co.uk:

> Lostgallifreyan wrote:
>> Sounds like the same stuff, though I have 2002 on mine (which in
>> absence of other markings was cryptic enough that I was unsure of it,
>> though I think it might have been earlier than 2002 when I found it. :)
>> I thought it might be 75 ohm but I had no idea it might efficiently
>> carry high power. But I knew it was well over-spec'd for the uses I put
>> it to. I was lucky to find it. The staff there were happy enough for me
>> to raid the skip, too... Should try it again sometime. That stuff seems
>> to last forever even outside in strong daily temperature changes and
>> direct sunlight.
>
> If it has 2002 printed on it, that means it's "Cable coaxial 2002",
> which is one down the scale in loss terms from 2003. 2002 (nothing to do
> with the date!) is as good quality as 2003 (which is thicker), but the
> loss is a bit higher. The three usual types were AFAIR -
>
> 2001 - single screened, foam dielectric. Quite thin - used for short
> runs and jumpers.
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>
> All are 75ohms - like pretty well all telecom coax. (50 ohm is usually
> only found in antenna feeders and traditional ethernet). The normal PVC
> jacket colour was "Light straw" (yellowish cream), but other colours
> were occasionally used for special purposes.
>
>

Thanks. That matches closely except the dielectric, which I think is foam (is certainly foamy or foamish). Colour is same too, though closer to white than yellow. As far as I know the impedance is purely based on the scale and geometry of the cross-section, and if so, I guess the central conductor of 2003 is also thicker. I think there were seven strands of very thin copper. If you or anyone reading this really wants to know I'll get a vernier gauge and find a bare cable end somewhere... External diameter is approx 5mm on the 2002 type.

Do you know if it's only BT internal use? If I can buy it economically, I'd consider it. I like working with it, when I'm in the mood for picking apart cable braids.

3313. Re: Faraday shields and radiation and misinterpretations

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-01 14:16:52 UTC
From: Art Unwin <arthurunwin@gmail.com>
Message-ID: <15904250-69bb-4aba-8a3f-bc97744a91df@u7g2000yqm.googlegroups.com>
Source record: 11724

On Nov 30, 11:05 pm, Lostgallifreyan <no-...@nowhere.net> wrote:
> tom <news4...@taring.org> wrote innews:4b148b31$0$47482$8046368a@newsreader.iphouse.net:
>
>
>
> > orfus wrote:
> >> Art Unwin wrote:
> >>> I have been reading the groups archives on shield antennas and Faraday
> >>> shields and the different auguments regarding how shielding or the
> >>> Faraday shield works. Frankly it is a total mess and should be removed
> >>> so that hams are not mislead.
> >>> Shielding is very simple.
> >>> A particle with a electromagnetic field strikes the outside of the
> >>> shield.
> >>> The magnetic field of same passes thru the shield some might say it is
> >>> coupled to the inside of the shield.
> >>> The magnetic vector component is out of phase with the electrical
> >>> field so it will be just a static particle at rest on the inside but
> >>> no inline with the electrical field vector which is now a staic
> >>> particle at rest on the outside
> >>> We now have a arbitrary boundary as discused by Gauss
> >>> For equilibrium all vectors impinging on the boundary must be aligned
> >>> such that they cancel.
> >>> To accomplish this the inner vector or charge MUST move sideways
>
> >> THE CHARGE WHEN ACCELERATED CREATES A TIME VARYING CURRENT ALONE
> >>> WHILE THE OTHER FIELD VECTORS CANCEL OUT
> >>> (I believe that this was the object intended in the cross field
> >>> antenna)
>
> >>> As with a applied varying current leaves a xmitter to create
> >>> radiation, so must the receiver obtain a time varying current.
>
> >>> Maxwells equations show equations with the electric field, the
> >>> magnetic field and a time varying current. When you have a electrical
> >>> field or vector of a static particle at rest outside the boundary
> >>> opposing the static vector on the inside of the boundary you have
> >>> nothing left EXCEPT a time varying current in the closed circuit.
> >>> For informative descriptions of how radiation occurs view the QRZ
> >>> forum of (antenna construction and design) threads (3) on the
> >>> double helix
> >>> antenna (see you there)
> >>> Somebody some where should re write the above such that a definition
> >>> is left for those who follow and remove the garbage which is now in

> >>> place
> >> TROLL!
>
> > Nope. Local loony.
>
> > You, however, are a troll until proven otherwise.
>
> > tom
> > K0TAR
>
> Ok, at the risk of stirring muddy water, I'm curious now, I'm new to this
> group, and the subject as there clearly seems to be more to it than I knew. I
> also don't know of those archives mentioned so I haven't seen the context.
>
> So in simple terms (hopefully) what is the truth of it? As far as I knew, a
> photon at RF with energy but no mass will produce a current that changes over
> time in a metal that it hits, though I imagine that as metal has resistance
> there must also be a voltage too. I've also heard of the 'skin effect' that
> means that at high RF frequencies, current flow tends to stay on the surface,
> so clearly the picture isn't as simple as DC and Ohm's law. I also know that
> when photons in optical fibres meet boundaries between layers they don't
> reflect simply on one side, within one region of specific refractive index,
> there's apparently some more complex information exchange that amounts to the
> photon crossing the border before returning. Which makes me suspect that
> equally exotic action happens when RF photons hit metal sheilds. So what IS
> correct? And even if there is more to it, does the aggregate of many photons,
> and the wave analysis of their behaviour, reduce to a simple model that makes
> the OP correct?
>
> I'm asking this because calls of 'troll' and 'loony' aren't working for me.

If you go back to the arbitary boundary of the Gaussian law of statics
and view it as a
Faraday shield it all becomes quite simple. If one adds a time varying
field you have the duplicate of Maxwells laws for radiation, where
the outside of the boundary is the radiator.
The Faraday shield supplies the transition from a static to a dynamic
field for xmission and
the reverse action for receiving.
Very basic my dear Watson, and a vindication that particles and not
waves create radiation
which puts it in line with deductions when other methods are applied.

3314. Re: Faraday shields and radiation and misinterpretations

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-01 14:38:40 UTC
From: Gaius <bin@127.0.0.1>
Message-ID: <4b152a71$0$2488$db0fefd9@news.zen.co.uk>
Source record: 11725

Lostgallifreyan wrote:

> Thanks. That matches closely except the dielectric, which I think is foam (is
> certainly foamy or foamish). Colour is same too, though closer to white than
> yellow. As far as I know the impedance is purely based on the scale and
> geometry of the cross-section, and if so, I guess the central conductor of
> 2003 is also thicker. I think there were seven strands of very thin copper.
> If you or anyone reading this really wants to know I'll get a vernier gauge
> and find a bare cable end somewhere... External diameter is approx 5mm on the
> 2002 type.
>
> Do you know if it's only BT internal use? If I can buy it economically, I'd
> consider it. I like working with it, when I'm in the mood for picking apart
> cable braids.
>

You're right - my memory must be porous. 2002 has a FOAM dielectric.
Also, 2003 has a single strand inner conductor (spec must have changed -
used to be stranded). You can buy 2002 from RS - it's a BT spec, but
available for anyone. Have a look at :

http://uk.rs-online.com/web/search/searchBrowseAction.html?method=getProduct&R=5203068

It's only ï¿½58 for 100m, and the loss is reasonable at 3.61dB/100m @
4MHz. (2003 cable is 2.33dB/100m @ 4MHz)

3315. Re: Faraday shields and radiation and misinterpretations

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-01 16:55:27 UTC
From: Lostgallifreyan <no-one@nowhere.net>
Message-ID: <Xns9CD4AC20C5DD2zoodlewurdle@216.196.109.145>
Source record: 11726

Gaius <bin@127.0.0.1> wrote in
news:4b152a71$0$2488$db0fefd9@news.zen.co.uk:

> Lostgallifreyan wrote:
>
>> Thanks. That matches closely except the dielectric, which I think is
>> foam (is certainly foamy or foamish). Colour is same too, though closer
>> to white than yellow. As far as I know the impedance is purely based on
>> the scale and geometry of the cross-section, and if so, I guess the
>> central conductor of 2003 is also thicker. I think there were seven
>> strands of very thin copper. If you or anyone reading this really wants
>> to know I'll get a vernier gauge and find a bare cable end somewhere...
>> External diameter is approx 5mm on the 2002 type.
>>
>> Do you know if it's only BT internal use? If I can buy it economically,
>> I'd consider it. I like working with it, when I'm in the mood for
>> picking apart cable braids.
>>
>
> You're right - my memory must be porous. 2002 has a FOAM dielectric.
> Also, 2003 has a single strand inner conductor (spec must have changed -
> used to be stranded). You can buy 2002 from RS - it's a BT spec, but
> available for anyone. Have a look at :
>
> http://uk.rs-online.com/web/search/searchBrowseAction.html?method=getProd
> uct&R=5203068
>
> It's only £58 for 100m, and the loss is reasonable at 3.61dB/100m @
> 4MHz. (2003 cable is 2.33dB/100m @ 4MHz)
>

Nice. Given what RS are charging for RG59 with a double braid that appears
similar, it looks very good. I don't know enough to choose between them
though, especially given the huge variety of cables RS show for RG59 with
costs varying more than tenfold per metre. From what I've seen of it I'd go
for that BT cable at their price. (They add VAT though..) I guess BT's
economies of large scale help this stuff to be cheaper than it otherwise
would be.

3316. Re: Faraday shields and radiation and misinterpretations

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-01 17:25:36 UTC
From: Lostgallifreyan <no-one@nowhere.net>
Message-ID: <Xns9CD4B1384E31Azoodlewurdle@216.196.109.145>
Source record: 11727

Art Unwin <arthurunwin@gmail.com> wrote in news:15904250-69bb-4aba-8a3f-bc97744a91df@u7g2000yqm.googlegroups.com:

> If you go back to the arbitary boundary of the Gaussian law of statics
> and view it as a
> Faraday shield it all becomes quite simple. If one adds a time varying
> field you have the duplicate of Maxwells laws for radiation, where
> the outside of the boundary is the radiator.
> The Faraday shield supplies the transition from a static to a dynamic
> field for xmission and
> the reverse action for receiving.
> Very basic my dear Watson, and a vindication that particles and not
> waves create radiation
> which puts it in line with deductions when other methods are applied.

Doesn't look basic, and I suspect it never will to me. The only thing I can get from this is the idea that a particle model will do what the wave one does, which isn't surprising but I've been told that particle based models are usually best left to situations (usually atomic scale quantum mechanical) where the wave model won't do, and I've never seen anyone suggest that wave-based theories of electromagnetics were inadequate (or inefficient) for scales involving obviously large numbers of particles. The other explanations seemed to grip, but not this one. I'll leave well alone now, but if anyone else takes up the discussion, I'll read it and only comment if I can't stop myself..

3317. Re: Faraday shields and radiation and misinterpretations

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-01 17:49:45 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <iciah5pesu7n47fv5i4iu968p0m3qfv1mu@4ax.com>
Source record: 11728

On Tue, 01 Dec 2009 03:42:13 -0600, Lostgallifreyan
<no-one@nowhere.net> wrote:

> why is it
>often ok for a Faraday cage to have holes in it? :) Braided screens, meshes,
>perforated metal sheets, etc, I've seen many shields that are not a complete
>'seal'... UHF TV cables especially seem to be very loosely shielded but they
>work.

This can be explained at super high frequency and at DC as easily.
However, before that it should be pointed out that the coverage (the
ratio of what is conductor to what is not - the air space) defines how
"good" the faraday shield will be. Not surprisingly, coverage is
wavelength dependant. To cut to the chase, a wide mesh will allow
increasingly higher frequencies (shorter waves) through.

Now, as to the how. With a separation in the mesh, and for very large
wavelength (in proportion to the opening size), you will have a very,
very small potential difference across any of the mesh openings. Very
little potential voltage across the mesh opening means very little
current flow around the mesh opening that is specifically due to that
potential difference.

This is not to say there isn't a very, very large current flow by
virtue of some very, very long wave. No, there's no denying that, but
to get through the mesh you have to satisfy local conditions that
demand what amounts to leakage (and this is exactly the term that
correlates to coverage when discussing coax weave). If that huge
current cannot induce a significant voltage across the mesh opening,
then the mesh opening loop current cannot induce a field through to
the other side. Now, if you examine the context of "huge current" in
a resistive conductor, then obviously a potential difference can
occur. Point is that reality (and science) allow for poor grade
shields, but as a one knock-off proof you can summon up any failure,
ignore simple contra-examples and create a new theory.

However, returning to what is well known. If you increase the
frequency applied to the mesh, then at some point wavelength will
allow a situation where the general current flowing through the whole
structure will naturally exhibit a potential difference across some
small scale. By this point, abstraction may be wearying.

Let's say you have a 10 meter-on-a-side cage with 1 meter mesh
openings. If your applied field were exciting the cage at 75MHz (4M),
then any spot on the cage could be at a very high potential difference
from any spot adjacent and 1 meter away (a simple quarterwave

relationship). This works for a solid conductor, it works for a mesh conductor.

The 1 meter mesh openings can thus exhibit a substantial potential difference across the opening, and a local current loop associated with that potential difference. The mesh opening becomes a quarterwave radiator (aka slot antenna) and can couple energy from the external field into the interior of the cage (now possibly a resonant chamber, aka RF cavity). In practice and literature, the mesh opening loop exhibits a radiation resistance of 10s of Ohms. That compared to its mesh loop Ohmic path loss, makes it a very efficient coupler of energy.

Take this very poor example of mesh, and lower the frequency to 750 KHz. The mesh opening - if we originally likened it to an antenna, we should be able to continue to do that - is now 1/400th Wave. A 1/400th wave radiator has extremely small radiation resistance. The exact value would be 751 nanoOhms. As we are examining a poor mesh, it becomes clear that it must have some resistance over that 1 meter distance (this is a real example, after all).

Being generous and constructing that cage out of rebar will give us a path resistance of, luckily, 1 milliOhm. This figure and that of the radiation resistance yield the radiation efficiency (that is, how well the exterior RF will couple into the interior) which reduces to 0.075%. The cage works pretty well, but not perfectly (it was, after all, a poor example).

Now, repeat this with a poorer conductor, or a tighter mesh and imagine the shielding effect. The mesh has an opening radius squared-squared relationship driving down the radiation resistance compared to the linear relationship of conductance.

****

Now, expanding the topic to allow for the contribution of ALL openings in the mesh, we must again return to the physical dimension compared to the wavelength dimension. If the cage is truly large, larger than the field exciting it, then you have miniscule radiators along it, each very inefficient. However, each of those radiators is out of phase with a distant neighbor (not so with its close mesh neighbors). Those two wavelength distant mesh radiators will combine somewhere in the interior space and build a field. This is very commonly found in inter-cable cross coupling through leakage that is exhibited in very long cable trays with tightly bound lines. This doesn't improve the efficiency, but sensitive circuits running parallel to power drives can prove to be a poor combination. What to do when conditions condemn the small signal coax to live in proximity to the large signal supply?

This introduces the foil shield. The foil shield is a very poor conductor over any significant length, but over the span between mesh

openings (e.g. coax shield weave), the resistance is sufficiently low
to close the conductance gap.

73's
Richard Clark, KB7QHC

3318. Re: Faraday shields and radiation and misinterpretations

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-01 18:05:58 UTC
From: Art Unwin <arthurunwin@gmail.com>
Message-ID: <e7727902-9c88-421f-b603-27a24d4a220e@b15g2000yqd.googlegroups.com>
Source record: 11729

On Dec 1, 11:25 am, Lostgallifreyan <no-...@nowhere.net> wrote:
> Art Unwin <arthurun...@gmail.com> wrote in news:15904250-69bb-4aba-8a3f-
> bc97744a9...@u7g2000yqm.googlegroups.com:
>
> > If you go back to the arbitary boundary of the Gaussian law of statics
> > and view it as a
> > Faraday shield it all becomes quite simple. If one adds a time varying
> > field you have the duplicate of Maxwells laws for radiation, where
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> > The Faraday shield supplies the transition from a static to a dynamic
> > field for xmission and
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> > Very basic my dear Watson, and a vindication that particles and not
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> > which puts it in line with deductions when other methods are applied.
>
> Doesn't look basic, and I suspect it never will to me. The only thing I
> can get from this is the idea that a particle model will do what the wave
> one does, which isn't surprising but I've been told that particle based
> models are usually best left to situations (usually atomic scale quantum
> mechanical) where the wave model won't do, and I've never seen anyone suggest
> that wave-based theories of electromagnetics were inadequate (or inefficient)
> for scales involving obviously large numbers of particles. The other
> explanations seemed to grip, but not this one. I'll leave well alone now, but
> if anyone else takes up the discussion, I'll read it and only comment if I
> can't stop myself..

Well I didn't tell all in the first place because so much untruths are
buried in people"s mind.
When the charge or particle hits the outside of the shield both the
electric and magnetic fields dissapate leaving just the static
particle adheared to the outside. Ofcourse non bound particles in the
air are immediatly attracted to the inside of the shield and move
along the inside of the shield to align themselves with the outside
static particles for equilibrium.
Now for the important stuff that will upset hams. The internal
particle moves to align itself with the outside particle. By moving it
generates a time varying current such that the electric and magnetic
fields that disapated on the outside are now REGENERATED on the
inside.
Most people see or think that the outside magnetic field can pierce
the shield, which is why the name magnetic loop came about. Fields do
NOT penetrate a Faraday shield. A electromagnetic shield is
regenerated by the newly formed internal current which then closes the

circuit.
To put this with the original explanation would be to much for hams to
digest so it is best to split it into two parts.

3319. Re: Faraday shields and radiation and misinterpretations

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-01 18:41:14 UTC
From: christofire <christofire@btinternet.com>
Message-ID: <A4qdnY2OM5HM_ojWnZ2dnUVZ8rednZ2d@bt.com>
Source record: 11730

"Ian White GM3SEK" <gm3sek@ifwtech.co.uk> wrote in message
news:xYMHdfMU9NFLFA51@ifwtech.co.uk...
> K7ITM wrote:
>>> I'm asking this because calls of 'troll' and 'loony' aren't working for
>>> me.
>>
- snip -
>
> Here is a link to a generalized proof of the skin effect:
>
> http://www.ifwtech.co.uk/g3sek/misc/skin.htm
>
> This is exactly equivalent to Tom's explanation above. The detailed proof
> is quite mathematical but it is solidly based in classical physics

- further snip -
> --
>
> 73 from Ian GM3SEK
> http://www.ifwtech.co.uk/g3sek

Your statement on your web page 'It is temporarily reproduced here, under
provisions of the Berne Copyright Convention, to support technical
discussions on the rec.radio.amateur.antenna newsgroup' looks interesting
because, to the best of my knowledge, the issue of the legality of copying
parts of others' published work onto Web sites hasn't been resolved. I
can't find any specific provision in the Berne Convention that _allows_
re-publishing on the Internet - it looks more likely to inhibit it because
Web sites are automatically worldwide.

On the page 'http://www.copyrightservice.co.uk/copyright/p09_fair_use' it
is stated: 'Under fair use rules, it may be possible to use quotations or
excerpts, where the work has been made available to the public, (i.e.
published). Provided that:
a.. The use is deemed acceptable under the terms of fair dealing.
b.. That the quoted material is justified, and no more than is necessary
is included.
c.. That the source of the quoted material is mentioned, along with the
name of the author.'
But also: 'The actual specifics of what is acceptable will be governed by
national laws, and although broadly similar, actual provision will vary from
country to country.'

Presumably you have researched this matter, and I for one would be
interested to hear what you've found that appears to cover international www

re-publishing.

Chris

3320. Re: Faraday shields and radiation and misinterpretations

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-01 20:11:16 UTC
From: K7ITM <k7itm@msn.com>
Message-ID: <23a4e09e-cb46-49a9-a096-7647584667f7@j19g2000yqk.googlegroups.com>
Source record: 11731

On Dec 1, 9:25 am, Lostgallifreyan <no-...@nowhere.net> wrote:
> Art Unwin <arthurun...@gmail.com> wrote in news:15904250-69bb-4aba-8a3f-
> bc97744a9...@u7g2000yqm.googlegroups.com:
>
> > If you go back to the arbitary boundary of the Gaussian law of statics
> > and view it as a
> > Faraday shield it all becomes quite simple. If one adds a time varying
> > field you have the duplicate of Maxwells laws for radiation, where
> > the outside of the boundary is the radiator.
> > The Faraday shield supplies the transition from a static to a dynamic
> > field for xmission and
> > the reverse action for receiving.
> > Very basic my dear Watson, and a vindication that particles and not
> > waves create radiation
> > which puts it in line with deductions when other methods are applied.
>
> Doesn't look basic, and I suspect it never will to me. The only thing I
> can get from this is the idea that a particle model will do what the wave
> one does, which isn't surprising but I've been told that particle based
> models are usually best left to situations (usually atomic scale quantum
> mechanical) where the wave model won't do, and I've never seen anyone suggest
> that wave-based theories of electromagnetics were inadequate (or inefficient)
> for scales involving obviously large numbers of particles. The other
> explanations seemed to grip, but not this one. I'll leave well alone now, but
> if anyone else takes up the discussion, I'll read it and only comment if I
> can't stop myself..

Yep, that's about right. In fact, my advice if you do get into that
situation (where quantization of energy is important), is to NOT think
of particles or waves, but realize that quanta of electromagnetic
radiation behave exactly as they behave, which is neither exactly like
waves nor exactly like particles. One of Richard Feynman's physics
lectures covered what I think is a lovely example of this: how you
can NOT explain the results of the experiment he sets up, using EITHER
wave OR particle behaviour. I highly recommend it, to arm yourself
against people who get into the particle-vs-wave battle. I believe
it's the sixth of what has been published as Feynman's "Six Easy
Pieces."

Cheers,
Tom

3321. Re: Faraday shields and radiation and misinterpretations

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-01 20:50:51 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <MkfRm.22673$gd1.15254@newsfe05.iad>
Source record: 11806

Lostgallifreyan wrote:
> I've been told that particle based
> models are usually best left to situations (usually atomic scale quantum
> mechanical) where the wave model won't do, and I've never seen anyone suggest
> that wave-based theories of electromagnetics were inadequate (or inefficient)
> for scales involving obviously large numbers of particles.

Consider that man's most ancient exposure to waves was
sea/ocean waves which, incidentally, consist of H2O
molecule particles.

Seems to me that everything that physically exists must
exist as a particle.
--
73, Cecil, IEEE, OOTC, http://www.w5dxp.com

3322. Re: Faraday shields and radiation and misinterpretations

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-01 20:53:02 UTC
From: Cecil Moore <nospam@w5dxp.com>
Message-ID: <MmfRm.22674$gd1.13335@newsfe05.iad>
Source record: 11807

Lostgallifreyan wrote:
> I've been told that particle based
> models are usually best left to situations (usually atomic scale quantum
> mechanical) where the wave model won't do, and I've never seen anyone suggest
> that wave-based theories of electromagnetics were inadequate (or inefficient)
> for scales involving obviously large numbers of particles.

Consider that man's most ancient exposure to waves was
sea/ocean waves which, incidentally, consist of H2O
molecule particles.

Seems to me that everything that physically exists must
exist as a particle.
--
73, Cecil, IEEE, OOTC, http://www.w5dxp.com

3323. Re: Faraday shields and radiation and misinterpretations

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-01 21:06:30 UTC
From: Art Unwin <arthurunwin@gmail.com>
Message-ID: <bef18a0a-34a1-4278-9a77-8b65ee051612@j24g2000yqa.googlegroups.com>
Source record: 11732

On Dec 1, 3:42 am, Lostgallifreyan <no-...@nowhere.net> wrote:
> K7ITM <k7...@msn.com> wrote in news:c52a1b1d-ef32-4d69-bf61-
> 64940f733...@r24g2000prf.googlegroups.com:
>
>
>
> > It's fairly straightforward, actually, if you believe in Faraday's law
> > of magnetic induction. That law says that for any closed loop
> > (through air, through a conductor, through anything), there is an
> > electromotive force (a voltage source, if you will) whose magnitude is
> > proportional to the rate of change of magnetic flux enclosed by the
> > loop. As there is no voltage drop along a perfect conductor, if your
> > closed loop follows the path of a perfect conductor, there is no
> > voltage drop around that loop, and therefore the rate of change of the
> > total magnetic flux enclosed by that loop must be zero. If the
> > perfect conductor is a closed box, then you can draw loops anywhere
> > through that conductor and you will never see a changing magnetic
> > field enclosed by that loop. Thus, the inside of the box and the
> > outside are magnetically independent; things happening on one side
> > (magnetically) are not sensed on the other side.
>
> > You can understand how this works if you realize that a changing
> > magnetic field outside the box that would penetrate the box if it
> > weren't there will induce currents in the conducting box (or even just
> > in a closed loop of wire). Those currents will (in a perfect
> > conductor) be exactly the right magnitude to cause a magnetic field
> > that cancels the external one everywhere inside the closed box (or the
> > net flux enclosed by a loop of wire). An example: if you short the
> > secondary of a mains transformer, the primary will draw lots of
> > current at its rated voltage: it's very difficult for the primary to
> > change the magnetic flux in the core.
>
> > Does the electric field shielding from a perfect conductor need any
> > explanation?
>
> > Of course, an imperfect conductor will be an imperfect magnetic
> > shield. But a perfect conductor won't let any change of field
> > through, no matter how slow (no matter how low an EMF it generates),
> > so a perfect conductor works as a shield all the way down to DC. A
> > box made with an imperfect conductor is essentially a perfect shield
> > if the box's wall thickness is at least many skin-depths thick at the
> > frequency of interest.
>
> > That's a quick beginning. You can find lots more about this in E&M

> > texts. There's even useful stuff about it on the web. ;-)
>
> > Cheers,
> > Tom
>
> Thanks, that helps, especially the paragraph about creating a magnetic field
> in response that tends to cancel the original one, and the thickness of metal
> with regard to frequency. The OP (Art Unwin) mentioned cancellation in more
> complex terms, so I'm still not clear if this validates what he said or not.
> It appears to but he mentions stuff I'm not likely to grasp in just an hour
> or two of effort.. What I'm getting at is that I'm not sure if his calling
> orthodoxy into question is all that drew the flak, or if there's something
> obviously wrong in his post that I'm missing.

When you feed a time varying current to the mesh it is best to view it
in small parts, say a square in the mesh. The hole is a static field
alongside the applied current flows. This same current generates a
displacement current which encircles the static field as it returns
to the initial current flow. Of course this section is a microcosm of
the flow pattern of the applied varying current which is continually
flowing.
The initial current flow generates a field at right angles to its
axis. This field thus bisects the enclosed static field and
accellerates a particle thru this intersection in the same way a
particle is accelerated in a cathode ray tube. The particle that was
accellerated, by the way, came from the surface of the conducting wire
which is diamagnetic upon which particles or free electrons rest
without being absorbed into the matrix of the material upon which it
rests.The speed that the charge or particle attains is that of the
speed of light. So when Einstein gave up his search regarding the
standard model it seems rather natural that he came up with E=mc sqd
as it was obvious to him that light itself was generated by the same
particle or free electron that occupied his mind for so long and not
of waves that appeared to persist in the minds of physicists to this
very day.
Hope that helps you out
Regards
Art

>
> Also (though I'll likely find out about this when I look deeper), why is it
> often ok for a Faraday cage to have holes in it? :) Braided screens, meshes,
> perforated metal sheets, etc, I've seen many shields that are not a complete
> 'seal'... UHF TV cables especially seem to be very loosely shielded but they
> work. Conversely, I found some nice coax in a skip once that had two heavy
> braids amounting to almost complete coverage around a single fine stranded
> core. (Found outside a telephone exchange, but I don't know what frequency
> they were intended for, though I used some for an outdoor VHF receiving
> quarter wave dipole with good results, and I suspect it will do for a SW
> longwire once I get a matching transformer for it).

3324. Re: Faraday shields and radiation and misinterpretations

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-01 21:22:08 UTC
From: Registered User <n4jvp@ix.netcom.com>
Message-ID: <6k1bh5t0cujrnc3t8oo3l02kpohhlm81e4@4ax.com>
Source record: 11733

On Tue, 1 Dec 2009 13:06:30 -0800 (PST), Art Unwin
<arthurunwin@gmail.com> wrote:

>
>When you feed a time varying current to the mesh it is best to view it
>in small parts, say a square in the mesh. The hole is a static field
>alongside the applied current flows. This same current generates a
>displacement current which encircles the static field as it returns
>to the initial current flow. Of course this section is a microcosm of
>the flow pattern of the applied varying current which is continually
>flowing.

Is this true of a discone? I'm under the impression the current flow
is identical whether metal rods or wire mesh is used in the antenna's
construction.

3325. Re: an ontopic post about code

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-01 21:50:47 UTC
From: kb9rqz@yahoooo.com
Message-ID: <lt3bh59hs5etctc099lcnl46r33dm3af7k@4ax.com>
Source record: 11734
Cross-posted to: alt.ham-radio.vhf-uhf,rec.radio.amateur.policy,rec.radio.amateur.antenna

On Fri, 01 Dec 2006 09:36:47 -0800, John Smith
<assemblywizard@gmail.com> wrote:

>K4YZ wrote:
>> Nope.
>>
>> The IP Address and servers are complete proof that I do NOT share
>> any annonymous character's "address".
>>
>> Sounds like Lennie, to me....
>>
>> Steve, K4YZ
>>
>
>To anyone with even an elementary understanding of anonymous proxies,
>anonymous remailers, zombie backdoors, etc., the ability to change ones
>IP address and header details is simplistic, indeed, with little time
>spent anyone can appear to be "coming" from anywhere in the world.
>
>You waste my time. Worse, you think us all idiots here. You remind me
>of the "street smart" prosecutors and defense attorneys who stack jurys
>with members of little or no technical knowledge and then call in
>"expert witnesses" and propose arguments of technical details to boggle
>their minds.
>
>You have only proven that you, yourself are either ignorant to such
>technical details, or else you are indeed street smart, I favor the
>latter in this case (however, if you in the dark about such things, 15
>minutes on google will enlighten you.)
>
>JS

"one useless man is disgrace 2 become a law firm 3 or more become a congress"
adams

woger you are a Congress all in your own head
"http://www.3ix.org/sys/aff.php?aff=7439" target="_blank"

altopia is never used by KB9RQZ
http://kb9rqz.cc.cc
http://kd8ctl.com
nor is Konstans@hotmail.com ever
btw i can be found at
17366 N River Rd

Chassel Mi

but the cowards asking lack the gut to act

3326. Re: Faraday shields and radiation and misinterpretations

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-01 23:19:59 UTC
From: Art Unwin <arthurunwin@gmail.com>
Message-ID: <e9842163-1ee5-46a2-9421-18242adc49df@j24g2000yqa.googlegroups.com>
Source record: 11735

On Dec 1, 3:22 pm, Registered User <n4...@ix.netcom.com> wrote:
> On Tue, 1 Dec 2009 13:06:30 -0800 (PST), Art Unwin
>
> <arthurun...@gmail.com> wrote:
>
> >When you feed a time varying current to the mesh it is best to view it
> >in small parts, say a square in the mesh. The hole is a static field
> >alongside the applied current flows. This same current generates a
> >displacement current which encircles the static field as it returns
> >to the initial current flow. Of course this section is a microcosm of
> >the flow pattern of the applied varying current which is continually
> >flowing.
>
> Is this true of a discone? I'm under the impression the current flow
> is identical whether metal rods or wire mesh is used in the antenna's
> construction.

I am under the understanding that for a Faraday shield it doesn't
matter whether it is a mesh or solid. When the displacement current
flows in terms of an eddy current it produces a vortice which holds
the static field
Dinner has arrived
Art

3327. Re: SMS?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-02 00:08:52 UTC
From: "Mike, who else?" <here@there.com>
Message-ID: <oeiRm.77924$Xf2.68819@newsfe12.iad>
Source record: 11736

On Mon, 16 Nov 2009 11:59:25 -0900, You wrote:

> It was called a "Gibson Girl"

Here's the link. http://wftw.nl/gibsongirl/gibsongirl.html
Very interesting

Mike
VE6HMG

3328. Re: Antenna Launcher

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-02 00:16:55 UTC
From: John Ferrell <jferrell13@triad.rr.com>
Message-ID: <igbbh55ee1bl0uqcke7rhgvbavh77enltk@4ax.com>
Source record: 11737

On Mon, 30 Nov 2009 10:31:12 -0800, Jim Lux <james.p.lux@jpl.nasa.gov>
wrote:

>
>3 9V batteries in series makes a fine source to actuate a sprinkler
>valve. Put a 0.1 uf (or thereabouts, non critical) capacitor across the
>pushbutton contacts to make it last a bit longer.
>
Got a little further today. It takes too many hands to twist the
valve, fiddle with the reel and aim the device. I black vinyl taped a
micro switch to the valve assembly with ONE 9 volt battery so that I
can thumb it to launch. I also moved the open face reel back to the
valve end of the barrel and fabricated (more black tape & paperclip)
an eye to pass the line through so that line retrieval with the reel
is less awkward. Today's final test was conducted in the dark so I was
unable to see much. I launched nearly 90 degrees and it was gone for
several seconds so I expect it did well.

VK2KC emailed me with some advice. He pointed out that it is usually
better to launch from the woods to an open space. I expect that will
be the case.

It seems to me that this device consists of three components: Barrel,
Valve and accumulator. It seems that to change to launching tennis
balls would be a matter of fitting a 2-1/2" barrel. I doubt that I am
going to find that in my area but I will keep my eyes open.

Tomorrow is another day!

John Ferrell W8CCW

3329. Re: Faraday shields and radiation and misinterpretations

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-02 00:29:04 UTC
From: tom <news4792@taring.org>
Message-ID: <4b15b4c1$0$47480$8046368a@newsreader.iphouse.net>
Source record: 11738

Lostgallifreyan wrote:
>
> Doesn't look basic, and I suspect it never will to me. The only thing I
> can get from this is the idea that a particle model will do what the wave
> one does, which isn't surprising but I've been told that particle based
> models are usually best left to situations (usually atomic scale quantum
> mechanical) where the wave model won't do, and I've never seen anyone suggest
> that wave-based theories of electromagnetics were inadequate (or inefficient)
> for scales involving obviously large numbers of particles. The other
> explanations seemed to grip, but not this one. I'll leave well alone now, but
> if anyone else takes up the discussion, I'll read it and only comment if I
> can't stop myself..

It's not basic, and it's not real.

Art has made up a whole new wing of physics that has only the slightest
ties to reality. It involves neutrinos leaping from diamagnetic
materials to radiate. And only diamagnetic materials can radiate,
unless he revised his theories, which he does regularly. And there are
NO waves, just particles And antennas don't work properly unless they
are a multiple of a wavelength, but it's OK to roll all that wire up in
a ball so that a 160m antenna fits in a shoebox. And then you can use
that with a teeny Dish network dish for directionality. Despite the
fact that those dishes won't work reasonably at anything less than low
GHz frequencies.

He is, to put it very plainly, nuts.

tom
K0TAR

3330. Re: Faraday shields and radiation and misinterpretations

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-02 00:37:51 UTC
From: tom <news4792@taring.org>
Message-ID: <4b15b6d0$0$33857$8046368a@newsreader.iphouse.net>
Source record: 11739

Richard Clark wrote:
> On Tue, 01 Dec 2009 03:42:13 -0600, Lostgallifreyan
> <no-one@nowhere.net> wrote:
>
>> why is it
>> often ok for a Faraday cage to have holes in it? :) Braided screens, meshes,
>> perforated metal sheets, etc, I've seen many shields that are not a complete
>> 'seal'... UHF TV cables especially seem to be very loosely shielded but they
>> work.
>
> This can be explained at super high frequency and at DC as easily.
> However, before that it should be pointed out that the coverage (the
> ratio of what is conductor to what is not - the air space) defines how
> "good" the faraday shield will be. Not surprisingly, coverage is
> wavelength dependant. To cut to the chase, a wide mesh will allow
> increasingly higher frequencies (shorter waves) through.
>
> Now, as to the how. With a separation in the mesh, and for very large
> wavelength (in proportion to the opening size), you will have a very,
> very small potential difference across any of the mesh openings. Very
> little potential voltage across the mesh opening means very little
> current flow around the mesh opening that is specifically due to that
> potential difference.
>
> This is not to say there isn't a very, very large current flow by
> virtue of some very, very long wave. No, there's no denying that, but
> to get through the mesh you have to satisfy local conditions that
> demand what amounts to leakage (and this is exactly the term that
> correlates to coverage when discussing coax weave). If that huge
> current cannot induce a significant voltage across the mesh opening,
> then the mesh opening loop current cannot induce a field through to
> the other side. Now, if you examine the context of "huge current" in
> a resistive conductor, then obviously a potential difference can
> occur. Point is that reality (and science) allow for poor grade
> shields, but as a one knock-off proof you can summon up any failure,
> ignore simple contra-examples and create a new theory.
>
> However, returning to what is well known. If you increase the
> frequency applied to the mesh, then at some point wavelength will
> allow a situation where the general current flowing through the whole
> structure will naturally exhibit a potential difference across some
> small scale. By this point, abstraction may be wearying.
>
> Let's say you have a 10 meter-on-a-side cage with 1 meter mesh

> openings. If your applied field were exciting the cage at 75MHz (4M),
> then any spot on the cage could be at a very high potential difference
> from any spot adjacent and 1 meter away (a simple quarterwave
> relationship). This works for a solid conductor, it works for a mesh
> conductor.
>
> The 1 meter mesh openings can thus exhibit a substantial potential
> difference across the opening, and a local current loop associated
> with that potential difference. The mesh opening becomes a
> quarterwave radiator (aka slot antenna) and can couple energy from the
> external field into the interior of the cage (now possibly a resonant
> chamber, aka RF cavity). In practice and literature, the mesh opening
> loop exhibits a radiation resistance of 10s of Ohms. That compared to
> its mesh loop Ohmic path loss, makes it a very efficient coupler of
> energy.
>
> Take this very poor example of mesh, and lower the frequency to 750
> KHz. The mesh opening - if we originally likened it to an antenna, we
> should be able to continue to do that - is now 1/400th Wave. A
> 1/400th wave radiator has extremely small radiation resistance. The
> exact value would be 751 nanoOhms. As we are examining a poor mesh,
> it becomes clear that it must have some resistance over that 1 meter
> distance (this is a real example, after all).
>
> Being generous and constructing that cage out of rebar will give us a
> path resistance of, luckily, 1 milliOhm. This figure and that of the
> radiation resistance yield the radiation efficiency (that is, how well
> the exterior RF will couple into the interior) which reduces to
> 0.075%. The cage works pretty well, but not perfectly (it was, after
> all, a poor example).
>
> Now, repeat this with a poorer conductor, or a tighter mesh and
> imagine the shielding effect. The mesh has an opening radius
> squared-squared relationship driving down the radiation resistance
> compared to the linear relationship of conductance.
>
> **********
>
> Now, expanding the topic to allow for the contribution of ALL openings
> in the mesh, we must again return to the physical dimension compared
> to the wavelength dimension. If the cage is truly large, larger than
> the field exciting it, then you have miniscule radiators along it,
> each very inefficient. However, each of those radiators is out of
> phase with a distant neighbor (not so with its close mesh neighbors).
> Those two wavelength distant mesh radiators will combine somewhere in
> the interior space and build a field. This is very commonly found in
> inter-cable cross coupling through leakage that is exhibited in very
> long cable trays with tightly bound lines. This doesn't improve the
> efficiency, but sensitive circuits running parallel to power drives
> can prove to be a poor combination. What to do when conditions

> condemn the small signal coax to live in proximity to the large signal
> supply?
>
> This introduces the foil shield. The foil shield is a very poor
> conductor over any significant length, but over the span between mesh
> openings (e.g. coax shield weave), the resistance is sufficiently low
> to close the conductance gap.
>
> 73's
> Richard Clark, KB7QHC

Nice explanation Richard. And I had never put together the
squared-squared relationship. That's a powerful thing to know.

I suppose this is why it ends up that a 1/10 lambda opening is
considered the rule of thumb cutoff frequency on a dish.

tom
K0TAR

3331. Re: Faraday shields and radiation and misinterpretations

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-02 00:42:00 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <dkdbh5t5lk4uifi1vm1597b65q5p6hmb39@4ax.com>
Source record: 11740

On Tue, 01 Dec 2009 16:22:08 -0500, Registered User
<n4jvp@ix.netcom.com> wrote:

> I'm under the impression the current flow
>is identical whether metal rods or wire mesh is used in the antenna's
>construction.

A discone does not exhibit any quality of shielding, so it wanders off
in that regard.

The difference between rods, number of rods, thickness of rods, and
mesh all speak to bandwidth. 2, 3, or 4 rods will not be remarkable.
16 rods will closely approximate a cone of sheet metal (as would a
grid of similar spacing). The same can be said of the
rod/rods/mesh/sheet in the upper section approximating a solid disk.

Again, all these "appearances" are a strict function of wavelength to
physical length and spacing relationships.

73's
Richard Clark, KB7QHC

3332. Re: Faraday shields and radiation and misinterpretations

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-02 00:53:30 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <m7ebh51m5va71e738e5q1nu3pgvf23oi8v@4ax.com>
Source record: 11741

On Tue, 01 Dec 2009 18:37:51 -0600, tom <news4792@taring.org> wrote:

>Nice explanation Richard. And I had never put together the
>squared-squared relationship. That's a powerful thing to know.
>
>I suppose this is why it ends up that a 1/10 lambda opening is
>considered the rule of thumb cutoff frequency on a dish.
>
>tom
>K0TAR

Hi Tom,

Radiation resistance certainly plummets quickly. Look at all the
tunable loops for HF that are 1 M in size AND made on an herculean
scale. I don't think any are rated at 80M (Rr ~ 5 milliOhms), and
even less so for 160M (Rr ~ 29 microOhms). This is the principle
reason why Art's inventions are doomed to abysmal transmit performance
in that band (the shoe-box sized 160M loop).

73's
Richard Clark, KB7QHC

3333. Re: Faraday shields and radiation and misinterpretations

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-02 01:31:16 UTC
From: Art Unwin <arthurunwin@gmail.com>
Message-ID: <049991cf-cb1f-4e55-9393-1de39ad781d7@v25g2000yqk.googlegroups.com>
Source record: 11742

On Dec 1, 6:53 pm, Richard Clark <kb7...@comcast.net> wrote:
> On Tue, 01 Dec 2009 18:37:51 -0600, tom <news4...@taring.org> wrote:
> >Nice explanation Richard. And I had never put together the
> >squared-squared relationship. That's a powerful thing to know.
>
> >I suppose this is why it ends up that a 1/10 lambda opening is
> >considered the rule of thumb cutoff frequency on a dish.
>
> >tom
> >K0TAR
>
> Hi Tom,
>
> Radiation resistance certainly plummets quickly. Look at all the
> tunable loops for HF that are 1 M in size AND made on an herculean
> scale. I don't think any are rated at 80M (Rr ~ 5 milliOhms), and
> even less so for 160M (Rr ~ 29 microOhms). This is the principle
> reason why Art's inventions are doomed to abysmal transmit performance
> in that band (the shoe-box sized 160M loop).
>
> 73's
> Richard Clark, KB7QHC

I have two Faraday shield antennas at the moment. One of which is a
large one sitting on the ground tho sometimes I raise it a foot or so
off the ground. This is an all band antenna
which the tuner in my solid state radio handles quite well., It is
made of mesh on a aluminum frame and at the moment I have not been
able to discern any noise difference and the like say on top band. I
compare it with a smaller Faraday shield which sits in the roter atop
of my tower. The antenna on the ground is square but the one on the
tower is a hexigon aluminum frame which is approx from memory about
four or five foot long and the hex is approx 3 foot across. This
antenna I use for comparison purposes where both antennas are end fed.
The smallest radiator that I have made for top band was a 1 inch
plastic pipe by about 4 foot tall. The radiator mesh was folded over
several times and then wound in helix form on the plastic tube. This
was also end fed. I could have folded it over upon itself to make it
even smaller but I declined to pursue matters. Now one can accuse me
of making up physics, but it was the understanding of physics which
the books state is not fully understood that I followed in every step
while maintaining equilibrium of the radiator.
At the moment I am not inclined to throw away either of these antennas
as they are easily confirmed for gain using a NEC with optimizer

where, at the same time, the physics that I mention is not in agreement with this group or apparently the many plagerised books on the market today. The bottom line with the pursuit of antennas is to make them small but not electrically small. It is also desirable to make them rotatable and directive with gain.
Maximum efficiency of a radiator is determined by how its size fits within a sphere and with the Faraday apparatus the radiator is the inside of the Faraday shield which makes it very efficient. I am continuing with my findings and the antennas and will not be discarding them as a child might say when lacking the knoweledge that is achieved by growing into an adult
they attain a modicom of logic that they can some meaning to their outburst
The antenna info is all on my page unwin antennas so that amateurs can join me in the joys of antenna design. As for the couch potatoes they can wave their arms as long as they want. I have also discussed it in full on qrz antennas if one wants to delve more into the physics.
Nobody over the years I have explained my findings has ever applied existing classical physics to disprove my findings providing only the crying of a child with no physics
substantiation applied.

3334. Slinkey Antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-02 04:01:50 UTC
From: clyde <clyde.55bacd8@radiobanter.com>
Message-ID: <clyde.55bacd8@radiobanter.com>
Source record: 11743

Has anyone used a slinkey antenna? I bought one and hooked it to a tree in my yard about 30 ft up. I have a Grundig Yacht Boy 400 and I clipped it to the telescopic antenna. I dont see much improvement. Live in the Wa. state, is recption real bad here or should I update and get a newer radio? this one I bought new in 91.

Thanks,

Clyde

--
clyde

3335. Re: Slinkey Antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-02 06:20:59 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <4e1ch5tts3v36ilqcnhi1o7ur9j65nria6@4ax.com>
Source record: 11744

On Wed, 2 Dec 2009 04:01:50 +0000, clyde
<clyde.55bacd8@radiobanter.com> wrote:

>
>Has anyone used a slinkey antenna? I bought one and hooked it to a tree
>in my yard about 30 ft up. I have a Grundig Yacht Boy 400 and I clipped
>it to the telescopic antenna. I dont see much improvement. Live in the
>Wa. state, is recption real bad here or should I update and get a newer
>radio? this one I bought new in 91.
>
>Thanks,
>
>Clyde

Hi Clyde,

That sounds like plenty of antenna for most SWLing - there's just not
enough sunspots to hook it too. A new radio won't fix that.

To those who are counting those sunspots (the missing ones), they have
theories about that which also involve the freemasons, ancient
astronauts, and other influences that will converge on a solution in
2012. The short explanation is that "time will tell."

73's
Richard Clark, KB7QHC

3336. Re: Antenna Launcher

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-02 09:04:48 UTC
From: Lostgallifreyan <no-one@nowhere.net>
Message-ID: <Xns9CD55C5949890zoodlewurdle@216.196.109.145>
Source record: 11745

John Ferrell <jferrell13@triad.rr.com> wrote in
news:igbbh55ee1bl0uqcke7rhgvbavh77enltk@4ax.com:

> On Mon, 30 Nov 2009 10:31:12 -0800, Jim Lux <james.p.lux@jpl.nasa.gov>
> wrote:
>
>
>>
>>3 9V batteries in series makes a fine source to actuate a sprinkler
>>valve. Put a 0.1 uf (or thereabouts, non critical) capacitor across the
>>pushbutton contacts to make it last a bit longer.
>>
> Got a little further today. It takes too many hands to twist the
> valve, fiddle with the reel and aim the device. I black vinyl taped a
> micro switch to the valve assembly with ONE 9 volt battery so that I
> can thumb it to launch. I also moved the open face reel back to the
> valve end of the barrel and fabricated (more black tape & paperclip)
> an eye to pass the line through so that line retrieval with the reel
> is less awkward. Today's final test was conducted in the dark so I was
> unable to see much. I launched nearly 90 degrees and it was gone for
> several seconds so I expect it did well.
>
> VK2KC emailed me with some advice. He pointed out that it is usually
> better to launch from the woods to an open space. I expect that will
> be the case.
>
> It seems to me that this device consists of three components: Barrel,
> Valve and accumulator. It seems that to change to launching tennis
> balls would be a matter of fitting a 2-1/2" barrel. I doubt that I am
> going to find that in my area but I will keep my eyes open.
>
> Tomorrow is another day!
>
> John Ferrell W8CCW
>

Sorry if my post is as silly as it appears it might be, but just in case it
isn't... I've seen people walking dogs in a large park I run in a lot. They
have these slingshot/stick type affairs to throw tennis balls with for fast
strong dogs to get a lot of exercise fetching them while the owner has an
easier time of it. I've never tried one, but from what I've seen, even
unconscious practise seems to result in some accuracy, and distance certainly
isn't lacking. In short, it might be easier, cheaper and faster to practise
with one of those than to devise a more complex launcher. It seems to me that
accurately placing a thin line over a branch up to 100 ft high might be

easier than learning to fly-cast.

Another thing I remember, on a smaller scale by far, is a small stick and two rubber bands, one binding the other over the end of the stick. I was about 6, at a strange house competing with another boy to accurately and strongly catapult nasturtium seeds by releasing them against the stick so the band drew them near-parallel to it at speed. It's very effective because it eases aiming and the recoil is just enough to cause the stick end to slew aside to allow accurate clearance at the crucial instant, something that became immediately apparent at the time I 'invented' it. If the thing were scaled up, for example with a carefully prepared inner tube from a cycle tyre, then maybe the thing can launch a weighted tennis ball and light line accurately with one shot. The trial and error would certainly be a lot lower than the dog-ball-slinger. :)

3337. Re: Slinkey Antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-02 15:52:47 UTC
From: Wayne <mygarbagecan@verizon.net>
Message-ID: <hf62gglav1@news.eternal-september.org>
Source record: 11746

"clyde" <clyde.55bacd8@radiobanter.com> wrote in message
news:clyde.55bacd8@radiobanter.com...
>
> Has anyone used a slinkey antenna? I bought one and hooked it to a tree
> in my yard about 30 ft up. I have a Grundig Yacht Boy 400 and I clipped
> it to the telescopic antenna. I dont see much improvement. Live in the
> Wa. state, is recption real bad here or should I update and get a newer
> radio? this one I bought new in 91.
>
> Thanks,
>
> Clyde
>
A random length wire should work just fine for SWLing. If the receiver
noise increases when you hook up the antenna, then you aren't doing too
badly.
--Wayne

3338. Re: Antenna Launcher

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-02 17:36:23 UTC
From: Jim Lux <james.p.lux@jpl.nasa.gov>
Message-ID: <hf68jh$qo3$1@news.jpl.nasa.gov>
Source record: 11747

John Ferrell wrote:
> On Mon, 30 Nov 2009 10:31:12 -0800, Jim Lux <james.p.lux@jpl.nasa.gov>
> wrote:
>
>
>> 3 9V batteries in series makes a fine source to actuate a sprinkler
>> valve. Put a 0.1 uf (or thereabouts, non critical) capacitor across the
>> pushbutton contacts to make it last a bit longer.
>>
> Got a little further today. It takes too many hands to twist the
> valve, fiddle with the reel and aim the device. I black vinyl taped a
> micro switch to the valve assembly with ONE 9 volt battery so that I
> can thumb it to launch. I also moved the open face reel back to the
> valve end of the barrel and fabricated (more black tape & paperclip)
> an eye to pass the line through so that line retrieval with the reel
> is less awkward. Today's final test was conducted in the dark so I was
> unable to see much. I launched nearly 90 degrees and it was gone for
> several seconds so I expect it did well.

I've found that a single 9V will open a valve if there's not much
pressure, the coil is cool, etc. Run the pressure up, grab the thing
out of the back of the car where it's been cooking in the sun, etc. and
a bit more current through the coil is handy. (Oh yeah, and with 3
alkaline 9Vs, they'll last basically forever, because it will still fire
when they're almost dead... use the ones you pulled out of your smoke
alarms at home)

>
> VK2KC emailed me with some advice. He pointed out that it is usually
> better to launch from the woods to an open space. I expect that will
> be the case.
>
> It seems to me that this device consists of three components: Barrel,
> Valve and accumulator. It seems that to change to launching tennis
> balls would be a matter of fitting a 2-1/2" barrel. I doubt that I am
> going to find that in my area but I will keep my eyes open.

Don't neglect the possibility of using a slightly large barrel with a
liner (take a bigger diameter piece of plastic pipe, use a circular saw
to rip a slot down the length, and then squeeze it down to fit inside
the outer tube.

Or a sabot/piston made of closed cell foam (e.g. cut a disc of styrofoam
that fits snugly.. or I like polyethylene foam.. it's a bit springier)

Or, use one of those squishy fairly dense foam rubber balls (you see them as "stress relievers" as a giveaway at trade show booths, for instance) that are available in a variety of sizes and make a snug fit with the ID of whatever barrel you use.

>
> Tomorrow is another day!
>
> John Ferrell W8CCW

3339. Re: Slinkey Antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-02 18:07:52 UTC
From: clyde <clyde.55caa21@radiobanter.com>
Message-ID: <clyde.55caa21@radiobanter.com>
Source record: 11802

Richard Clark;694940 Wrote:
> On Wed, 2 Dec 2009 04:01:50 +0000, clyde
> clyde.55bacd8@radiobanter.com wrote:
> -
>
> Has anyone used a slinkey antenna? I bought one and hooked it to a
> tree
> in my yard about 30 ft up. I have a Grundig Yacht Boy 400 and I
> clipped
> it to the telescopic antenna. I dont see much improvement. Live in
> the
> Wa. state, is recption real bad here or should I update and get a
> newer
> radio? this one I bought new in 91.
>
> Thanks,
>
> Clyde-
>
> Hi Clyde,
>
> That sounds like plenty of antenna for most SWLing - there's just not
> enough sunspots to hook it too. A new radio won't fix that.
>
> To those who are counting those sunspots (the missing ones), they have
> theories about that which also involve the freemasons, ancient
> astronauts, and other influences that will converge on a solution in
> 2012. The short explanation is that "time will tell."
>
> 73's
> Richard Clark, KB7QHC

Hi Richard,

Thanks for the reply.

Clyde

--
clyde

3340. Re: Slinkey Antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-02 20:27:12 UTC
From: nm5k@wt.net
Message-ID: <ce1a747c-3738-482e-9325-9cb380ba005c@m25g2000yqc.googlegroups.com>
Source record: 11748

On Dec 2, 12:20 am, Richard Clark <kb7...@comcast.net> wrote:

>
> To those who are counting those sunspots (the missing ones), they have
> theories about that which also involve the freemasons, ancient
> astronauts, and other influences that will converge on a solution in
> 2012.   The short explanation is that "time will tell."
>
> 73's
> Richard Clark, KB7QHC

I'd heard quirks in the solar "jet stream" so to speak..

3341. Re: an ontopic post about code

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-02 20:29:27 UTC
From: kb9rqz@yahoooo.com
Message-ID: <5hjdh55qrjnjk0dfiv6ij9cmghqketp47v@4ax.com>
Source record: 11749
Cross-posted to: alt.ham-radio.vhf-uhf,rec.radio.amateur.policy,rec.radio.amateur.antenna

On Fri, 01 Dec 2006 09:36:47 -0800, John Smith
<assemblywizard@gmail.com> wrote:

>K4YZ wrote:
>> Nope.
>>
>> The IP Address and servers are complete proof that I do NOT share
>> any annonymous character's "address".
>>
>> Sounds like Lennie, to me....
>>
>> Steve, K4YZ
>>
>
>To anyone with even an elementary understanding of anonymous proxies,
>anonymous remailers, zombie backdoors, etc., the ability to change ones
>IP address and header details is simplistic, indeed, with little time
>spent anyone can appear to be "coming" from anywhere in the world.
>
>You waste my time. Worse, you think us all idiots here. You remind me
>of the "street smart" prosecutors and defense attorneys who stack jurys
>with members of little or no technical knowledge and then call in
>"expert witnesses" and propose arguments of technical details to boggle
>their minds.
>
>You have only proven that you, yourself are either ignorant to such
>technical details, or else you are indeed street smart, I favor the
>latter in this case (however, if you in the dark about such things, 15
>minutes on google will enlighten you.)
>
>JS

"one useless man is disgrace 2 become a law firm 3 or more become a congress"
adams

woger you are a Congress all in your own head
"http://www.3ix.org/sys/aff.php?aff=7439" target="_blank"

altopia is never used by KB9RQZ
http://kb9rqz.cc.cc
http://kd8ctl.com
nor is Konstans@hotmail.com ever
btw i can be found at
17366 N River Rd

Chassel Mi

but the cowards asking lack the gut to act

3342. Re: Slinkey Antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-02 20:36:14 UTC
From: nm5k@wt.net
Message-ID: <17dff8c1-a13b-4c13-b969-b7770d4e53e0@s20g2000yqd.googlegroups.com>
Source record: 11750

On Dec 2, 9:52 am, "Wayne" <mygarbage...@verizon.net> wrote:
> If the receiver
> noise increases when you hook up the antenna, then you aren't doing too
> badly.
> --Wayne

In a case like that, he's doing about as well as one can do, not
counting changes in pattern. For SWL, a slinky is ok. Not so hot
for transmitting though, being the antenna is almost all loading coil
with no capacitance added at the ends. Kind of like running back
to back ham sticks with no stingers on the ends. :/
It'll work, but there are better designs for short loaded dipoles.

3343. Re: Antenna Launcher

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-02 23:14:15 UTC
From: John Ferrell <jferrell13@triad.rr.com>
Message-ID: <ffsdh5pqjgf8njso1egqegv36s1bjn47bu@4ax.com>
Source record: 11801

On Wed, 02 Dec 2009 03:04:48 -0600, Lostgallifreyan
<no-one@nowhere.net> wrote:

>Sorry if my post is as silly as it appears it might be, but just in case it
>isn't... I've seen people walking dogs in a large park I run in a lot. They
>have these slingshot/stick type affairs to throw tennis balls with for fast
>strong dogs to get a lot of exercise fetching them while the owner has an
>easier time of it. I've never tried one, but from what I've seen, even
>unconscious practise seems to result in some accuracy, and distance certainly
>isn't lacking. In short, it might be easier, cheaper and faster to practise
>with one of those than to devise a more complex launcher. It seems to me that
>accurately placing a thin line over a branch up to 100 ft high might be
>easier than learning to fly-cast.
>
>Another thing I remember, on a smaller scale by far, is a small stick and two
>rubber bands, one binding the other over the end of the stick. I was about 6,
>at a strange house competing with another boy to accurately and strongly
>catapult nasturtium seeds by releasing them against the stick so the band
>drew them near-parallel to it at speed. It's very effective because it eases
>aiming and the recoil is just enough to cause the stick end to slew aside to
>allow accurate clearance at the crucial instant, something that became
>immediately apparent at the time I 'invented' it. If the thing were scaled
>up, for example with a carefully prepared inner tube from a cycle tyre, then
>maybe the thing can launch a weighted tennis ball and light line accurately
>with one shot. The trial and error would certainly be a lot lower than the
>dog-ball-slinger. :)

I am still open to all leads. I did a Google on "dog ball shooter" and
found a lot of interesting posts. I don't think any of them are up to
carrying a monofilament line over a 100 foot tree but they are still
interesting. My Black Lab enjoys chasing a genuine bowling pin when I
throw it but we are both getting too old for that game! It has given
her very strong neck muscles.

The Hyper dog launcher looks to be effective and inexpensive for the
intended purpose.

I met a fellow at Home Depot that does a lot of surf fishing in the
ocean. He is considering a similar device as my launcher to place his
bait further from the beach...

Rainy day (flood warnings) in North Carolina today... antenna play on
computer today.

John Ferrell W8CCW

3344. Re: Slinkey Antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-02 23:21:32 UTC
From: ecregger <ecregger@bellsouth.net>
Message-ID: <hf6sps$hu9$1@adenine.netfront.net>
Source record: 11803

<nm5k@wt.net> wrote in message
news:17dff8c1-a13b-4c13-b969-b7770d4e53e0@s20g2000yqd.googlegroups.com...
On Dec 2, 9:52 am, "Wayne" <mygarbage...@verizon.net> wrote:
> If the receiver
> noise increases when you hook up the antenna, then you aren't doing too
> badly.
> --Wayne

In a case like that, he's doing about as well as one can do, not
counting changes in pattern. For SWL, a slinky is ok. Not so hot
for transmitting though, being the antenna is almost all loading coil
with no capacitance added at the ends. Kind of like running back
to back ham sticks with no stingers on the ends. :/
It'll work, but there are better designs for short loaded dipoles.

Speaking of compromise antennas that work - at least somewhat - there is one
that MFJ has been selling for quite a while. Unfortunately, the model number
does not spring to mind, but it is for indoor use and consists of a remote
control box (remote from the "antenna") an over twenty foot run of coax and
a mobile looking telescopic element antenna on a mount of some kind (I
forget which type). It does work pretty well. A friend of mine owned one and
he lived in an apartment complex with a no external antenna rule. He did a
very good job of working out past the Mississippi on 40 meters with just 100
watts. He lived in New Jersey.

Ed, NM2K (yes NM5K it is me again. I got my old callsign back)

3345. Re: Slinkey Antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-03 00:06:38 UTC
From: 'Doc <ltdoc@yahoo.com>
Message-ID: <5f7ad152-314e-41e3-8b01-d0b959ab2bf0@j24g2000yqa.googlegroups.com>
Source record: 11804

This is a metal slinky, not the plastic ones?
- 'Doc

3346. Re: Antenna Launcher

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-03 04:36:25 UTC
From: Lostgallifreyan <no-one@nowhere.net>
Message-ID: <Xns9CD62ED936354zoodlewurdle@216.196.109.145>
Source record: 11808

John Ferrell <jferrell13@triad.rr.com> wrote in
news:ffsdh5pqjgf8njso1egqegv36s1bjn47bu@4ax.com:

> I am still open to all leads. I did a Google on "dog ball shooter" and
> found a lot of interesting posts. I don't think any of them are up to
> carrying a monofilament line over a 100 foot tree but they are still
> interesting. My Black Lab enjoys chasing a genuine bowling pin when I
> throw it but we are both getting too old for that game! It has given
> her very strong neck muscles.
>
> The Hyper dog launcher looks to be effective and inexpensive for the
> intended purpose.
>
> I met a fellow at Home Depot that does a lot of surf fishing in the
> ocean. He is considering a similar device as my launcher to place his
> bait further from the beach...
>
> Rainy day (flood warnings) in North Carolina today... antenna play on
> computer today.
>
> John Ferrell W8CCW
>

One thing I didn't catch was how often you might need to relaunch.. If lots,
then for consistency your gadget will win easily. I'd still try the inner-
tube elastic and 3 foot stick wheeze though. I also tried making bows and
arrows as a kid and was hopeless, but the straight-stick catapult really
scored.. (I'm surrounded by 4-floor buildings though so this is sort of
rhetorical, I couldn't actually do it on anything but a short trajectory to
ground here without breaking something).

3347. Re: Slinkey Antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-03 04:49:39 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <lmgeh5duts9eq1hgp8t969upsduf1tekhu@4ax.com>
Source record: 11809

On Wed, 2 Dec 2009 12:27:12 -0800 (PST), nm5k@wt.net wrote:

>On Dec 2, 12:20ï¿½am, Richard Clark <kb7...@comcast.net> wrote:
>
>>
>> To those who are counting those sunspots (the missing ones), they have
>> theories about that which also involve the freemasons, ancient
>> astronauts, and other influences that will converge on a solution in
>> 2012. ï¿½ The short explanation is that "time will tell."
>>
>> 73's
>> Richard Clark, KB7QHC
>
>I'd heard quirks in the solar "jet stream" so to speak..
>
Who knows? Maybe the sunspots, like gauss/newtonian craters, got
plugged up with weak-force (feeble?) particels.

73's
Richard Clark, KB7QHC

3348. Re: Faraday shields and radiation and misinterpretations

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-03 08:25:15 UTC
From: Lostgallifreyan <no-one@nowhere.net>
Message-ID: <Xns9CD655A902D5Czoodlewurdle@216.196.109.145>
Source record: 11810

K7ITM <k7itm@msn.com> wrote in news:23a4e09e-cb46-49a9-a096-7647584667f7@j19g2000yqk.googlegroups.com:

> In fact, my advice if you do get into that
> situation (where quantization of energy is important), is to NOT think
> of particles or waves, but realize that quanta of electromagnetic
> radiation behave exactly as they behave, which is neither exactly like
> waves nor exactly like particles. One of Richard Feynman's physics
> lectures covered what I think is a lovely example of this: how you
> can NOT explain the results of the experiment he sets up, using EITHER
> wave OR particle behaviour. I highly recommend it, to arm yourself
> against people who get into the particle-vs-wave battle. I believe
> it's the sixth of what has been published as Feynman's "Six Easy
> Pieces."
>

That's what I kept telling myself when I first read about it 20 years ago, that light was neither wave, nor particle, but something else that can appear as either, or both. It felt like a kind of fence-sitting tautology at the time, but it really seemed the only way to have any hope of resolving (sometimes foolish) paradoxes, so it's gratifying to know that Feynman says it too. I don't know if he's written anything a layman can easily work through, that doesn't come with lots of maths without which accompanying text doesn't help much, but if he has I'll try to read it.

I have various thoughts of my own, too off-topic to go into most likely, but I'll indulge in one of them. The duality/exclusion, etc is often expressed in various ways, but the one I find most intersting is based not in massenergy but information, that of isolation and continuity. People have made computers of both types now, basically the Turing machine and the operational amplifier. I suspect we have a third type, the brain, that isn't 'modelled' on either type but uses the quanta as they actually are. Though whether attempts to make actual quantum computers will be anything like what the brain does, I have no idea. But it seems to imply that there might be a 'conservation of information' law as there are such laws for mass and energy or mass-energy. Maybe information is more fundamental than either. If so, some very strange science is going to emerge (and I suspect it won't be quantum theory that gets us anywhere, as such, especially given the Copenhagen Interpretaion and what that implies about 'knowing', but the tools it enables us to build are another matter, I think they're going to show plenty, once we have enough new info to interpret).

As continuity as well as isolation is a fundamental aspect of whatever is 'underneath', it means I have no reason to reject a wave model of electrodynamics if it works, so I won't.

3349. Re: Faraday shields and radiation and misinterpretations

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-03 08:28:26 UTC
From: Lostgallifreyan <no-one@nowhere.net>
Message-ID: <Xns9CD65633B90D4zoodlewurdle@216.196.109.145>
Source record: 11811

Richard Clark <kb7qhc@comcast.net> wrote in
news:iciah5pesu7n47fv5i4iu968p0m3qfv1mu@4ax.com:

> On Tue, 01 Dec 2009 03:42:13 -0600, Lostgallifreyan
> <no-one@nowhere.net> wrote:
>
>> why is it
>>often ok for a Faraday cage to have holes in it? :) Braided screens,
>>meshes, perforated metal sheets, etc, I've seen many shields that are
>>not a complete 'seal'... UHF TV cables especially seem to be very
>>loosely shielded but they work.
>
> This can be explained at super high frequency and at DC as easily.
> However, before that it should be pointed out that the coverage (the
> ratio of what is conductor to what is not - the air space) defines how
> "good" the faraday shield will be. Not surprisingly, coverage is
> wavelength dependant. To cut to the chase, a wide mesh will allow
> increasingly higher frequencies (shorter waves) through.
>
> Now, as to the how. With a separation in the mesh, and for very large
> wavelength (in proportion to the opening size), you will have a very,
> very small potential difference across any of the mesh openings. Very
> little potential voltage across the mesh opening means very little
> current flow around the mesh opening that is specifically due to that
> potential difference.
>
> This is not to say there isn't a very, very large current flow by
> virtue of some very, very long wave. No, there's no denying that, but
> to get through the mesh you have to satisfy local conditions that
> demand what amounts to leakage (and this is exactly the term that
> correlates to coverage when discussing coax weave). If that huge
> current cannot induce a significant voltage across the mesh opening,
> then the mesh opening loop current cannot induce a field through to
> the other side. Now, if you examine the context of "huge current" in
> a resistive conductor, then obviously a potential difference can
> occur. Point is that reality (and science) allow for poor grade
> shields, but as a one knock-off proof you can summon up any failure,
> ignore simple contra-examples and create a new theory.
>
> However, returning to what is well known. If you increase the
> frequency applied to the mesh, then at some point wavelength will
> allow a situation where the general current flowing through the whole
> structure will naturally exhibit a potential difference across some
> small scale. By this point, abstraction may be wearying.

>
> Let's say you have a 10 meter-on-a-side cage with 1 meter mesh
> openings. If your applied field were exciting the cage at 75MHz (4M),
> then any spot on the cage could be at a very high potential difference
> from any spot adjacent and 1 meter away (a simple quarterwave
> relationship). This works for a solid conductor, it works for a mesh
> conductor.
>
> The 1 meter mesh openings can thus exhibit a substantial potential
> difference across the opening, and a local current loop associated
> with that potential difference. The mesh opening becomes a
> quarterwave radiator (aka slot antenna) and can couple energy from the
> external field into the interior of the cage (now possibly a resonant
> chamber, aka RF cavity). In practice and literature, the mesh opening
> loop exhibits a radiation resistance of 10s of Ohms. That compared to
> its mesh loop Ohmic path loss, makes it a very efficient coupler of
> energy.
>
> Take this very poor example of mesh, and lower the frequency to 750
> KHz. The mesh opening - if we originally likened it to an antenna, we
> should be able to continue to do that - is now 1/400th Wave. A
> 1/400th wave radiator has extremely small radiation resistance. The
> exact value would be 751 nanoOhms. As we are examining a poor mesh,
> it becomes clear that it must have some resistance over that 1 meter
> distance (this is a real example, after all).
>
> Being generous and constructing that cage out of rebar will give us a
> path resistance of, luckily, 1 milliOhm. This figure and that of the
> radiation resistance yield the radiation efficiency (that is, how well
> the exterior RF will couple into the interior) which reduces to
> 0.075%. The cage works pretty well, but not perfectly (it was, after
> all, a poor example).
>
> Now, repeat this with a poorer conductor, or a tighter mesh and
> imagine the shielding effect. The mesh has an opening radius
> squared-squared relationship driving down the radiation resistance
> compared to the linear relationship of conductance.
>
> **********
>
> Now, expanding the topic to allow for the contribution of ALL openings
> in the mesh, we must again return to the physical dimension compared
> to the wavelength dimension. If the cage is truly large, larger than
> the field exciting it, then you have miniscule radiators along it,
> each very inefficient. However, each of those radiators is out of
> phase with a distant neighbor (not so with its close mesh neighbors).
> Those two wavelength distant mesh radiators will combine somewhere in
> the interior space and build a field. This is very commonly found in
> inter-cable cross coupling through leakage that is exhibited in very
> long cable trays with tightly bound lines. This doesn't improve the

> efficiency, but sensitive circuits running parallel to power drives
> can prove to be a poor combination. What to do when conditions
> condemn the small signal coax to live in proximity to the large signal
> supply?
>
> This introduces the foil shield. The foil shield is a very poor
> conductor over any significant length, but over the span between mesh
> openings (e.g. coax shield weave), the resistance is sufficiently low
> to close the conductance gap.
>
> 73's
> Richard Clark, KB7QHC
>

Thankyou. That IS a clear picture. I'll have to learn more to understand it well but what I can grasp fits well with things I have already observed.

Regarding the other postings today, I can see that if you're receiving a long wave signal a small system will do if the sensivity is good and the noise is low, but transmission is another matter entirely. But whatever the theories propounded might be, I guess the observations are what matters. I haven't the space or equipment to test it, but if anyone manages to transmit a lot of longwave RF from a small directional system such as Art Unwin appears to be describing, then the theory will take care of itself, eventually, but I also get the strong impression that few people, if any, have done it. As far as I know, all low frequency RF transmitting systems are large, powerful things, and not very directional.

(I wrote that yesterday but kept clear of the Send button, but it's on topic enough to go for it now.)

3350. Re: Antenna Launcher

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-03 09:17:11 UTC
From: Jeff Liebermann <jeffl@cruzio.com>
Message-ID: <c5veh5lkg0rkb9c5srj2s1r9cp7cc2fl0o@4ax.com>
Source record: 11812

On Sun, 29 Nov 2009 20:11:29 -0500, "Ralph Mowery"
<rmowery28146@earthlink.net> wrote:

>You do not need the projectile to be very tight.
>I just used some electrical tape to make it fit beter. Used orange as I
>though it might make it easier to find .

Yech. One of the local hams was trying to use one and had the same
fit problem. Somehow, I got involved. The first thing I did was toss
a little household flour into the launch tube so I could see if the
ball was leaking. Someone appeared up with a camcorder that would do
about slow motion. Kinda like that TV show that shows things in slow
motion. The tennis ball leaked really badly.

Time to fix the leak. I decide to make a new projectile in the shape
of a Civil War Minie Ball.
<http://en.wikipedia.org/wiki/Mini%C3%A9_ball>
The idea was to have a conical head for improved aerodynamics and an
expanding base for a good seal. Of course, friction had to be
minimal. To improve the seal, I found some close cell urethane foam.
Using a hot nichrome wire, I cut a simple cylinder that was slightly
smaller than the bore diameter, and about the length of a beer can.
Well, it was the exact size of a beer can because that was what we
were launching nearby with a propane powered canon. Anyway, I also
used the hot wire to form a somewhat conical cavity in the base. Air
pressure would expand the base outward towards the barrel wall,
forming a better gas seal. The length of the foam would keep it from
wobbling. As long as the foam was a loose fit, there would be little
added friction. I never got around to building a conical projectile
and just dumped the tennis ball on top of the foam forming a sabot.

As I recall, we got about 60 ft with 50 lbs pressure using only the
tennis ball, and about 90 ft at 50 lbs using the foam Minie Ball.
Videos of the trajectory showed that the air resistance of the tennis
ball was only a little better than if it had been dragging a
parachute. End of flight droop was severe. A better aerodynamic
shape would certainly have been a major improvement. However, I never
tried.

It would also be fairly easy to add spin stabilization, but that would
require a one piece conical projectile.

--
Jeff Liebermann jeffl@cruzio.com
150 Felker St #D http://www.LearnByDestroying.com
Santa Cruz CA 95060 http://802.11junk.com

Skype: JeffLiebermann AE6KS 831-336-2558

3351. Re: Faraday shields and radiation and misinterpretations

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-03 15:40:48 UTC
From: Art Unwin <arthurunwin@gmail.com>
Message-ID: <e8c1d40e-41fe-464f-bbb5-33aaee541db0@s31g2000yqs.googlegroups.com>
Source record: 11813

On Dec 3, 2:28 am, Lostgallifreyan <no-...@nowhere.net> wrote:
> Richard Clark <kb7...@comcast.net> wrote
innews:iciah5pesu7n47fv5i4iu968p0m3qfv1mu@4ax.com:
>
>
>
> > On Tue, 01 Dec 2009 03:42:13 -0600, Lostgallifreyan
> > <no-...@nowhere.net> wrote:
>
> >> why is it
> >>often ok for a Faraday cage to have holes in it? :) Braided screens,
> >>meshes, perforated metal sheets, etc, I've seen many shields that are
> >>not a complete 'seal'... UHF TV cables especially seem to be very
> >>loosely shielded but they work.
>
> > This can be explained at super high frequency and at DC as easily.
> > However, before that it should be pointed out that the coverage (the
> > ratio of what is conductor to what is not - the air space) defines how
> > "good" the faraday shield will be. Not surprisingly, coverage is
> > wavelength dependant. To cut to the chase, a wide mesh will allow
> > increasingly higher frequencies (shorter waves) through.
>
> > Now, as to the how. With a separation in the mesh, and for very large
> > wavelength (in proportion to the opening size), you will have a very,
> > very small potential difference across any of the mesh openings. Very
> > little potential voltage across the mesh opening means very little
> > current flow around the mesh opening that is specifically due to that
> > potential difference.
>
> > This is not to say there isn't a very, very large current flow by
> > virtue of some very, very long wave. No, there's no denying that, but
> > to get through the mesh you have to satisfy local conditions that
> > demand what amounts to leakage (and this is exactly the term that
> > correlates to coverage when discussing coax weave). If that huge
> > current cannot induce a significant voltage across the mesh opening,
> > then the mesh opening loop current cannot induce a field through to
> > the other side. Now, if you examine the context of "huge current" in
> > a resistive conductor, then obviously a potential difference can
> > occur. Point is that reality (and science) allow for poor grade
> > shields, but as a one knock-off proof you can summon up any failure,
> > ignore simple contra-examples and create a new theory.
>
> > However, returning to what is well known. If you increase the
> > frequency applied to the mesh, then at some point wavelength will

> > allow a situation where the general current flowing through the whole
> > structure will naturally exhibit a potential difference across some
> > small scale. By this point, abstraction may be wearying.
>
> > Let's say you have a 10 meter-on-a-side cage with 1 meter mesh
> > openings. If your applied field were exciting the cage at 75MHz (4M),
> > then any spot on the cage could be at a very high potential difference
> > from any spot adjacent and 1 meter away (a simple quarterwave
> > relationship). This works for a solid conductor, it works for a mesh
> > conductor.
>
> > The 1 meter mesh openings can thus exhibit a substantial potential
> > difference across the opening, and a local current loop associated
> > with that potential difference. The mesh opening becomes a
> > quarterwave radiator (aka slot antenna) and can couple energy from the
> > external field into the interior of the cage (now possibly a resonant
> > chamber, aka RF cavity). In practice and literature, the mesh opening
> > loop exhibits a radiation resistance of 10s of Ohms. That compared to
> > its mesh loop Ohmic path loss, makes it a very efficient coupler of
> > energy.
>
> > Take this very poor example of mesh, and lower the frequency to 750
> > KHz. The mesh opening - if we originally likened it to an antenna, we
> > should be able to continue to do that - is now 1/400th Wave. A
> > 1/400th wave radiator has extremely small radiation resistance. The
> > exact value would be 751 nanoOhms. As we are examining a poor mesh,
> > it becomes clear that it must have some resistance over that 1 meter
> > distance (this is a real example, after all).
>
> > Being generous and constructing that cage out of rebar will give us a
> > path resistance of, luckily, 1 milliOhm. This figure and that of the
> > radiation resistance yield the radiation efficiency (that is, how well
> > the exterior RF will couple into the interior) which reduces to
> > 0.075%. The cage works pretty well, but not perfectly (it was, after
> > all, a poor example).
>
> > Now, repeat this with a poorer conductor, or a tighter mesh and
> > imagine the shielding effect. The mesh has an opening radius
> > squared-squared relationship driving down the radiation resistance
> > compared to the linear relationship of conductance.
>
> > **********
>
> > Now, expanding the topic to allow for the contribution of ALL openings
> > in the mesh, we must again return to the physical dimension compared
> > to the wavelength dimension. If the cage is truly large, larger than
> > the field exciting it, then you have miniscule radiators along it,
> > each very inefficient. However, each of those radiators is out of
> > phase with a distant neighbor (not so with its close mesh neighbors).
> > Those two wavelength distant mesh radiators will combine somewhere in

> > the interior space and build a field. This is very commonly found in
> > inter-cable cross coupling through leakage that is exhibited in very
> > long cable trays with tightly bound lines. This doesn't improve the
> > efficiency, but sensitive circuits running parallel to power drives
> > can prove to be a poor combination. What to do when conditions
> > condemn the small signal coax to live in proximity to the large signal
> > supply?
>
> > This introduces the foil shield. The foil shield is a very poor
> > conductor over any significant length, but over the span between mesh
> > openings (e.g. coax shield weave), the resistance is sufficiently low
> > to close the conductance gap.
>
> > 73's
> > Richard Clark, KB7QHC
>
> Thankyou. That IS a clear picture. I'll have to learn more to understand it
> well but what I can grasp fits well with things I have already observed.
>
> Regarding the other postings today, I can see that if you're receiving a long
> wave signal a small system will do if the sensivity is good and the noise is
> low, but transmission is another matter entirely. But whatever the theories
> propounded might be, I guess the observations are what matters. I haven't the
> space or equipment to test it, but if anyone manages to transmit a lot of
> longwave RF from a small directional system such as Art Unwin appears to be
> describing, then the theory will take care of itself, eventually, but I also
> get the strong impression that few people, if any, have done it. As far as I
> know, all low frequency RF transmitting systems are large, powerful things,
> and not very directional.
>
> (I wrote that yesterday but kept clear of the Send button, but it's on topic
> enough to go for it now.)

You only have to visualise a large solenoid to see that it is quite
directional.
Modeling shows in the order of 10 dbi when end fed !
If you have a helix antenna in ribbon shape form where all lumped
loads are canceled
then even Eznec should be able to do the job. No need for cross wires
for a single frequency design. A mesh made into a tube and placed on
the ground will also get the job done, no hand waving required. Put
mesh around a plastic garbage can also does the job and Menards have
the mesh for less than $20 and muriatic acis for $4.
It is just that hams cannot accept change or even small non electrical
antennas.
After all, all is known about antennas as they have been studied to
death.

3352. Re: an ontopic post about code

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-03 18:25:52 UTC
From: kb9rqz <mark@kb9rqz.com>
Message-ID: <15b9e8c7-d066-483a-8f2b-eb245886c089@m4g2000vbi.googlegroups.com>
Source record: 11814
Cross-posted to: alt.ham-radio.vhf-uhf,rec.radio.amateur.policy,rec.radio.amateur.antenna

On Dec 1, 4:50 pm, kb9...@yahoooo.com wrote:
> On Fri, 01 Dec 2006 09:36:47 -0800, John Smith
>
>
>
>
>
> <assemblywiz...@gmail.com> wrote:
> >K4YZ wrote:
> >>   Nope.
>
> >>   The IP Address and servers are complete proof that I do NOT share
> >> any annonymous character's "address".
>
> >>   Sounds like Lennie, to me....
>
> >> Steve, K4YZ
>
> >To anyone with even an elementary understanding of anonymous proxies,
> >anonymous remailers, zombie backdoors, etc., the ability to change ones
> >IP address and header details is simplistic, indeed, with little time
> >spent anyone can appear to be "coming" from anywhere in the world.
>
> >You waste my time. Worse, you think us all idiots here. You remind me
> >of the "street smart" prosecutors and defense attorneys who stack jurys
> >with members of little or no technical knowledge and then call in
> >"expert witnesses" and propose arguments of technical details to boggle
> >their minds.
>
> >You have only proven that you, yourself are either ignorant to such
> >technical details, or else you are indeed street smart, I favor the
> >latter in this case (however, if you in the dark about such things, 15
> >minutes on google will enlighten you.)
>
> >JS
>
> "one useless man is disgrace 2 become a law firm 3 or more become a congress"
> adams
>
> woger you are a Congress all in your own head
> "http://www.3ix.org/sys/aff.php?aff=7439" target="_blank"
>
> altopia is never used by KB9RQZhttp://kb9rqz.cc.cchttp://kd8ctl.com

> nor is Konst...@hotmail.com ever
> btw i can be found at
> 17366 N River Rd
> Chassel Mi
>
> but the cowards asking lack the gut to act- Hide quoted text -
>
> - Show quoted text -

3353. Re: Faraday shields and radiation and misinterpretations

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-03 18:29:53 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <p60gh5hsgecqacd0489vbgpvkt5knhr0mg@4ax.com>
Source record: 11815

On Thu, 03 Dec 2009 02:28:26 -0600, Lostgallifreyan
<no-one@nowhere.net> wrote:

>Regarding the other postings today, I can see that if you're receiving a long
>wave signal a small system will do if the sensivity is good and the noise is
>low, but transmission is another matter entirely.

Reciprocity dominates, but transmit and receive circuits are not
always reciprocal (that is, symmetric or identical). If you match at
the antenna, you don't lose signal in the loss of the transmission
line where SWR would dominate. That topic is best left to other
discussion.

>But whatever the theories
>propounded might be, I guess the observations are what matters. I haven't the
>space or equipment to test it, but if anyone manages to transmit a lot of
>longwave RF from a small directional system such as Art Unwin appears to be
>describing, then the theory will take care of itself, eventually, but I also
>get the strong impression that few people, if any, have done it. As far as I
>know, all low frequency RF transmitting systems are large, powerful things,
>and not very directional.

In logic there is the argument called Reductio Ad Absurdum. With the
claim of a resonant small antenna being efficient there exists an
obvious example that completely disrupts this. Since the inception of
man-made RF radiation, ALL such attempts have been preceded with a
resonant coil/capacitor combination. Think of the plate load of the
conventional RF transmitter in both amateur and professional
applications for the many decades that followed Hertz' work.

This small, resonant plate load, is quite specifically designed for RF
with low in resistive loss - and yet it is miserable as a propagator
of that same RF. The physical size compared to the wavelength size
dominates that efficiency with a fourth power law. Hertz' original
design was in the VHF where his "plate tank" (so to speak) was
physically large in relation to the wavelength he successfully
transmitted to a nearby physically large receiving tank.

73's
Richard Clark, KB7QHC

3354. Re: Faraday shields and radiation and misinterpretations

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-03 20:25:37 UTC
From: Art Unwin <arthurunwin@gmail.com>
Message-ID: <026ae0ed-cc0f-4182-9797-cdf2befb9af8@j19g2000yqk.googlegroups.com>
Source record: 11816

On Dec 3, 12:29 pm, Richard Clark <kb7...@comcast.net> wrote:
> On Thu, 03 Dec 2009 02:28:26 -0600, Lostgallifreyan
>
> <no-...@nowhere.net> wrote:
> >Regarding the other postings today, I can see that if you're receiving a long
> >wave signal a small system will do if the sensivity is good and the noise is
> >low, but transmission is another matter entirely.
>
> Reciprocity dominates, but transmit and receive circuits are not
> always reciprocal (that is, symmetric or identical). If you match at
> the antenna, you don't lose signal in the loss of the transmission
> line where SWR would dominate. That topic is best left to other
> discussion.
>
> >But whatever the theories
> >propounded might be, I guess the observations are what matters. I haven't the
> >space or equipment to test it, but if anyone manages to transmit a lot of
> >longwave RF from a small directional system such as Art Unwin appears to be
> >describing, then the theory will take care of itself, eventually, but I also
> >get the strong impression that few people, if any, have done it. As far as I
> >know, all low frequency RF transmitting systems are large, powerful things,
> >and not very directional.
>
> In logic there is the argument called Reductio Ad Absurdum. With the
> claim of a resonant small antenna being efficient there exists an
> obvious example that completely disrupts this. Since the inception of
> man-made RF radiation, ALL such attempts have been preceded with a
> resonant coil/capacitor combination. Think of the plate load of the
> conventional RF transmitter in both amateur and professional
> applications for the many decades that followed Hertz' work.
>
> This small, resonant plate load, is quite specifically designed for RF
> with low in resistive loss - and yet it is miserable as a propagator
> of that same RF. The physical size compared to the wavelength size
> dominates that efficiency with a fourth power law. Hertz' original
> design was in the VHF where his "plate tank" (so to speak) was
> physically large in relation to the wavelength he successfully
> transmitted to a nearby physically large receiving tank.
>
> 73's
> Richard Clark, KB7QHC

A perfect example of an old man or woman not willing to accept change.
For the cost of a few dollars they would not have made such fools of

themselves over the years.
I have stated many times that adding a time varying current to a Gaussian field of statics
represents Maxwells laws for radiation. The group many times over say this is foolish and stupid. I know it is not stated or confirmed in the books. When one accept that statement of mine the next deductions become obvious.
A radiator can be any size, shape or elevation as long as it is in a state of equilibrium and is in compliance with Maxwells equation for radiation.
I have opreviously shown how static particles are part and parcel how a Faraday shield works. I now have shown again how Maxwell and Gauss also state that particles are part of radiation. In addition, the particle is also part of a CRT mechanism as is the salvage sorting system when sorting aluminum cans. I have also shown how the particle achieves a straight line trajectory with spin unaffected by gravity which is also essential to radio propagation.
Yet hams still hang on to the yagi and all its atributes as being the cats whiskers.
Thus size has become everything and the volume it occupies instead of distributed loads only as long as it is in equilibrium. The particle responsible for radiation and light is very small and is the perfect example of point radiation at its best.
All it takes is a few dollars and a few hours work to make such an antenna, which allows you to stop making idiots of your selves, or a modicum of physics. Instead, you are all so sure that you find no need to get up from a couch.
As I have stated many times, all the group has done is the waving of hands with no physics attached or any explanation why it is in total conformance with antenna computer programs of the day in addition to the points I have made. With groups such as this it is no small wonder that radiation has not been fully understood for more than a century.

3355. Re: Faraday shields and radiation and misinterpretations

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-03 21:37:05 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <9j8gh559nbf580isq710jg15csk0g9ebqb@4ax.com>
Source record: 11817

On Thu, 03 Dec 2009 10:29:53 -0800, Richard Clark <kb7qhc@comcast.net>
wrote:

>This small, resonant plate load, is quite specifically designed for RF
>with low in resistive loss - and yet it is miserable as a propagator
>of that same RF. The physical size compared to the wavelength size
>dominates that efficiency with a fourth power law.

To extend this to Art's misinterpretation of Faraday Shields:

In the old days, breadboard design was exactly that - your rig was
built on (hammered to) a breadboard. It was open wiring with open
components. It radiated well with an antenna, and poorly without one.

However, as poorly as it radiated without an antenna, if you had a
separate receiver, you would hear yourself. This was sometimes useful
and gave us what is called "side tone."

The monitor was born.

Of course, with antennas connected, the receiver was bound to get more
than enough of that anyway and if the two were closely spaced,
feedback could drive all circuits into saturation. Not a good thing.
The Faraday shield for the transmitter was born.

It, as many can witness from simple observation, was composed of a
fine grid mesh of wire either tied to ground, or to a heavily AC/RF
filtered DC potential. As with all Faraday shields that came before
it (indeed since Faraday invented it), it completely encapsulated the
RF power source. The screen or mesh was simply a contrivance to allow
cool air to move in and hot air to move out. Modern implementations
use finned constructions and heat wicks - but this is topic drift.

With this added to the breadboard, other circuits also came to be
shielded, and generally so with the appearance of sheet metal chassis
with suitably wavelength small openings for access and heat transfer.
As the breadboard went into this RF impenetrable shell for both
receivers and transmitters (and with even more care for transceivers),
there arose a problem: What about the wires that go in and out?

Yes indeed. If those wires were not, in themselves, decoupled; then
they became radiators. The lesson to be learned was that those wires
had to be held at the same potential as the Faraday shield. This
could be accomplished by a simple connection, but with more than one
wire this leads to dead shorts between wires. Not a good thing.

The solution was to use AC/RF shorts (capacitors) to the shield from the wire and the wire could only penetrate the shield through a very small (in proportion to wavelength) opening. This was not always a good thing.

A capacitor could be good, but it exhibits a roll-off of only 6dB per octave, or 10dB per decade isolation. If your line going in and out was a DC control line, and your principle frequency was 1MHz (talking about the old days now); then you had 6 decades of separation between 1Hz and 1MHz - pretty good. If in the intervening years you pushed the technology envelope and added voice modulation and that came through the same wire; then your system shrunk to 3 decades of separation between 10,000Hz and 1MHz. This might work, sometimes it didn't.

As the years spun on, more wires penetrated that RF barrier, and they needed to not only be isolated from the RF, but each other; and often they contained very small signals that needed suitable signal to noise ratio (noise being that soup of RF that was stewing inside the shield).

Inline bypass filters were born.

The lines that penetrate a Faraday shield now appear to be more multi-stage low pass filters with repeating sections of shunt capacitors and series inductors. Their common (ground to the old brass pounder) was the shield which was RF free (as it was decoupled to a sanctioned earth ground). And lest we forget the principle penetration of that old time Faraday shield:

The coaxial transmission line was born.

By all appearances, this line satisfies the convention of a small opening through the Faraday shield. It's diameter is easily very small in relation to the wavelength of the RF power it reaches into the shield to tap. In a sense, it extends that hole in the shield to some very remote area that is far from the operating position, and then allows a wire(s) to emerge without regard for further shielding:

The antenna is born.

Funny thing, however, is that presumption of the shield of the coax being inert, un-perturbing, quiescent, invisible, benign - for that presumption is an illusion, a grand delusion. The line is very long with respect to wavelength, it is in the field of excitation that has been drawn out of the soup within the cage, and it is as much an antenna as the wire that emerged from its end. Many familiar problems rise from the ashes of this illusion. The exterior of the coaxial cable appears to the field to be a very long, grounded radiator. However, at any appreciable length (wavelength raises its familiar visage with an ironic grin), this exterior surface ceases to be the familiar DC grounding strap material, and becomes a full-fledge radiator according to its physical length vs. wavelength relationship. Not a very good thing, untill:

The transmission line choke is born.

To decouple the OUTSIDE of the coaxial line, the convention that has been observed (to widespread validation) is to either wind some sections of the line into Inductive chokes, or to add ferrites which serve the same purpose. These chokes, to be fully useful to their purpose, should be found at not only one point along the line, but at several so as to suppress (wavelength based) couplings along the line, by the line and by the field.

When the combination of all these methods are employed, then the Faraday shield does what it has done for these several hundred years while allowing the migration of RF power to a remote drive point, and without allowing that RF power to re-intrude into the shield, nor along the coaxial cable. Thus, the only evidence of RF from inside the Faraday shield is that which arrives over-the-air from the remote antenna.

Any other claim is a profanation of Faraday.

73's
Richard Clark, KB7QHC

3356. Re: Faraday shields and radiation and misinterpretations

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-03 21:51:05 UTC
From: Registered User <n4jvp@ix.netcom.com>
Message-ID: <od8gh5lrdl03td0v2mrm1fqn833g19rg6a@4ax.com>
Source record: 11818

On Tue, 01 Dec 2009 16:42:00 -0800, Richard Clark <kb7qhc@comcast.net>
wrote:

>On Tue, 01 Dec 2009 16:22:08 -0500, Registered User
><n4jvp@ix.netcom.com> wrote:
>
>> I'm under the impression the current flow
>>is identical whether metal rods or wire mesh is used in the antenna's
>>construction.
>
>A discone does not exhibit any quality of shielding, so it wanders off
>in that regard.
>

Maybe I'm confused and can't distinguish between Art's all-band mesh
antennas and his mesh Faraday shields.

I was questioning Art's statement
-quote-
When you feed a time varying current to the mesh it is best to view it
in small parts, say a square in the mesh. The hole is a static field
alongside the applied current flows.
- end quote -

The idea of examining the characteristics of a single square of mesh
seems impractical. The impact of adjacent squares should be accounted
for otherwise the single square is a loop.

Either way I've learned as current varies the fields it produces will
vary. If the fields vary they're not static. Too simplistic? What am I
missing?

>The difference between rods, number of rods, thickness of rods, and
>mesh all speak to bandwidth. 2, 3, or 4 rods will not be remarkable.
>16 rods will closely approximate a cone of sheet metal (as would a
>grid of similar spacing). The same can be said of the
>rod/rods/mesh/sheet in the upper section approximating a solid disk.
>
IIUC the current flows around the cone of a discone regardless of
solid, sheet or mesh construction. This appears to be contrary to the
quote above where current flows around each individual hole in the
mesh.

>Again, all these "appearances" are a strict function of wavelength to
>physical length and spacing relationships.
>

I've built several discones over the years and understand these relationships. How well is subject to conjecture hi.

3357. Re: Faraday shields and radiation and misinterpretations

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-03 21:54:04 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <d1cgh59ndhcjdso0codkuquodonfb86udi@4ax.com>
Source record: 11819

On Thu, 03 Dec 2009 13:37:05 -0800, Richard Clark <kb7qhc@comcast.net>
wrote:

>Yes indeed. If those wires were not, in themselves, decoupled; then
>they became radiators.

Further discussion about these wires allowing RF to slither through
what would ordinarily be impenetrable holes.

Those holes, whose circulating currents prohibit any coupling of
fields through them, as long as they are very small in relation to the
wavelength, can turn into free-flowing fountains of power with some
rather simple additions.

As mentioned, merely pass an insulated wire through the hole. If that
wire reaches into the interior where an RF field presents a very high
potential difference to the Faraday shield, then you have a capacitive
coupling to the exterior of the shield, through the hole, along that
wire. On the other hand, if you loop that interior wire back onto the
interior surface of the shield, AND that loop resides within the RF
field where it presents a very high magnetic component; then you have
an inductive coupling to the exterior of the shield, through the hole,
along that wire. Simply terminate the outside extension of that wire
to a suitable load, observing the conventions of matching, and remove
as much power as is practicable.

This is nothing more complex than the usual design conventions already
discussed under the coaxial transmission line considerations in the
post this derives from.

The point of this aside is to remark how easily (or difficulty) the
Faraday shield can be corrupted through indifference to first
principles.

73's
Richard Clark, KB7QHC

3358. Re: Faraday shields and radiation and misinterpretations

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-03 22:13:57 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <qvcgh5tslkt564tks77vmti5l4s7jer6h1@4ax.com>
Source record: 11820

On Thu, 03 Dec 2009 16:51:05 -0500, Registered User
<n4jvp@ix.netcom.com> wrote:

>On Tue, 01 Dec 2009 16:42:00 -0800, Richard Clark <kb7qhc@comcast.net>
>wrote:
>
>>On Tue, 01 Dec 2009 16:22:08 -0500, Registered User
>><n4jvp@ix.netcom.com> wrote:
>>
>>> I'm under the impression the current flow
>>>is identical whether metal rods or wire mesh is used in the antenna's
>>>construction.
>>
>>A discone does not exhibit any quality of shielding, so it wanders off
>>in that regard.
>>
>
>Maybe I'm confused and can't distinguish between Art's all-band mesh
>antennas and his mesh Faraday shields.

I can understand the confusion. To return to your question above,
there is NOTHING about the discone that falls under the topic of
Faraday shield.

>I was questioning Art's statement
>-quote-
>When you feed a time varying current to the mesh it is best to view it
>in small parts, say a square in the mesh. The hole is a static field
>alongside the applied current flows.
>- end quote -
>
>The idea of examining the characteristics of a single square of mesh
>seems impractical. The impact of adjacent squares should be accounted
>for otherwise the single square is a loop.

I discussed both the single mesh opening, and the total contribution
of all mesh openings. To respond to your last statement, yes, the
single square is a loop. A very, very inefficient coupler of energy.

>Either way I've learned as current varies the fields it produces will
>vary. If the fields vary they're not static. Too simplistic? What am I
>missing?

Static comes in two flavors. One means "not moving." The other means
high potential (which can be "not moving" AND, ironically, "moving").
Such is the legacy of electrostatic potential covering DC to Gamma.

>>The difference between rods, number of rods, thickness of rods, and
>>mesh all speak to bandwidth. 2, 3, or 4 rods will not be remarkable.
>>16 rods will closely approximate a cone of sheet metal (as would a
>>grid of similar spacing). The same can be said of the
>>rod/rods/mesh/sheet in the upper section approximating a solid disk.
>>
>IIUC the current flows around the cone of a discone regardless of
>solid, sheet or mesh construction. This appears to be contrary to the
>quote above where current flows around each individual hole in the
>mesh.

Well, language can be a barrier here when you say "around the cone."

Go to:
http://www.antenna-theory.com/antennas/aperture/slot.php
I don't endorse this page, but it gives you a beginning for slot antennas and especially the construction mimicry between them and a dipole. Note in figure two that a "source" appears across the two. In the case of the slot antenna, this source would give rise to a circulating current. If you were to approach this with knowing the current alone, it would follow that the source is "apparent." In other words, the two models (or experiences) are equivalent.

Do not confuse this circulating current with a larger, general current UNLESS that more general one can spawn the circulating one. I wrote to this already and to put it shortly, it is physical length vs. wave length dependant.

>>Again, all these "appearances" are a strict function of wavelength to
>>physical length and spacing relationships.
>>
>
>I've built several discones over the years and understand these
>relationships. How well is subject to conjecture hi.

http://www.qsl.net/kb7qhc/antenna/Discone/discone.htm
will illustrate how varying the flare of the skirt shifts the operating properties of the discone.

73's
Richard Clark, KB7QHC

3359. Re: Faraday shields and radiation and misinterpretations

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-03 22:24:26 UTC
From: Art Unwin <arthurunwin@gmail.com>
Message-ID: <0778a4b3-98e0-4d3c-b49d-bf0d4fe64c31@k19g2000yqc.googlegroups.com>
Source record: 11821

On Dec 3, 3:37 pm, Richard Clark <kb7...@comcast.net> wrote:
> On Thu, 03 Dec 2009 10:29:53 -0800, Richard Clark <kb7...@comcast.net>
> wrote:
>
> >This small, resonant plate load, is quite specifically designed for RF
> >with low in resistive loss - and yet it is miserable as a propagator
> >of that same RF. The physical size compared to the wavelength size
> >dominates that efficiency with a fourth power law.
>
> To extend this to Art's misinterpretation of Faraday Shields:
>
> In the old days, breadboard design was exactly that - your rig was
> built on (hammered to) a breadboard. It was open wiring with open
> components. It radiated well with an antenna, and poorly without one.
>
> However, as poorly as it radiated without an antenna, if you had a
> separate receiver, you would hear yourself. This was sometimes useful
> and gave us what is called "side tone."
>
> The monitor was born.
>
> Of course, with antennas connected, the receiver was bound to get more
> than enough of that anyway and if the two were closely spaced,
> feedback could drive all circuits into saturation. Not a good thing.
> The Faraday shield for the transmitter was born.
>
> It, as many can witness from simple observation, was composed of a
> fine grid mesh of wire either tied to ground, or to a heavily AC/RF
> filtered DC potential. As with all Faraday shields that came before
> it (indeed since Faraday invented it), it completely encapsulated the
> RF power source. The screen or mesh was simply a contrivance to allow
> cool air to move in and hot air to move out. Modern implementations
> use finned constructions and heat wicks - but this is topic drift.
>
> With this added to the breadboard, other circuits also came to be
> shielded, and generally so with the appearance of sheet metal chassis
> with suitably wavelength small openings for access and heat transfer.
> As the breadboard went into this RF impenetrable shell for both
> receivers and transmitters (and with even more care for transceivers),
> there arose a problem: What about the wires that go in and out?
>
> Yes indeed. If those wires were not, in themselves, decoupled; then
> they became radiators. The lesson to be learned was that those wires
> had to be held at the same potential as the Faraday shield. This

> could be accomplished by a simple connection, but with more than one
> wire this leads to dead shorts between wires. Not a good thing.
>
> The solution was to use AC/RF shorts (capacitors) to the shield from
> the wire and the wire could only penetrate the shield through a very
> small (in proportion to wavelength) opening. This was not always a
> good thing.
>
> A capacitor could be good, but it exhibits a roll-off of only 6dB per
> octave, or 10dB per decade isolation. If your line going in and out
> was a DC control line, and your principle frequency was 1MHz (talking
> about the old days now); then you had 6 decades of separation between
> 1Hz and 1MHz - pretty good. If in the intervening years you pushed
> the technology envelope and added voice modulation and that came
> through the same wire; then your system shrunk to 3 decades of
> separation between 10,000Hz and 1MHz. This might work, sometimes it
> didn't.
>
> As the years spun on, more wires penetrated that RF barrier, and they
> needed to not only be isolated from the RF, but each other; and often
> they contained very small signals that needed suitable signal to noise
> ratio (noise being that soup of RF that was stewing inside the
> shield).
>
> Inline bypass filters were born.
>
> The lines that penetrate a Faraday shield now appear to be more
> multi-stage low pass filters with repeating sections of shunt
> capacitors and series inductors. Their common (ground to the old
> brass pounder) was the shield which was RF free (as it was decoupled
> to a sanctioned earth ground). And lest we forget the principle
> penetration of that old time Faraday shield:
>
> The coaxial transmission line was born.
>
> By all appearances, this line satisfies the convention of a small
> opening through the Faraday shield. It's diameter is easily very
> small in relation to the wavelength of the RF power it reaches into
> the shield to tap. In a sense, it extends that hole in the shield to
> some very remote area that is far from the operating position, and
> then allows a wire(s) to emerge without regard for further shielding:
>
> The antenna is born.
>
> Funny thing, however, is that presumption of the shield of the coax
> being inert, un-perturbing, quiescent, invisible, benign - for that
> presumption is an illusion, a grand delusion. The line is very long
> with respect to wavelength, it is in the field of excitation that has
> been drawn out of the soup within the cage, and it is as much an
> antenna as the wire that emerged from its end. Many familiar problems

> rise from the ashes of this illusion. The exterior of the coaxial
> cable appears to the field to be a very long, grounded radiator.
> However, at any appreciable length (wavelength raises its familiar
> visage with an ironic grin), this exterior surface ceases to be the
> familiar DC grounding strap material, and becomes a full-fledge
> radiator according to its physical length vs. wavelength relationship.
> Not a very good thing, untill:
>
> The transmission line choke is born.
>
> To decouple the OUTSIDE of the coaxial line, the convention that has
> been observed (to widespread validation) is to either wind some
> sections of the line into Inductive chokes, or to add ferrites which
> serve the same purpose. These chokes, to be fully useful to their
> purpose, should be found at not only one point along the line, but at
> several so as to suppress (wavelength based) couplings along the line,
> by the line and by the field.
>
> When the combination of all these methods are employed, then the
> Faraday shield does what it has done for these several hundred years
> while allowing the migration of RF power to a remote drive point, and
> without allowing that RF power to re-intrude into the shield, nor
> along the coaxial cable. Thus, the only evidence of RF from inside
> the Faraday shield is that which arrives over-the-air from the remote
> antenna.
>
> Any other claim is a profanation of Faraday.
>
> 73's
> Richard Clark, KB7QHC

So after a degree in literature you have taken to reading up on
science.
But you have only regurgutated what you have read in a physics book.
When I introduced this group to first principles every body on this
group were apaulled.
When I stated, and it was confirmed by Dr Davis, all started waving
the hands and insulted Davis and I." What" you said "you can mix up
statics with electromechanics"? "What foolishness is being stated
here." In your posting you never mentioned any thing of that!
You and nobody in the group has presented anything that refutes what I
have stated.
All this group have agreed on is that I am promoting a new fangled
science where all is already known. Now Avitar has never stated any
sort of physics that shows that he has studied in college other than
waving his hands. Ofcourse we have the ham who got kicked out of high
school so he couldn't graduate. Not his fault I might add, just some
mis understandings why he would not go to school, and it goes on. And
then we have Richard who says, why do we need new design antennas, we
have the yagi, what more can you want?

So the group is not going to rely on physics to disprove my comments because they have found that deformation, insults and loud voices is all they have to crush my claims, and it is just not working. Have they made one? No. They know the true facts on radiation so they continue to sit on the couch and wave their hands and yell

3360. Re: Slinkey Antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-03 22:58:59 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <l6ggh5lmfudj5gqo8vi02i1etfdvcu501j@4ax.com>
Source record: 11822

On Thu, 3 Dec 2009 14:47:25 -0800 (PST), Bill <k4wge@arrl.net> wrote:

>It's soot from the sun.

If the shuttle could only get close enough to trim its wick....

3361. Re: Faraday shields and radiation and misinterpretations

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-03 23:35:03 UTC
From: nm5k@wt.net
Message-ID: <fa9fd4be-6e94-4c5c-a6a8-a849de86364d@k4g2000yqb.googlegroups.com>
Source record: 11823

On Dec 3, 4:24 pm, Art Unwin <arthurun...@gmail.com> wrote:

> You and nobody in the group has presented anything that refutes what I
> have stated.

I have, and on more than one occasion. But it goes through
your head faster than a blue light special announcement to the
average K-mart shopper.

>They know the true facts on radiation so they
> continue to sit on the couch and wave their hands and yell

I don't sit on a couch. I sit in an office style chair. And it
probably
should be replaced as it tends to molest my differential after a
while.
Needs more particuls between the frame and the top particul retaining
cover. Due to the weak force of my differential constantly being
supported by these particuls, they have achieved equilibrium and
no longer want to do any useful work.

3362. Re: Faraday shields and radiation and misinterpretations

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-04 00:42:08 UTC
From: Art Unwin <arthurunwin@gmail.com>
Message-ID: <70a194d7-4cb6-48a1-9d27-1609c6b82ff5@k4g2000yqb.googlegroups.com>
Source record: 11824

On Dec 3, 5:35 pm, n...@wt.net wrote:
> On Dec 3, 4:24 pm, Art Unwin <arthurun...@gmail.com> wrote:
>
> > You and nobody in the group has presented anything that refutes what I
> > have stated.
>
> I have, and on more than one occasion. But it goes through
> your head faster than a blue light special announcement to the
> average K-mart shopper.
>
> >They know the true facts on radiation so they
> > continue to sit on the couch and wave their hands and yell
>
> I don't sit on a couch. I sit in an office style chair. And it
> probably
> should be replaced as it tends to molest my differential after a
> while.
> Needs more particuls between the frame and the top particul retaining
> cover. Due to the weak force of my differential constantly being
> supported by these particuls, they have achieved equilibrium and
> no longer want to do any useful work.

No you have not!
Every thing comes back to the initial finding that
by adding a time varying current to the arbitrary border of Gauss
which surrounds
a field of static particles provides the same conditions implied by
Maxwell's equations.
The group denies this fact possibly because the word equilibrium was
not of their understanding. Without understanding the connection
between Maxwell and Gauss
with respect to the addition of time makes to a static field ala a
dynamic field, it is impossible to procede with respect to radiation.
If one starts from the middle of the story where coupling of waves is
considered a basic physics understanding the debate leads no where.
Now I am not asking people to follow solely the path of mathematics
but of the concepts involved where the presence of particles is
present., To start from a small portion of the current flow and
thinking in terms of DC or the suggestion that time varying fields
cannot surround a static field is just ludicrous. The subject is
Classical Physics and one should keep on subject if one is to fully
understand radiation. Denial of select parts of classical physics
without supplying reason ans substituting insults instead is not going
to solve anything. And as you did not graduate from high school it is

perfectly understandable that you will find difficulties in parts of the debate and yet you would like to contribute to the debate. But insults will not get the job done.
Of course one can go back to the basics of mathematics way back in Arabic times where
the mere presence of an equal sign denotes equilibrium or balance. The equal sign is part of Maxwells equations so equilibrium is in effect. This immediatly tells you that any radiator considered must be a function of a full wavelength or a period with respect to a continuing variable sign wave. Immediately one should note that a half wave has no place in our calculations as the two areas under curve for a period can never be the same because of overshoot phenomina, thus it is the period that is repeatable and to be used. One can also deduce that a radiator must be in equilibrium to be part of the same reasoning thus resonance on its own is not part of the mathematics. There are plenty of ways to see how current thinking on antennas is certainly not inline with the equations of Maxwell, thus it is very important to start from "first "principles and not just accept the books. And that the importance of adding time to a static field enclosed by an arbitrary boundary to ensure the correct metrics will be used at the outset.
Art

3363. Re: Faraday shields and radiation and misinterpretations

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-04 00:52:26 UTC
From: K7ITM <k7itm@msn.com>
Message-ID: <8b542276-db03-4c3d-9658-6c5c2cc438df@v25g2000yqk.googlegroups.com>
Source record: 11825

On Dec 3, 12:25 am, Lostgallifreyan <no-...@nowhere.net> wrote:

(re: Richard Feynman lectures)
> ... I don't know if he's written anything a layman can easily work
> through, that doesn't come with lots of maths without which accompanying text
> doesn't help much, but if he has I'll try to read it.

I think one of the key things that made his physics lectures popular
is that they were delivered without a whole lot of math. You could
get into that if you wanted, but you could also get a lot out of just
listening to the _ideas_.

If you drop me an email, perhaps I can send you a bit more about this
particular lecture...

Cheers,
Tom

3364. Re: Slinkey Antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-04 00:59:53 UTC
From: Art Unwin <arthurunwin@gmail.com>
Message-ID: <54a916d4-99cc-4825-a900-e3c134251747@g26g2000yqe.googlegroups.com>
Source record: 11826

On Dec 3, 4:58 pm, Richard Clark <kb7...@comcast.net> wrote:
> On Thu, 3 Dec 2009 14:47:25 -0800 (PST), Bill <k4...@arrl.net> wrote:
> >It's soot from the sun.
>
> If the shuttle could only get close enough to trim its wick....

The antenna sold today as a "slinky" is not the slinky of old as shown
in Jasik's book.
If one is to put a lumped load into the schematics of an antenna then
one MUST add a cancellation to the structure as the intent for maximum
efficiency of radiation is the correct use of distributed loads only.
The present day slinky consists of continuous length of wound
inductance or a "lumped" load. The true slinky consists of equal
amounts of clockwise and clockwise turns such that the lumped
inductance is canceled leaving only distributed loads.

O.T
As far as the "soot" term being presently bandied around, it is an
adjective which describes the chemical effects of combustion. Only
those old in the tooth or unfamilier with physics describe it solely
as a product of burning coaland nothing else!
This is similar to the use of "waves" in physics with respect to
particles. One is a noun,
where the other is a adjective that describes the action of same.

3365. Re: Faraday shields and radiation and misinterpretations

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-04 01:19:36 UTC
From: Art Unwin <arthurunwin@gmail.com>
Message-ID: <1e8bc4f7-7f73-48e2-9414-c3d879b0b884@b15g2000yqd.googlegroups.com>
Source record: 11827

On Dec 3, 6:52 pm, K7ITM <k7...@msn.com> wrote:
> On Dec 3, 12:25 am, Lostgallifreyan <no-...@nowhere.net> wrote:
>
> (re: Richard Feynman lectures)
>
> > ... I don't know if he's written anything a layman can easily work
> > through, that doesn't come with lots of maths without which accompanying text
> > doesn't help much, but if he has I'll try to read it.
>
> I think one of the key things that made his physics lectures popular
> is that they were delivered without a whole lot of math. You could
> get into that if you wanted, but you could also get a lot out of just
> listening to the _ideas_.
>
> If you drop me an email, perhaps I can send you a bit more about this
> particular lecture...
>
> Cheers,
> Tom

That is oh so true! The masters started with an observation of an
occurence and not from
a rendering of mathematics. With more observations it became natural
to align the Universe via mathematics which, as with a jig saw puzzle,
fits together nicely.,
It would seem today that scientists today are using mathematics via a
computer to churn out bundles of equations leaving the operator to
think of an observation that would fit the math. Of course,
mathematics provide imaginary answers similar to a quadratic equation
that finish up as multiple of false leads and deductions which
eventually requires the multiple use of constants to provide a
semblance of understanding of what has been provided.

3366. Re: Faraday shields and radiation and misinterpretations

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-04 02:39:24 UTC
From: tom <news4792@taring.org>
Message-ID: <4b187642$0$47485$8046368a@newsreader.iphouse.net>
Source record: 11828

Art Unwin wrote:
>
> No you have not!

Temper, temper little boy.

> Every thing comes back to the initial finding that
> by adding a time varying current to the arbitrary border of Gauss
> which surrounds
> a field of static particles provides the same conditions implied by
> Maxwell's equations.

Made up physics again. Unproven by any math or demonstrable effects.
Try a new line of argument, this one gets you nowhere.

> The group denies this fact possibly because the word equilibrium was
> not of their understanding. Without understanding the connection
> between Maxwell and Gauss
> with respect to the addition of time makes to a static field ala a
> dynamic field, it is impossible to procede with respect to radiation.
> If one starts from the middle of the story where coupling of waves is
> considered a basic physics understanding the debate leads no where.

Denied by the group because it contradicts everything that is proven to
work, as well as all published and mathematically backed theories.

And provide some proof. Even just a little. Rhetoric doesn't count.

You accuse others of sitting on their asses and not building antennas
and measuring them, when you have never once done it yourself.

I have built many antennas and provided many independent performance
measurements right here. And so has almost evreyone you argue with. We
all make things and MEASURE them. You don't.

> Now I am not asking people to follow solely the path of mathematics
> but of the concepts involved where the presence of particles is
> present., To start from a small portion of the current flow and
> thinking in terms of DC or the suggestion that time varying fields
> cannot surround a static field is just ludicrous. The subject is
> Classical Physics and one should keep on subject if one is to fully
> understand radiation. Denial of select parts of classical physics
> without supplying reason ans substituting insults instead is not going
> to solve anything. And as you did not graduate from high school it is
> perfectly understandable that you will find difficulties in parts of
> the debate and yet you would like to contribute to the debate. But
> insults will not get the job done.

> Of course one can go back to the basics of mathematics way back in
> Arabic times where
> the mere presence of an equal sign denotes equilibrium or balance. The
> equal sign is part of Maxwells equations so equilibrium is in effect.
> This immediatly tells you that any radiator considered must be a
> function of a full wavelength or a period with respect to a continuing
> variable sign wave. Immediately one should note that a half wave has
> no place in our calculations as the two areas under curve for a period
> can never be the same because of overshoot phenomina, thus it is the
> period that is repeatable and to be used. One can also deduce that a
> radiator must be in equilibrium to be part of the same reasoning thus
> resonance on its own is not part of the mathematics. There are plenty
> of ways to see how current thinking on antennas is certainly not
> inline with the equations of Maxwell, thus it is very important to
> start from "first "principles and not just accept the books. And that
> the importance of adding time to a static field enclosed by an
> arbitrary boundary to ensure the correct metrics will be used at the
> outset.

Uh Art? There are no rational concepts in your presentation, please provide some.

And there's no "math" at all in your mathematical presentations, just a bunch of bafflegab. Please provide math.

Oh, I forgot, you can't. All you can do is babble. And accuse people of foolishness in their disbelief.

I must say, you are entertaining when you don't take your medications.

And you still can't spell or put together a sentence. I would suggest a spell checker at the very least.

tom
K0TAR

3367. Re: Faraday shields and radiation and misinterpretations

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-04 03:07:01 UTC
From: nm5k@wt.net
Message-ID: <d19f2abf-3ba0-47be-8b20-b2128ff35ed3@o10g2000yqa.googlegroups.com>
Source record: 11829

On Dec 3, 6:42 pm, Art Unwin <arthurun...@gmail.com> wrote:
> On Dec 3, 5:35 pm, n...@wt.net wrote:
>
>
>
> > On Dec 3, 4:24 pm, Art Unwin <arthurun...@gmail.com> wrote:
>
> > > You and nobody in the group has presented anything that refutes what I
> > > have stated.
>
> > I have, and on more than one occasion. But it goes through
> > your head faster than a blue light special announcement to the
> > average K-mart shopper.
>
> > >They know the true facts on radiation so they
> > > continue to sit on the couch and wave their hands and yell
>
> > I don't sit on a couch. I sit in an office style chair. And it
> > probably
> > should be replaced as it tends to molest my differential after a
> > while.
> > Needs more particuls between the frame and the top particul retaining
> > cover. Due to the weak force of my differential constantly being
> > supported by these particuls, they have achieved equilibrium and
> > no longer want to do any useful work.
>
> No you have not!
> Every thing comes back to the initial finding that
> by adding a time varying current to the arbitrary border of Gauss
> which surrounds
> a field of static particles provides the same conditions implied by
> Maxwell's equations.
> The group denies this fact possibly because the word equilibrium was
> not of their understanding. Without understanding the connection
> between Maxwell and Gauss
> with respect to the addition of time makes to a static field ala a
> dynamic field, it is impossible to procede with respect to radiation.
> If one starts from the middle of the story where coupling of waves is
> considered a basic physics understanding the debate leads no where.
> Now I am not asking people to follow solely the path of mathematics
> but of the concepts involved where the presence of particles is
> present., To start from a small portion of the current flow and
> thinking in terms of DC or the suggestion that time varying fields
> cannot surround a static field is just ludicrous. The subject is

> Classical Physics and one should keep on subject if one is to fully
> understand radiation. Denial of select parts of classical physics
> without supplying reason ans substituting insults instead is not going
> to solve anything. And as you did not graduate from high school it is
> perfectly understandable that you will find difficulties in parts of
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> inline with the equations of Maxwell, thus it is very important to
> start from "first "principles and not just accept the books. And that
> the importance of adding time to a static field enclosed by an
> arbitrary boundary to ensure the correct metrics will be used at the
> outset.
> Art

Bla, bla, bla, bla.. We need to get you a new needle that doesn't skip
and play the same broken record over and over again. :/
You whine and moan about my education, which BTW, you have no
idea of knowing what I have learned in the 35 years since then, but
you
stun us with such proof of your all knowing knowledge by referring to
sine waves as "sign waves"..
Chortle..
Give me a break.. Your education in things RF is probably not much
greater than mine is being as you didn't take the relevant courses
in school. It might even be less being as I have a decent library
and I don't distrust everything I read without actually testing it
first.

And I actually build and test the antennas I talk about. On the air.
In front of real people. I've got nothing to hide. When was the last
time you actually compared one of your antennas to a known
benchmark?
At at a testing range. Or on the air.. In front of real people...

I'm afraid using mumbo jumbo pseudoscience theories are not going
to propel your obviously inefficient antenna designs to greatness.
I realize this must distress you greatly, but it's a situation that
can

be dealt with with the proper medications and therapy.

3368. Re: Faraday shields and radiation and misinterpretations

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-04 03:08:39 UTC
From: Art Unwin <arthurunwin@gmail.com>
Message-ID: <bfaa387d-f911-46ba-9601-a73e8ded3fa6@a32g2000yqm.googlegroups.com>
Source record: 11830

On Dec 3, 8:39 pm, tom <news4...@taring.org> wrote:
> Art Unwin wrote:
>
> > No you have not!
>
> Temper, temper little boy.
>
> > Every thing comes back to the initial finding that
> > by adding a time varying current to the arbitrary border of Gauss
> > which surrounds
> > a field of static particles provides the same conditions implied by
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> Try a new line of argument, this one gets you nowhere.
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> > not of their understanding. Without understanding the connection
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> > considered a basic physics understanding the debate leads no where.
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> Denied by the group because it contradicts everything that is proven to
> work, as well as all published and mathematically backed theories.
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> And provide some proof. Even just a little. Rhetoric doesn't count.
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> You accuse others of sitting on their asses and not building antennas
> and measuring them, when you have never once done it yourself.
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> I have built many antennas and provided many independent performance
> measurements right here. And so has almost evreyone you argue with. We
> all make things and MEASURE them. You don't.
>
>
>
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> > understand radiation. Denial of select parts of classical physics
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> Uh Art? There are no rational concepts in your presentation, please
> provide some.
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> And there's no "math" at all in your mathematical presentations, just a
> bunch of baffllegab. Please provide math.
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> Oh, I forgot, you can't. All you can do is babble. And accuse people
> of foolishness in their disbelief.
>
> I must say, you are entertaining when you don't take your medications.
>
> And you still can't spell or put together a sentence. I would suggest a
> spell checker at the very least.
>
> tom
> K0TAR

Tom
Give me a clue whether you are in junior high school or have a track
record of achieving something higher. You have never enunciated or
even given a clue that you have ever taken a physics course or for
that matter any engineering course in any of your postings.
It seems like you are awful young and not yet an adult to put some
scence or logic to any thing that you say! You talk of no "rational"
in my statements, but as yet have not presented

anything to back you up. I have read thru a lot of your postings but as yet have not come across anything from which I can gauge some of your knowledge and expertise with respect to antennas and radiation. I have gathered that you have had some experience in installing consumer dishes and I recall you stating that dishes can only be used in the giga hertz range, without mention that it is the size of the antenna determines whether a dish orreflecter is pertinant or not. Very strange!
Because of lack of comment from others one can assume that they know you better than I do and are content with a glance in the air with a sigh and maybe I should follow like wise. I read your post again and note that you want the math. If I gave you a starter with respect to Gauss and Maxwell would you give me a hint with respect to your present understandings with mathematics. Lets face it, you never proved the mathematics wrong when it was presented to you by the good doctor where every body also denied its correctness, so it is awfully difficult to proceed when you deny the feasability of the initiating statement. If it makes you feel good then continue with your insults in leu of not knowing anything else to say.

3369. Re: Faraday shields and radiation and misinterpretations

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-04 03:10:21 UTC
From: tom <news4792@taring.org>
Message-ID: <4b187d83$0$33857$8046368a@newsreader.iphouse.net>
Source record: 11831

Art Unwin wrote:
> Of course one can go back to the basics of mathematics way back in
> Arabic times where
> the mere presence of an equal sign denotes equilibrium or balance. The
> equal sign is part of Maxwells equations so equilibrium is in effect.

"the mere presence of an equal sign denotes equilibrium or balance"

So sayeth the master of the physical universe - Art Unwin...

Hmmm, so if there is an equal sign, it means it's in equilibrium.

So a half wave antenna = 468/f(Mhz).

It is therefore in equilibrium.

tom
K0TAR

3370. Re: Faraday shields and radiation and misinterpretations

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-04 03:31:53 UTC
From: tom <news4792@taring.org>
Message-ID: <4b188294$0$47487$8046368a@newsreader.iphouse.net>
Source record: 11832

Art Unwin wrote:
> I have gathered that you have had some experience in installing
> consumer dishes and I recall you stating that dishes can only be used
> in the giga hertz range, without mention that it is the size of the
> antenna determines whether a dish orreflecter is pertinant or not.
> Very strange!

Dishes are usable based upon their size relative to the frequency of
use. You seem not to understand that.

They work by reflecting the EM waves directed at them. The gain is set
by the area of the dish in square wavelengths, and your pretend physics
can't change that.

A DSS dish isn't even a pinpoint to reflect off of at 160m, which is
your favorite example.

A dish that provides only 3dB gain at 160m would be approximately a
kilometer in diameter. How big is your mom's garden?

tom
K0TAR

3371. Re: Faraday shields and radiation and misinterpretations

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-04 03:46:44 UTC
From: Art Unwin <arthurunwin@gmail.com>
Message-ID: <16a076bc-6312-42ca-b0b6-c443f905e3c5@u7g2000yqm.googlegroups.com>
Source record: 11833

On Dec 3, 9:10 pm, tom <news4...@taring.org> wrote:
> Art Unwin wrote:
> > Of course one can go back to the basics of mathematics way back in
> > Arabic times where
> > the mere presence of an equal sign denotes equilibrium or balance. The
> > equal sign is part of Maxwells equations so equilibrium is in effect.
>
> "the mere presence of an equal sign denotes equilibrium or balance"
>
> So sayeth the master of the physical universe - Art Unwin...
>
> Hmmm, so if there is an equal sign, it means it's in equilibrium.
>
> So a half wave antenna = 468/f(Mhz).
>
> It is therefore in equilibrium.
>
> tom
> K0TAR

So stupid. A half wave does not have a measurement that is repeatable
therefore it is not in equilibrium. The point of repeatability is a
"period". Surely you learned that in Jnr High!

3372. Re: Faraday shields and radiation and misinterpretations

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-04 03:57:59 UTC
From: tom <news4792@taring.org>
Message-ID: <4b1888ac$0$47484$8046368a@newsreader.iphouse.net>
Source record: 11834

Art Unwin wrote:
> So stupid. A half wave does not have a measurement that is repeatable
> therefore it is not in equilibrium. The point of repeatability is a
> "period". Surely you learned that in Jnr High!

Your own statement was "the mere presence of an equal sign denotes
equilibrium or balance".

I rest my case.

And stupid is as stupid does. Stupid boy.

tom
K0TAR

3373. Re: Faraday shields and radiation and misinterpretations

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-04 04:00:27 UTC
From: Art Unwin <arthurunwin@gmail.com>
Message-ID: <65607d16-a495-4f75-a630-a4196f0cfbaa@m16g2000yqc.googlegroups.com>
Source record: 11835

On Dec 3, 9:31 pm, tom <news4...@taring.org> wrote:
> Art Unwin wrote:
> > I have gathered that you have had some experience in installing
> > consumer dishes and I recall you stating that dishes can only be used
> > in the giga hertz range, without mention that it is the size of the
> > antenna determines whether a dish orreflecter is pertinant or not.
> > Very strange!
>
> Dishes are usable based upon their size relative to the frequency of
> use. You seem not to understand that.
>
> They work by reflecting the EM waves directed at them. The gain is set
> by the area of the dish in square wavelengths, and your pretend physics
> can't change that.
>
> A DSS dish isn't even a pinpoint to reflect off of at 160m, which is
> your favorite example.
>
> A dish that provides only 3dB gain at 160m would be approximately a
> kilometer in diameter. How big is your mom's garden?
>
> tom
> K0TAR

Again how foolish you are. There are many radiators that have
reflectors that are way below the GIGA Hz level. You are basing your
statement on laws applicable to planar forms of radiators.
Heck! There are many helix antennas in use that have reflectors that
are used in the Mega Hz range. There is absolutely no good reason why
a antenna for top band must have a reflector a kilometer in diameter
if the antenna itself replicates a point source.
I think you have shown everybody the extent of your limitations with
respect to antennas!

3374. Re: Faraday shields and radiation and misinterpretations

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-04 04:21:42 UTC
From: Lostgallifreyan <no-one@nowhere.net>
Message-ID: <Xns9CD72C58CB393zoodlewurdle@216.196.109.145>
Source record: 11836

K7ITM <k7itm@msn.com> wrote in news:8b542276-db03-4c3d-9658-6c5c2cc438df@v25g2000yqk.googlegroups.com:

> On Dec 3, 12:25 am, Lostgallifreyan <no-...@nowhere.net> wrote:
>
> (re: Richard Feynman lectures)
>> ... I don't know if he's written anything a layman can easily work
>> through, that doesn't come with lots of maths without which accompanying
> text
>> doesn't help much, but if he has I'll try to read it.
>
> I think one of the key things that made his physics lectures popular
> is that they were delivered without a whole lot of math. You could
> get into that if you wanted, but you could also get a lot out of just
> listening to the _ideas_.
>
> If you drop me an email, perhaps I can send you a bit more about this
> particular lecture...
>
> Cheers,
> Tom
>

Thankyou, I'll go for that. I've also been given two books by Marcus Chown, who I found has a knack of conveying things clearly at some depth. Entertaining too. My email is (slightly obfuscated) z dot crow at BTinternet dot com for as long as I still use their service. (Contract runs out fairly soon so even though they're ok I'm looking at alternatives.. :)

3375. Re: Faraday shields and radiation and misinterpretations

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-04 04:23:02 UTC
From: Art Unwin <arthurunwin@gmail.com>
Message-ID: <bb0e89bf-104f-44bb-a299-2499dd92cde5@v25g2000yqk.googlegroups.com>
Source record: 11837

On Dec 3, 9:57 pm, tom <news4...@taring.org> wrote:
> Art Unwin wrote:
> > So stupid. A half wave does not have a measurement that is repeatable
> > therefore it is not in equilibrium. The point of repeatability is a
> > "period". Surely you learned that in Jnr High!
>
> Your own statement was "the mere presence of an equal sign denotes
> equilibrium or balance".
>
> I rest my case.
>
> And stupid is as stupid does. Stupid boy.
>
> tom
> K0TAR

That's correct. The equal sign denotes the presence of balance. Making up an equation that is not in balance is not corrected by the addition of an equal sign. Starting with fraud in mind never can later be corrected other than the continuance of fraud. Seems like your efforts in persuading others of your expertise is not working out as you thought.Just the opposite.

3376. Re: Satelite Watching

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-04 07:19:40 UTC
From: JosephKK <quiettechblue@yahoo.com>
Message-ID: <ctdhh5ljg9i74ulu69vp8adrqrf4qmt2lf@4ax.com>
Source record: 11838
Cross-posted to: sci.electronics.design,rec.radio.amateur.antenna

```
On Sat, 28 Nov 2009 10:40:51 -0600, "amdx" <amdx@knology.net> wrote:

>
>"Rob" <nomail@example.com> wrote in message
>news:slrnhh0biv.2uba.nomail@xs7.xs4all.nl...
>> amdx <amdx@knology.net> wrote:
>>> This must have been a rare occurance, look how close the were.
>>> Maximum altitude is at ISS 17:44:57 STS 17:45:19 Within 22
>>> seconds
>>> Altitude ISS 37° STS 38°
>>> Within 1°
>>> Azimuth ISS 44° STS 44°
>>> Same
>>> Distance ISS 549 km STS 545 km
>>> Within 4 km.
>>
>> The difference in distance between you and ISS and between you and STS
>> was 4 km. This does not mean they are 4km apart. That would only be
>> true if they were on a straight line from you to those objects.
>
>I understand that, at one time they were docked with each other.
> Mike
>
>
From a quick calculation, that 1 degree difference in right ascension
is about 75 miles.
```

3377. Get more ugg 09 new style boots

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-04 09:08:54 UTC
From: addugg <addugg@gmail.com>
Message-ID: <f9ad6cc3-da30-4051-9367-f60c947f6ae7@h14g2000pri.googlegroups.com>
Source record: 11839

Never before have we seen a winter fashion season where there were so many different styles of ugg boots available! It seems like there are a million different types, colors and materials that make up the boots we see today.2009 New Style boots,UGG Bailey Button boots,ED HarDy Boots,Ugg 5879 Womens Argyle Knit are a very popular choice among people who love fashion.
get your new uggs at uggmax.com

3378. come here buy uggs

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-04 09:09:11 UTC
From: addugg <addugg@gmail.com>
Message-ID: <f2abac9b-bfe3-4038-b14c-8d4831a53aa9@z35g2000prh.googlegroups.com>
Source record: 11840

UGG Australia has quickly become one of the most sought-after brands in the world. Constructed with the highest quality leather,suede and sheepskin,UGG boots are luxuriously comfortable. Sheepskin's thermostatic properties keep your feet warm in the winter and cool in the summer,so with our large assortment of fashionable boots by UGG,you're sure to find a pair for every season.
Renowned for its luxurious comfort,UGG Australia offers footwear for every aspect of your life and we're proud to have the world's largest collection! We are your source for every style,every color,and every size that they offer. We receive new UGG styles on a weekly basis,so please visit us often to see even more boots and shoes. They all sell quickly,so get yours now before they're gone!
buy cheap ugg boots at gouggs.com

3379. Re: Faraday shields and radiation and misinterpretations

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-04 12:04:28 UTC
From: Registered User <n4jvp@ix.netcom.com>
Message-ID: <0hthh5tl3bm4fuatdrge64void45a8n7n1@4ax.com>
Source record: 11841

On Thu, 03 Dec 2009 14:13:57 -0800, Richard Clark <kb7qhc@comcast.net>
wrote:

>On Thu, 03 Dec 2009 16:51:05 -0500, Registered User
><n4jvp@ix.netcom.com> wrote:
>
- good stuff from RC snipped -
>
>>Either way I've learned as current varies the fields it produces will
>>vary. If the fields vary they're not static. Too simplistic? What am I
>>missing?
>
>Static comes in two flavors. One means "not moving." The other means
>high potential (which can be "not moving" AND, ironically, "moving").
>Such is the legacy of electrostatic potential covering DC to Gamma.
>
I was wondering about the latter as a possibility but couldn't find
the proper words. My interpretation is although the individual fields
may vary the total potential of the fields is constant. Is this
correct?

>>>The difference between rods, number of rods, thickness of rods, and
>>>mesh all speak to bandwidth. 2, 3, or 4 rods will not be remarkable.
>>>16 rods will closely approximate a cone of sheet metal (as would a
>>>grid of similar spacing). The same can be said of the
>>>rod/rods/mesh/sheet in the upper section approximating a solid disk.
>>>
>>IIUC the current flows around the cone of a discone regardless of
>>solid, sheet or mesh construction. This appears to be contrary to the
>>quote above where current flows around each individual hole in the
>>mesh.
>
>Well, language can be a barrier here when you say "around the cone."
>
I should have said the current flows around the cone parallel to its
base.

- more snippage -

I appreciate the clarifications and the links. It all helps to better
my knowledge and understanding of these topics. Thank you

3380. Re: come here buy uggs

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-04 12:27:55 UTC
From: Rob <nomail@example.com>
Message-ID: <slrnhhi02b.dpr.nomail@xs8.xs4all.nl>
Source record: 11842

addugg <addugg@gmail.com> wrote:
> UGG Australia has quickly become one of the most sought-after brands
> in the world.

So what do you get? Lots of spammers that advertise fake merchandise
or operate fraudulent shops.

3381. Re: Faraday shields and radiation and misinterpretations

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-04 13:22:05 UTC
From: tom <news4792@taring.org>
Message-ID: <4b190ce1$0$33859$8046368a@newsreader.iphouse.net>
Source record: 11843

Art Unwin wrote:
>
> Again how foolish you are. There are many radiators that have
> reflectors that are way below the GIGA Hz level. You are basing your
> statement on laws applicable to planar forms of radiators.
> Heck! There are many helix antennas in use that have reflectors that
> are used in the Mega Hz range. There is absolutely no good reason why
> a antenna for top band must have a reflector a kilometer in diameter
> if the antenna itself replicates a point source.
> I think you have shown everybody the extent of your limitations with
> respect to antennas!

A typical helical antenna would be in the "mega" hertz range would be for 435 MHz. The planar reflector for that antenna is 70cm, or 1 wavelength. Which would lead one to conclude that a planar reflector for top band would be about 160m.

And now Art will make up more new physics for his response.

tom
K0TAR

3382. Re: Faraday shields and radiation and misinterpretations

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-04 13:24:30 UTC
From: tom <news4792@taring.org>
Message-ID: <4b190d72$0$33859$8046368a@newsreader.iphouse.net>
Source record: 11844

Art Unwin wrote:
>
> Again how foolish you are. There are many radiators that have
> reflectors that are way below the GIGA Hz level. You are basing your
> statement on laws applicable to planar forms of radiators.
> Heck! There are many helix antennas in use that have reflectors that
> are used in the Mega Hz range. There is absolutely no good reason why
> a antenna for top band must have a reflector a kilometer in diameter
> if the antenna itself replicates a point source.
> I think you have shown everybody the extent of your limitations with
> respect to antennas!

And you just might want to look up the definition of "axial mode".

tom
K0TAR

3383. Re: Faraday shields and radiation and misinterpretations

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-04 18:19:07 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <18gih5pu1g1vsf6sk0oaebs4do28fm2rm3@4ax.com>
Source record: 11845

On Fri, 04 Dec 2009 07:04:28 -0500, Registered User
<n4jvp@ix.netcom.com> wrote:

>>Static comes in two flavors. One means "not moving." The other means
>>high potential (which can be "not moving" AND, ironically, "moving").
>>Such is the legacy of electrostatic potential covering DC to Gamma.
>>
>I was wondering about the latter as a possibility but couldn't find
>the proper words. My interpretation is although the individual fields
>may vary the total potential of the fields is constant. Is this
>correct?

Electrostatic is properly applied to charge that is NOT moving, or
moving very slowly.

The same thing can be said of Magnetostatics as being derived from a
current that is constant, or altering very slowly.

The sense of either of these strict terms residing in the RF denotes
the poverty of idea that takes up residence here as invention. There
is plenty of examples to be found on the Web too. It is unfortunate,
like the camel's nose under the Arab's tent, that taking "very slowly"
and winding out the tach to 100GHz is the pollution of meaning.

What we are concerned here with is electromagnetics infrequently known
as electrodynamics and rarely as magnetodynamics. The sense behind
electromagnetics is inclusive of dynamics of which statics is a
special case.

Dynamics, of course, means time-varying. In EMF, or electromagnetics,
what varies is magnitude and/or polarity of the electric and magnetic
field. What you find "constant" about the fields (properly observed
as plural) is in their orthogonality (one field is building the other
as it decays in amplitude).

>>Well, language can be a barrier here when you say "around the cone."
>>
>I should have said the current flows around the cone parallel to its
>base.

That doesn't happen.

73's
Richard Clark, KB7QHC

3384. Re: Faraday shields and radiation and misinterpretations

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-04 18:42:41 UTC
From: Szczepan Bialek <sz.bialek@wp.pl>
Message-ID: <hfbk68$q37$1@node1.news.atman.pl>
Source record: 11846

"Richard Clark" <kb7qhc@comcast.net> wrote
news:18gih5pu1g1vsf6sk0oaebs4do28fm2rm3@4ax.com...
> On Fri, 04 Dec 2009 07:04:28 -0500, Registered User
> <n4jvp@ix.netcom.com> wrote:
>
>>>Static comes in two flavors. One means "not moving." The other means
>>>high potential (which can be "not moving" AND, ironically, "moving").
>>>Such is the legacy of electrostatic potential covering DC to Gamma.
>>>
>>I was wondering about the latter as a possibility but couldn't find
>>the proper words. My interpretation is although the individual fields
>>may vary the total potential of the fields is constant. Is this
>>correct?
>
> Electrostatic is properly applied to charge that is NOT moving, or
> moving very slowly.
>
> The same thing can be said of Magnetostatics as being derived from a
> current that is constant, or altering very slowly.
>
> The sense of either of these strict terms residing in the RF denotes
> the poverty of idea that takes up residence here as invention. There
> is plenty of examples to be found on the Web too. It is unfortunate,
> like the camel's nose under the Arab's tent, that taking "very slowly"
> and winding out the tach to 100GHz is the pollution of meaning.
>
> What we are concerned here with is electromagnetics infrequently known
> as electrodynamics and rarely as magnetodynamics. The sense behind
> electromagnetics is inclusive of dynamics of which statics is a
> special case.

Between statics and dynamics is kinetics. EM is the kinetics.
S*
>
> Dynamics, of course, means time-varying. In EMF, or electromagnetics,
> what varies is magnitude and/or polarity of the electric and magnetic
> field. What you find "constant" about the fields (properly observed
> as plural) is in their orthogonality (one field is building the other
> as it decays in amplitude).
>
>>>Well, language can be a barrier here when you say "around the cone."
>>>
>>I should have said the current flows around the cone parallel to its
>>base.

>
> That doesn't happen.
>
> 73's
> Richard Clark, KB7QHC

3385. Re: Ground Antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-04 19:02:11 UTC
From: Bill Baka <bbaka@comcast.net>
Message-ID: <hfbmbs$td3$1@news.eternal-september.org>
Source record: 11847

pdrahn@coinet.com wrote:
> On Oct 15, 11:11 am, "Cyclone651" <rol...@iowatelecom.net> wrote:
>> If you ground the antenna and the tower/mast the lightning will flow to the
>> ground source of least resistance. ie: It will flow down the mast/tower to
>> ground and not into your house, at least that's the theory.
>
> Actually only partially true. Think if two parallel resistors or
> inductors. The current will be divided between the two. If only 1%
> flows to the house, it could be very damaging.
>
> Paul, KD7HB

Could be very damaging. When I lived in Minnesota on top of a hill I
ran some 4AWG wire from all the metal vents and anything metal down to a
fence post steel stake I had driven into the ground. 2 months later we
got hit by a big strike and the whole house shook but there was no
damage except that the wire on the fence post was welded by the hit.
Must have been big to instantly weld 4AWG into a stake post.
Without the wire, who knows?

Bill Baka

3386. Re: Best Antenna books?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-04 19:11:53 UTC
From: Bill Baka <bbaka@comcast.net>
Message-ID: <hfbmtq$td3$2@news.eternal-september.org>
Source record: 11848

Jeff Liebermann wrote:
> On Sun, 27 Sep 2009 22:22:56 -0700, Roy Lewallen <w7el@eznec.com>
> wrote:
>
>> Jeff Liebermann wrote:
>>> . . .
>>> I wish you hadn't done that. I just ordered a copy of Kraus (2nd
>>> edition) for $25 and a 2nd copy of the ARRL Antenna Book for $19
>>> (because it always seems to be out on loan). Sigh. I need to
>>> practice resisting temptation. Internet shopping is far too easy.
>
>> Hah, be glad you don't live close to Powell's, which has a separate
>> technical bookstore. My wallet is always a lot thinner when I walk out
>> of there than when I walked in.
>>
>> Roy Lewallen, W7EL
>
> Many years ago, I used to make the pilgrimage to the Sunnyvale Fry's,
> Ham Radio Outlet, various nearby surplus stores, and then Computer
> Literacy Bookstore. After spending far too much money on books, I
> started to avoid the bookstore. They solved the problem for me by
> moving locations and finally closing in 2001.

WTF? That was one of my favorite stores to hang out and spend $$$ when I
lived down there. What happened? They always seemed to be thriving and
had books on other subjects. Fry's simply never had the books to compete.

>
> A visit to San Francisco was not complete without dropping into
> Stacey's bookstore on Market and Powell (after the one in Palo Alto
> closed). However, the SF store closed earlier this year.
> <http://www.sfgate.com/cgi-bin/article.cgi?f=/c/a/2009/01/07/BAFN154UV2.DTL>
>
> What's left are the big chains, online vendors, and some specialty
> stores. I've never been to Portland, but if I find an excuse, I'll
> certainly give Powell's a visit.
>
Is there anything in the Sacramento area or even the Silicon Valley area
anymore?

Bill Baka, heavy reader.

3387. Re: Antenna Launcher

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-04 19:30:53 UTC
From: Bill Baka <bbaka@comcast.net>
Message-ID: <hfbo1f$td3$3@news.eternal-september.org>
Source record: 11849

John Ferrell wrote:
> There is an artical by W4SSY in the March 2009 QST Magazine. I am
> planning to duplicate it for use at my QTH. I am interested in any
> comments, especially from anyone who may have already built one.
>
> My available trees may be about 80 feet so that is my minimum
> expectations!
>
> There is a lot of Google information available but I am trying to
> focus on this example.
>
> John Ferrell W8CCW

I think I have a good one for this thread. Get about 500 feet of 24 to 28 AWG magnet wire and wind it onto a fishing pole that has the easy cast and not an ocean reel. Put on a fair sized weight and then cast over the first tree in sight. Have someone walk around and find the weight on the ground and throw it over the next tree. Do this until the wire is used up or there are no more usable trees. I am going to try it on my next outing.

Bill Baka SWL only.

3388. Re: Faraday shields and radiation and misinterpretations

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-04 19:35:52 UTC
From: Lostgallifreyan <no-one@nowhere.net>
Message-ID: <Xns9CD7C75884754zoodlewurdle@216.196.109.145>
Source record: 11850

"Szczepan Bialek" <sz.bialek@wp.pl> wrote in
news:hfbk68$q37$1@node1.news.atman.pl:

> Between statics and dynamics is kinetics. EM is the kinetics.
>

This could either get very confusing, or very revealing, not sure which yet. I found that no terms I knew fitted that well so I ended up using 'flux' and 'stasis' NOT to be confused with motion and stillness. By which I mean motion and stillness are the phenomenon, but flux and stasis are what lies beyond, in a pattern of information for want of better expression. To illustrate, a tap turned to release a flow of water often shows a stationary pattern while water is obviously flowing. That pattern is a stasis, but the water is not still. I don't know how useful this is when resolving a distinction between kinetics and dynamics, but it does look like we have to be careful about how we use these terms or we might not know which we're talking about, the standing pattern, or a manifest stillness. If we can't be clear on it we might as well be trying to pin down the 'evanescence of soul'. (Richard Clark, that was a good one, it's right up there with the better phrases from Douglas Adams.)

3389. Re: Slinkey Antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-04 20:13:17 UTC
From: Bill <k4wge@arrl.net>
Message-ID: <d9eb74ee-d108-4895-90bb-c9f915bce744@v30g2000yqm.googlegroups.com>
Source record: 11751

On Dec 3, 7:59 pm, Art Unwin <arthurun...@gmail.com> wrote:

> As far as the "soot" term being presently bandied around, it is an
> adjective which describes the chemical effects of combustion. Only
> those old in the tooth or unfamilier with physics describe it solely
> as a product of burning coal and nothing else!

Does your meaning of combustion encompass nuclear fusion?

http://unwinantennas.com/

> This is similar to the use of "waves" in physics with respect to
> particles. One is a noun, where the other is a adjective that describes the action of
same.

Wavy?

3390. Re: Best Antenna books?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-04 20:18:14 UTC
From: dplatt@radagast.org
Message-ID: <6d7ou6-9qn.ln1@radagast.org>
Source record: 11752

In article <hfbmtq$td3$2@news.eternal-september.org>,
Bill Baka <bbaka@comcast.net> wrote:

>WTF? That was one of my favorite stores to hang out and spend $$$ when I
>lived down there. What happened? They always seemed to be thriving and
>had books on other subjects. Fry's simply never had the books to compete.

If I recall correctly, they were bought up by another company (or, at
least, changed names) and then finally closed.

I don't know what the economics of their close-down were. I suspect a
combination of factors: rising rents (things were getting a big crazy
during the dot-com bubble), competition from online book-sellers such
as Amazon, increasing cost of purchasing inventory, and increasing
cost of maintaining stock (business taxes on unsold inventory).

>Is there anything in the Sacramento area or even the Silicon Valley area
>anymore?

There's another technical bookstore called Digital Guru, located in
the next strip-mall section northwards from where Computer Literacy
used to be. They don't carry as broad a stock as CL did, but they
aren't bad.

These days, I tend to look on-line first.

--
Dave Platt <dplatt@radagast.org> AE6EO
Friends of Jade Warrior home page: http://www.radagast.org/jade-warrior
I do _not_ wish to receive unsolicited commercial email, and I will
boycott any company which has the gall to send me such ads!

3391. Re: Faraday shields and radiation and misinterpretations

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-04 21:08:34 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <97tih59nu949hn5p8r57249oljbt4tm6l7@4ax.com>
Source record: 11753

On Fri, 04 Dec 2009 13:35:52 -0600, Lostgallifreyan
<no-one@nowhere.net> wrote:

> I don't know how useful this is when resolving a distinction between
>kinetics and dynamics,

There is no distinction.

>but it does look like we have to be careful about how
>we use these terms or we might not know which we're talking about,

The Unwin problem.

>the
>standing pattern, or a manifest stillness. If we can't be clear on it we
>might as well be trying to pin down the 'evanescence of soul'. (Richard
>Clark, that was a good one, it's right up there with the better phrases from
>Douglas Adams.)

Douglas Adams is good, but I have just discovered Arnold Bennett's
"BURIED ALIVE
A Tale of These Days"

...over a narrow doorway, he perceived the image of a green tree, and
the words, 'The Elm Tree.' It was the entrance to the Elm Tree Tea
Rooms, so well spoken of in the Telegraph. In certain ways he was a
man of advanced and humane ideas, and the thought of delicately
nurtured needy gentlewomen bravely battling with the world instead of
starving as they used to starve in the past, appealed to his chivalry.
He determined to assist them by taking tea in the advertised
drawing-room. Gathering together his courage, he penetrated into a
corridor lighted by pink electricity, and then up pink stairs. A pink
door stopped him at last. It might have hid mysterious and
questionable things, but it said laconically 'Push,' and he
courageously pushed... He was in a kind of boudoir thickly populated
with tables and chairs. The swift transmigration from the blatant
street to a drawing-room had a startling effect on him: it caused him
to whip off his hat as though his hat had been red hot. Except for two
tall elegant creatures who stood together at the other end of the
boudoir, the chairs and tables had the place to themselves. He was
about to stammer an excuse and fly, when one of the gentlewomen turned
her eye on him for a moment, and so he sat down. The gentlewomen then
resumed their conversation. He glanced cautiously about him.
Elm-trees, firmly rooted in a border of Indian matting, grew round all
the walls in exotic profusion, and their topmost branches splashed
over on to the ceiling. A card on the trunk of a tree, announcing

curtly, "Dogs not allowed," seemed to enhearten him. After a pause one of the gentlewomen swam haughtily towards him and looked him between the eyes. She spoke no word, but her firm, austere glance said:

"Now, out with it, and see you behave yourself!"

He had been ready to smile chivalrously. But the smile was put to sudden death.

"Some tea, please," he said faintly, and his intimidated tone said, "If it isn't troubling you too much."

"What do you want with it?" asked the gentlewoman abruptly, and as he was plainly at a loss she added, "Crumpets or tea-cake?"

"Tea-cake," he replied, though he hated tea-cake. But he was afraid.

"You've escaped this time," said the drapery of her muslins as she swam from his sight. "But no nonsense while I'm away!"

****

I have included this vignette simply to fulfill Art's fulmination against all things English (the author to this vignette) and literary. Most readers are already aware that Art would spit on Shakespeare, drowning him, if there stood any chance of that getting me damp. ;-)

73's
Richard Clark, KB7QHC

3392. Re: Slinkey Antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-04 21:49:01 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <rqvih5dk1578qis2a06at7f76ojf210em1@4ax.com>
Source record: 11754

On Fri, 4 Dec 2009 12:13:17 -0800 (PST), Bill <k4wge@arrl.net> wrote:

>> As far as the "soot" term being presently bandied around, it is an
>> adjective which describes the chemical effects of combustion.
>
>Does your meaning of combustion encompass nuclear fusion?

I once encounter a young wag on campus (a LaRoucheitte in disguise)
trying to argue (there seemed to be no other outcome expected to this
encounter) that Pythagoras law was wrong.

The hidden agenda seemed (and I say seemed only because this disguised
follower of LaRouche could never get to the point) to be for (or it
could have as easily been against) Nuclear power.

He waved his hands at the sun as the font of all energy (what this had
to do with Pythagorean law was a long and rambling exercise) and that
oil was for naught in comparison. I harkened to comparisons as they
are often fraught with error... my argumentative dwarf snapped on that
hook like an intellectual turtle.

He invoked how much power there was to be had by turning the moon into
our own special sun by nuking it. I venture to offer that we needn't
send missiles to the moon when a match head had enough ooomph to power
Seattle for a day. (I drew my own comparison carefully, knowing the
rhetorical advantage of choice in a match.)

"How could a match head barely light a cigarette, much less power a
city for a day?" Came his indignant, and proud retort - thinly
disguised as the master-stroke of logical humiliation.

I pointed out the difference between nuclear energy (his topic of
choice) and chemical energy (his topic of complete equal ignorance),
two concepts his arguments wandered between without care nor concern
for accuracy in terminology or science.

It was just my luck that all this attracted another eavesdropper who
wanted to dip his oar in this polluted water. I stepped out quickly
with my disguised LaRoucheitte chasing me with epithets such as "I
hope I'm never in YOUR class!"

73's
Richard Clark, KB7QHC

3393. Re: Faraday shields and radiation and misinterpretations

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-04 22:10:28 UTC
From: Lostgallifreyan <no-one@nowhere.net>
Message-ID: <Xns9CD7E19053E31zoodlewurdle@216.196.109.145>
Source record: 11755

Richard Clark <kb7qhc@comcast.net> wrote in
news:97tih59nu949hn5p8r57249oljbt4tm6l7@4ax.com:

> On Fri, 04 Dec 2009 13:35:52 -0600, Lostgallifreyan
> <no-one@nowhere.net> wrote:
>
>> I don't know how useful this is when resolving a distinction between
>>kinetics and dynamics,
>
> There is no distinction.
>
>>but it does look like we have to be careful about how
>>we use these terms or we might not know which we're talking about,
>
> The Unwin problem.
>
>>the
>>standing pattern, or a manifest stillness. If we can't be clear on it we
>>might as well be trying to pin down the 'evanescence of soul'. (Richard
>>Clark, that was a good one, it's right up there with the better phrases
>>from Douglas Adams.)
>
> Douglas Adams is good, but I have just discovered Arnold Bennett's
> "BURIED ALIVE
> A Tale of These Days"
>
> ...over a narrow doorway, he perceived the image of a green tree, and
> the words, 'The Elm Tree.' It was the entrance to the Elm Tree Tea
> Rooms, so well spoken of in the Telegraph. In certain ways he was a
> man of advanced and humane ideas, and the thought of delicately
> nurtured needy gentlewomen bravely battling with the world instead of
> starving as they used to starve in the past, appealed to his chivalry.
> He determined to assist them by taking tea in the advertised
> drawing-room. Gathering together his courage, he penetrated into a
> corridor lighted by pink electricity, and then up pink stairs. A pink
> door stopped him at last. It might have hid mysterious and
> questionable things, but it said laconically 'Push,' and he
> courageously pushed... He was in a kind of boudoir thickly populated
> with tables and chairs. The swift transmigration from the blatant
> street to a drawing-room had a startling effect on him: it caused him
> to whip off his hat as though his hat had been red hot. Except for two
> tall elegant creatures who stood together at the other end of the
> boudoir, the chairs and tables had the place to themselves. He was
> about to stammer an excuse and fly, when one of the gentlewomen turned

> her eye on him for a moment, and so he sat down. The gentlewomen then
> resumed their conversation. He glanced cautiously about him.
> Elm-trees, firmly rooted in a border of Indian matting, grew round all
> the walls in exotic profusion, and their topmost branches splashed
> over on to the ceiling. A card on the trunk of a tree, announcing
> curtly, "Dogs not allowed," seemed to enhearten him. After a pause one
> of the gentlewomen swam haughtily towards him and looked him between
> the eyes. She spoke no word, but her firm, austere glance said:
>
> "Now, out with it, and see you behave yourself!"
>
> He had been ready to smile chivalrously. But the smile was put to
> sudden death.
>
> "Some tea, please," he said faintly, and his intimidated tone said,
> "If it isn't troubling you too much."
>
> "What do you want with it?" asked the gentlewoman abruptly, and as he
> was plainly at a loss she added, "Crumpets or tea-cake?"
>
> "Tea-cake," he replied, though he hated tea-cake. But he was afraid.
>
> "You've escaped this time," said the drapery of her muslins as she
> swam from his sight. "But no nonsense while I'm away!"
>
> **********
>
> I have included this vignette simply to fulfill Art's fulmination
> against all things English (the author to this vignette) and literary.
> Most readers are already aware that Art would spit on Shakespeare,
> drowning him, if there stood any chance of that getting me damp. ;-)
>
> 73's
> Richard Clark, KB7QHC
>

Well I still like my idea of flux and stasis but that aside (it's never really been practical, just helpful when trying to understand some things), that writing has topspin, it carries. I might try it. I was disappointed by Terry Pratchett, but this one looks as new as Adam's stuff did when it was new.

Btw, I think I worked out how Adams came up with the Long Dark Teatime Of The Soul, as a name, and some meaning behind it. I like myeteries so all I'll say is I think it emerges from a bit of French classical music....

3394. Re: Faraday shields and radiation and misinterpretations

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-04 22:35:53 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <uu2jh5tldkvnms4vt63fbh1amdtelvu6c0@4ax.com>
Source record: 11756

On Fri, 04 Dec 2009 16:10:28 -0600, Lostgallifreyan
<no-one@nowhere.net> wrote:

>that writing has topspin, it carries. I might try it.

It was written 101 years ago. Freely available at:
http://www.gutenberg.org/browse/authors/b#a859

Other Bennett titles I recommend:
"The Card, a Story of Adventure in the Five Towns"
"The Grand Babylon Hotel"
"How to Live on 24 Hours a Day"

73's
Richard Clark, KB7QHC

3395. Re: Antenna Launcher

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-05 01:40:09 UTC
From: John Ferrell <jferrell13@triad.rr.com>
Message-ID: <d6djh5hbttt2ae681g4ljqtqmmnlk0bsl9@4ax.com>
Source record: 11757

On Fri, 04 Dec 2009 11:30:53 -0800, Bill Baka <bbaka@comcast.net>
wrote:

>
>I think I have a good one for this thread. Get about 500 feet of 24 to
>28 AWG magnet wire and wind it onto a fishing pole that has the easy
>cast and not an ocean reel. Put on a fair sized weight and then cast
>over the first tree in sight. Have someone walk around and find the
>weight on the ground and throw it over the next tree. Do this until the
>wire is used up or there are no more usable trees. I am going to try it
>on my next outing.
>
>Bill Baka SWL only.

After today's experience I think I can see a problem coming for you.
I was ready to move to the second tree today. After a couple of false
starts (valve leaking around pipe threads & add the second battery per
advice) I popped the line over the intended tree plus two more. The
line ran out smoothly but stopped with a jerk. I ran out of line on
the reel! The projectile was hanging about 30 feet from the ground.
After much fussing around I managed to reel in enough line get to the
top of the intended tree. It seems to be best to reel the line in very
slowly because the projectile tends to flip around the limbs and wrap
itself tightly. That is what happened to today's effort. The
projectile is tightly jammed at about 65 feet up the tree with a good
portion of the available line out of reach. I took the XYL to dinner
and stopped by WalMart for more line for tomorrow...

What I am getting to is that you will need a plan for what to do when
you pitch the weight in the tree and it don't come down!

100% chance of precipitation tomorrow afternoon (may be even snow) in
the North Carolina Piedmont. Great antenna weather!

John Ferrell W8CCW

3396. Re: Antenna Launcher

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-05 02:10:23 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <j6gjh556unbbsk51rrbru30v9o3k8ngrpr@4ax.com>
Source record: 11758

On Fri, 04 Dec 2009 20:40:09 -0500, John Ferrell
<jferrell13@triad.rr.com> wrote:

>What I am getting to is that you will need a plan for what to do when
>you pitch the weight in the tree and it don't come down!

Hi John,

Barring snags, time and gravity always wins.

73's
Richard Clark, KB7QHC

3397. Re: Antenna Launcher

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-05 04:23:39 UTC
From: Ralph Mowery <rmowery28146@earthlink.net>
Message-ID: <GJydnUed4tSrfYTWnZ2dnUVZ_oadnZ2d@earthlink.com>
Source record: 11759

"John Ferrell" <jferrell13@triad.rr.com> wrote in message
news:d6djh5hbttt2ae681g4ljqtqmmnlk0bsl9@4ax.com...
> On Fri, 04 Dec 2009 11:30:53 -0800, Bill Baka <bbaka@comcast.net>
> wrote:
>
>
>>
>>I think I have a good one for this thread. Get about 500 feet of 24 to
>>28 AWG magnet wire and wind it onto a fishing pole that has the easy
>>cast and not an ocean reel. Put on a fair sized weight and then cast
>>over the first tree in sight. Have someone walk around and find the
>>weight on the ground and throw it over the next tree. Do this until the
>>wire is used up or there are no more usable trees. I am going to try it
>>on my next outing.
>>
>>Bill Baka SWL only.
>
> After today's experience I think I can see a problem coming for you.
> I was ready to move to the second tree today. After a couple of false
> starts (valve leaking around pipe threads & add the second battery per
> advice) I popped the line over the intended tree plus two more. The
> line ran out smoothly but stopped with a jerk. I ran out of line on
> the reel! The projectile was hanging about 30 feet from the ground.
> After much fussing around I managed to reel in enough line get to the
> top of the intended tree. It seems to be best to reel the line in very
> slowly because the projectile tends to flip around the limbs and wrap
> itself tightly. That is what happened to today's effort. The
> projectile is tightly jammed at about 65 feet up the tree with a good
> portion of the available line out of reach. I took the XYL to dinner
> and stopped by WalMart for more line for tomorrow...
>
> What I am getting to is that you will need a plan for what to do when
> you pitch the weight in the tree and it don't come down!
>
> 100% chance of precipitation tomorrow afternoon (may be even snow) in
> the North Carolina Piedmont. Great antenna weather!
>
> John Ferrell W8CCW

You probably should have just cut the line off the reel and let the weight
drop. When I miss, I cut the weight off and reel it back in, then reattach
the weight. As mentioned, the weight will tend to wrap around places where
it is not wanted.

Looks like a radio day for me to John as I am just down the road near Salisbury.

DE KU4PT

3398. Re: Faraday shields and radiation and misinterpretations

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-05 04:29:37 UTC
From: Lostgallifreyan <no-one@nowhere.net>
Message-ID: <Xns9CD82DB5E8D58zoodlewurdle@216.196.109.145>
Source record: 11760

Richard Clark <kb7qhc@comcast.net> wrote in
news:uu2jh5tldkvnms4vt63fbh1amdtelvu6c0@4ax.com:

> On Fri, 04 Dec 2009 16:10:28 -0600, Lostgallifreyan
> <no-one@nowhere.net> wrote:
>
>>that writing has topspin, it carries. I might try it.
>
> It was written 101 years ago. Freely available at:
> http://www.gutenberg.org/browse/authors/b#a859
>
> Other Bennett titles I recommend:
> "The Card, a Story of Adventure in the Five Towns"
> "The Grand Babylon Hotel"
> "How to Live on 24 Hours a Day"
>
> 73's
> Richard Clark, KB7QHC
>

Strange! So many things make me think of a certain style that goes with the time, that feels old, the kind of thing that pervades early science fiction or romance or Victoriana in general. That extract had a drive a clarity that could easily be taken for something post-William-Gibson but without the obvious futuristic affectations. My dad was born 100 years ago, so I will read this stuff, it might give a useful perspective on how people saw their times, instead of how we have been so often made to see them.

(And if anyone can find anything to do with antennas here now I admire their skill :)

3399. Re: Antenna Launcher

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-05 04:48:38 UTC
From: Lostgallifreyan <no-one@nowhere.net>
Message-ID: <Xns9CD830EE65584zoodlewurdle@216.196.109.145>
Source record: 11761

Richard Clark <kb7qhc@comcast.net> wrote in
news:j6gjh556unbbsk51rrbru30v9o3k8ngrpr@4ax.com:

> On Fri, 04 Dec 2009 20:40:09 -0500, John Ferrell
> <jferrell13@triad.rr.com> wrote:
>
>>What I am getting to is that you will need a plan for what to do when
>>you pitch the weight in the tree and it don't come down!
>
> Hi John,
>
> Barring snags, time and gravity always wins.
>
> 73's
> Richard Clark, KB7QHC
>

No, no, the snags are going to win. :) Friction can be a vicious mistress.
Which might mean that very cold wet conditions favour the business, as it
happens...

One thought... how acccurate is this launcher? Any chance it can be aimed to
hit the branch above target and bounce to assist further directed travel?
(Sadly I wouldn't trust my stick and elastic trick with that move).

3400. Re: Faraday shields and radiation and misinterpretations

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-05 05:28:48 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <o0rjh5h0jm38edrarl5bb4lbpa9gtpegq7@4ax.com>
Source record: 11762

On Fri, 04 Dec 2009 22:29:37 -0600, Lostgallifreyan
<no-one@nowhere.net> wrote:

>(And if anyone can find anything to do with antennas here now I admire their
>skill :)

Art has made claims for discovering antennas that were commonplace for
Bellini and Tosi who he refuses to acknowledge predating his
"theories" 102 years ago.
http://www.astrosol.ch/thisandthat/5379039a840e79e07/index.html

And, as you are such a willing prospect for situational humour (as
just such as we indulge here anyway without regard for literary nor
scientific merit); I push the envelope by enlarging upon parallels to
Art - both literal and figurative (as evidenced by the last line):

This unique seat was occupied by the principal player, who wore a
humorous wig and a brilliant and expensive scarlet costume. He was a
fairly able judge, but he had mistaken his vocation; his rare talent
for making third-rate jokes would have brought him a fortune in the
world of musical comedy. His salary was a hundred a week; better
comedians have earned less. On the present occasion he was in the
midst of a double row of fashionable hats, and beneath the hats were
the faces of fourteen feminine relatives and acquaintances. These hats
performed the function of 'dressing' the house. The principal player
endeavoured to behave as though under the illusion that he was alone
in his glory, but he failed.

There were four other leading actors: Mr. Pennington, K.C., and Mr.
Vodrey, K.C., engaged by the plaintiff, and Mr. Cass, K.C., and Mr.
Crepitude, K.C., engaged by the defendant. These artistes were the
stars of their profession, nominally less glittering, but really far
more glittering than the player in scarlet. Their wigs were of
inferior quality to his, and their costumes shabby, but they did not
mind, for whereas he got a hundred a week, they each got a hundred a
day. Three junior performers received ten guineas a day apiece: one of
them held a watching brief for the Dean and Chapter of the Abbey, who,
being members of a Christian fraternity, were pained and horrified by
the defendants' implication that they had given interment to a valet,
and who were determined to resist exhumation at all hazards. The
supers in the drama, whose business it was to whisper to each other
and to the players, consisted of solicitors, solicitors' clerks, and
experts; their combined emoluments worked out at the rate of a hundred
and fifty pounds a day. Twelve excellent men in the jury-box received
between them about as much as would have kept a K.C. alive for five
minutes. The total expenses of production thus amounted to something

like six or seven hundred pounds a day. The preliminary expenses had run into several thousands. The enterprise could have been made remunerative by hiring for it Convent Garden Theatre and selling stalls as for Tettrazzini and Caruso, but in the absurd auditorium chosen, crammed though it was to the perilous doors, the loss was necessarily terrific. Fortunately the affair was subsidized; not merely by the State, but also by those two wealthy capitalists, Whitney C. Witt and Mr. Oxford; and therefore the management were in a position to ignore paltry financial considerations and to practise art for art's sake.

73's
Richard Clark, KB7QHC

3401. Re: Faraday shields and radiation and misinterpretations

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-05 08:44:40 UTC
From: Lostgallifreyan <no-one@nowhere.net>
Message-ID: <Xns9CD858F33C03Dzoodlewurdle@216.196.109.145>
Source record: 11763

Richard Clark <kb7qhc@comcast.net> wrote in
news:o0rjh5h0jm38edrarl5bb4lbpa9gtpegq7@4ax.com:

> The principal player
> endeavoured to behave as though under the illusion that he was alone
> in his glory, but he failed.
>

Interesting. A very different Art comes to mind here: Arthur Daley. Fits like
the proverbial.

3402. Re: Faraday shields and radiation and misinterpretations

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-05 10:40:46 UTC
From: Szczepan Bia&#65533;ek <sz.bialek@wp.pl>
Message-ID: <hfdca8$1of$1@node1.news.atman.pl>
Source record: 11764

"Lostgallifreyan" <no-one@nowhere.net> wrote
news:Xns9CD7C75884754zoodlewurdle@216.196.109.145...
> "Szczepan Bialek" <sz.bialek@wp.pl> wrote in
> news:hfbk68$q37$1@node1.news.atman.pl:
>
>> Between statics and dynamics is kinetics. EM is the kinetics.

Should be kinematics (not kinetcs): "Branch of physics concerned with the
geometrically possible motion of a body or system of bodies, without
consideration of the forces involved. It describes the spatial position of
bodies or systems, their velocities, and their acceleration".

The kinematics describes motions without consideration what and why.
>
> This could either get very confusing, or very revealing, not sure which
> yet.

EM is the first step. No the next for the incompressible fluid. The electron
were discovered and the dynamics are done for them.

> I found that no terms I knew fitted that well so I ended up using 'flux'
> and
> 'stasis' NOT to be confused with motion and stillness. By which I mean
> motion
> and stillness are the phenomenon, but flux and stasis are what lies
> beyond,
> in a pattern of information for want of better expression. To illustrate,
> a
> tap turned to release a flow of water often shows a stationary pattern
> while
> water is obviously flowing. That pattern is a stasis, but the water is not
> still. I don't know how useful this is when resolving a distinction
> between
> kinetics and dynamics, but it does look like we have to be careful about
> how
> we use these terms or we might not know which we're talking about, the
> standing pattern, or a manifest stillness. If we can't be clear on it we
> might as well be trying to pin down the 'evanescence of soul'. (Richard
> Clark, that was a good one, it's right up there with the better phrases
> from
> Douglas Adams.)

For flows are also the flow kinematics and the flow dynamics.
"An accurate theory of electromagnetism, known as classical
electromagnetism, was developed by various physicists over the course of the
19th century, culminating in the work of James Clerk Maxwell, who unified

the preceding developments into a single theory and discovered the electromagnetic nature of light. In classical electromagnetism, the electromagnetic field obeys a set of equations known as Maxwell's equations, and the electromagnetic force is given by the Lorentz force law. "

It seams that EM is the field kinematics.

S*

3403. Re: Faraday shields and radiation and misinterpretations

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-05 18:47:37 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <00alh5dmq3gtg57g2hkvgo3k29rvghbope@4ax.com>
Source record: 11765

On Sat, 05 Dec 2009 02:44:40 -0600, Lostgallifreyan
<no-one@nowhere.net> wrote:

>Richard Clark <kb7qhc@comcast.net> wrote in
>news:o0rjh5h0jm38edrarl5bb4lbpa9gtpegq7@4ax.com:
>
>> The principal player
>> endeavoured to behave as though under the illusion that he was alone
>> in his glory, but he failed.
>>
>
>Interesting. A very different Art comes to mind here: Arthur Daley. Fits like
>the proverbial.

I am not familiar with Arthur Daley, but your close editing has very
much converged on the psychology of this side-topic. We have with us
now a late-coming ankle bighter kinetically trying to compete for that
humorous wig.

However, that aside and in fitting to the context of the group, I
offered a link to an equally old reference of Bellini and Tosi that
should be very interesting to you, as a SWLer. If you revisit that
reference, then take note of the goniometer where its receive
application would allow you to perform your own crude beam steering
using two orthogonal long wire antennas (or crossed dipoles).

73's
Richard Clark, KB7QHC

3404. Re: Faraday shields and radiation and misinterpretations

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-05 19:26:35 UTC
From: Lostgallifreyan <no-one@nowhere.net>
Message-ID: <Xns9CD8C5C90FCB0zoodlewurdle@216.196.109.145>
Source record: 11766

Richard Clark <kb7qhc@comcast.net> wrote in
news:00alh5dmq3gtg57g2hkvgo3k29rvghbope@4ax.com:

> On Sat, 05 Dec 2009 02:44:40 -0600, Lostgallifreyan
> <no-one@nowhere.net> wrote:
>
>>Richard Clark <kb7qhc@comcast.net> wrote in
>>news:o0rjh5h0jm38edrarl5bb4lbpa9gtpegq7@4ax.com:
>>
>>> The principal player
>>> endeavoured to behave as though under the illusion that he was alone
>>> in his glory, but he failed.
>>>
>>
>>Interesting. A very different Art comes to mind here: Arthur Daley. Fits
>>like the proverbial.
>
> I am not familiar with Arthur Daley, but your close editing has very
> much converged on the psychology of this side-topic. We have with us
> now a late-coming ankle bighter kinetically trying to compete for that
> humorous wig.
>

Daley's great, well worth trying to see. (Minder, TV shows circa 1979 or so).
The books aren't high literature but they are good (written by Anthony
Masters) and do offer something beyond the shows, and they stand some repeat
reading too. I think Wodehouse is better and funnier, but Minder really has
its perks. Cheerful Charlie Chisolm, for example... Best detective since
Clouseau.

> However, that aside and in fitting to the context of the group, I
> offered a link to an equally old reference of Bellini and Tosi that
> should be very interesting to you, as a SWLer. If you revisit that
> reference, then take note of the goniometer where its receive
> application would allow you to perform your own crude beam steering
> using two orthogonal long wire antennas (or crossed dipoles).
>
> 73's
> Richard Clark, KB7QHC
>

Yes, I ought to have said, that IS interesting to me. I've often wondered
about direction finding so I earmarked it on the strength of that for a full
read soon. (Didn't have time today..)

3405. Re: Satelite Watching

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-05 21:11:26 UTC
From: HH&C <hot-ham-and-cheese@hotmail.com>
Message-ID: <9db48959-06ab-4e22-b9ed-11718bcfd992@33g2000vbe.googlegroups.com>
Source record: 11767
Cross-posted to: sci.electronics.design,rec.radio.amateur.antenna

On Nov 26, 8:47 pm, "amdx" <a...@knology.net> wrote:
> I took my son out to watch the ISS (International Space Station) pass by
> at 5:43 this evening. My son saw it first but we weren't sure because
> something else was moving at the same speed. We quickly realized
> yes both objects were moving across the sky. At arms length they were
> about thumb to pinky (spread out) distance apart.
> When we got home I started looking online to see what the second
> object was. Turns out to be STS129, the space shuttle!
> Open these in two different tabs and see how close they are to each other.
> The ISS.http://www.n2yo.com/?s=25544
>
> The Space shuttle.http://www.n2yo.com/?s=36094
>
> I don't know how long they will track.
> Well, I know not past 9:30 tommorrow,
> the shuttle is supposed to land.
>   Mike

I finished reading "Blank Sots on the Map" and one of the chapters
covered objects not in the NASA elements.

Really good stuff.

http://www.amazon.com/Blank-Spots-Map-Geography-Pentagons/dp/0525951016

3406. G3JVL's 5/8 6m Vertical antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-05 21:52:16 UTC
From: Kosmas Anastasiadis <sv2bfi@otenet.gr>
Message-ID: <hfekmi$13m$1@mouse.otenet.gr>
Source record: 11768

Hello,
Has everyone build this antenna?

> http://www.uksmg.org/content/vertical.htm

I need more information about base coil (turns spacing etc.)
I am about to modify an old CB antenna to 50mhz 5/8.
Any other information about a 6m 5/8 matching section is wellcome.

73s
SV2BFI

3407. Motorola Connectors?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-05 23:45:40 UTC
From: Dave D <xray66@earthlink.net>
Message-ID: <19d07f19-9ac9-4ab0-ae3c-d770979180bf@f18g2000prf.googlegroups.com>
Source record: 11769

I need to install a few of the old style Motorola connectors to use with some equipment that uses them. Just wondering if anybody knows the proper way to do them. I assume you just solder the center through the tip... But I'm not quite sure what the proper thing to do with the braid is.

Thanks for any help.

3408. Re: Faraday shields and radiation and misinterpretations

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-06 01:14:19 UTC
From: tom <news4792@taring.org>
Message-ID: <4b1b0547$0$47486$8046368a@newsreader.iphouse.net>
Source record: 11770

Lostgallifreyan wrote:
> Richard Clark <kb7qhc@comcast.net> wrote in
> news:00alh5dmq3gtg57g2hkvgo3k29rvghbope@4ax.com:
>
>> On Sat, 05 Dec 2009 02:44:40 -0600, Lostgallifreyan
>> <no-one@nowhere.net> wrote:
>>
>>> Richard Clark <kb7qhc@comcast.net> wrote in
>>> news:o0rjh5h0jm38edrarl5bb4lbpa9gtpegq7@4ax.com:
>>>
>>>> The principal player
>>>> endeavoured to behave as though under the illusion that he was alone
>>>> in his glory, but he failed.
>>>>
>>> Interesting. A very different Art comes to mind here: Arthur Daley. Fits
>>> like the proverbial.
>> I am not familiar with Arthur Daley, but your close editing has very
>> much converged on the psychology of this side-topic. We have with us
>> now a late-coming ankle bighter kinetically trying to compete for that
>> humorous wig.
>>
>
> Daley's great, well worth trying to see. (Minder, TV shows circa 1979 or so).
> The books aren't high literature but they are good (written by Anthony
> Masters) and do offer something beyond the shows, and they stand some repeat
> reading too. I think Wodehouse is better and funnier, but Minder really has
> its perks. Cheerful Charlie Chisolm, for example... Best detective since
> Clouseau.
>
>> However, that aside and in fitting to the context of the group, I
>> offered a link to an equally old reference of Bellini and Tosi that
>> should be very interesting to you, as a SWLer. If you revisit that
>> reference, then take note of the goniometer where its receive
>> application would allow you to perform your own crude beam steering
>> using two orthogonal long wire antennas (or crossed dipoles).
>>
>> 73's
>> Richard Clark, KB7QHC
>>
>
> Yes, I ought to have said, that IS interesting to me. I've often wondered
> about direction finding so I earmarked it on the strength of that for a full
> read soon. (Didn't have time today..)

This discussion has significantly diverged from allowable r.r.a.a specifications. This non-group discussion is almost certainly disturbing others within this group since many are very sensitive and can't use the delete key. Please discontinue further discussions using this mode.

Thank you.

3409. Re: Faraday shields and radiation and misinterpretations

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-06 01:27:13 UTC
From: nm5k@wt.net
Message-ID: <00a6f30a-0938-4be0-aa97-a205f72ce509@19g2000vbq.googlegroups.com>
Source record: 11771

On Dec 5, 7:14 pm, tom <news4...@taring.org> wrote:
 This non-group discussion is almost certainly
> disturbing others within this group since many are very sensitive and
> can't use the delete key. Please discontinue further discussions using
> this mode.
>
> Thank you.

I suspect Art is about to have a litter of kittens.. :/

3410. Re: Best Antenna books?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-06 02:04:49 UTC
From: Bill Baka <bbaka@comcast.net>
Message-ID: <hff3g2$6bm$1@news.eternal-september.org>
Source record: 11772

Dave Platt wrote:
> In article <hfbmtq$td3$2@news.eternal-september.org>,
> Bill Baka <bbaka@comcast.net> wrote:
>
>> WTF? That was one of my favorite stores to hang out and spend $$$ when I
>> lived down there. What happened? They always seemed to be thriving and
>> had books on other subjects. Fry's simply never had the books to compete.
>
> If I recall correctly, they were bought up by another company (or, at
> least, changed names) and then finally closed.

Damn. That was the best technical book store I have ever been in. The
last time was 1998 when I was working down there and they seemed healthy.
>
> I don't know what the economics of their close-down were. I suspect a
> combination of factors: rising rents (things were getting a big crazy
> during the dot-com bubble), competition from online book-sellers such
> as Amazon, increasing cost of purchasing inventory, and increasing
> cost of maintaining stock (business taxes on unsold inventory).

Rents I believe. Even in this depression people are trying to raise the
rents. I know from experience owning a TV/electronics repair shop. At
exactly 1 year the girl representing the landlord told me that since we
were a success and made it a full year they were going to raise my rent.
My answer, "Sorry, greed doesn't get it, I'm closing.".
That was easy because business sucked except for the truckers and my CB
tuning skills at 5:00 A.M.
>
>> Is there anything in the Sacramento area or even the Silicon Valley area
>> anymore?
>
> There's another technical bookstore called Digital Guru, located in
> the next strip-mall section northwards from where Computer Literacy
> used to be. They don't carry as broad a stock as CL did, but they
> aren't bad.

Maybe, just maybe.
>
> These days, I tend to look on-line first.
>
Me too.
<sigh>
Bill Baka

3411. Re: Faraday shields and radiation and misinterpretations

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-06 02:09:38 UTC
From: tom <news4792@taring.org>
Message-ID: <4b1b123e$0$47486$8046368a@newsreader.iphouse.net>
Source record: 11773

nm5k@wt.net wrote:
> On Dec 5, 7:14 pm, tom <news4...@taring.org> wrote:
> This non-group discussion is almost certainly
>> disturbing others within this group since many are very sensitive and
>> can't use the delete key. Please discontinue further discussions using
>> this mode.
>>
>> Thank you.
>
> I suspect Art is about to have a litter of kittens.. :/
>
>

Art probably doesn't care a rat's rear end for anyone but Art. And I'm
not sure he even cares or know about himself. He is a total nutjob
after all.

tom
K0TAR

3412. Re: Antenna Launcher

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-06 02:10:45 UTC
From: Bill Baka <bbaka@comcast.net>
Message-ID: <hff3r5$6bm$2@news.eternal-september.org>
Source record: 11774

John Ferrell wrote:
> On Fri, 04 Dec 2009 11:30:53 -0800, Bill Baka <bbaka@comcast.net>
> wrote:
>
>
>> I think I have a good one for this thread. Get about 500 feet of 24 to
>> 28 AWG magnet wire and wind it onto a fishing pole that has the easy
>> cast and not an ocean reel. Put on a fair sized weight and then cast
>> over the first tree in sight. Have someone walk around and find the
>> weight on the ground and throw it over the next tree. Do this until the
>> wire is used up or there are no more usable trees. I am going to try it
>> on my next outing.
>>
>> Bill Baka SWL only.
>
> After today's experience I think I can see a problem coming for you.
> I was ready to move to the second tree today. After a couple of false
> starts (valve leaking around pipe threads & add the second battery per
> advice) I popped the line over the intended tree plus two more. The
> line ran out smoothly but stopped with a jerk. I ran out of line on
> the reel! The projectile was hanging about 30 feet from the ground.
> After much fussing around I managed to reel in enough line get to the
> top of the intended tree. It seems to be best to reel the line in very
> slowly because the projectile tends to flip around the limbs and wrap
> itself tightly. That is what happened to today's effort. The
> projectile is tightly jammed at about 65 feet up the tree with a good
> portion of the available line out of reach. I took the XYL to dinner
> and stopped by WalMart for more line for tomorrow...
>
> What I am getting to is that you will need a plan for what to do when
> you pitch the weight in the tree and it don't come down!
>
> 100% chance of precipitation tomorrow afternoon (may be even snow) in
> the North Carolina Piedmont. Great antenna weather!
>
> John Ferrell W8CCW

I have a big reel of magnet wire about 22 or 24 AWG, meaning probably
miles of it, so I can lose some. A lead weight is disposable so I won't
cry over it. I may leave some of these antennas at favorite spots for
future use. A fishing rod just casts really far for me so it is my
weapon of choice.
Bill Baka

3413. Fractal Antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-06 10:44:30 UTC
From: EI5DD <EI5DD.5614748@radiobanter.com>
Message-ID: <EI5DD.5614748@radiobanter.com>
Source record: 11775

Would anyone have a copy of an article from either 73 or CQ magazine somewhere around the 90's which contained an article on how to construct a Fractal Quad antenna for 10 metres. The design was based on work done by Nathan Coen N1IR.

Steve (EI5DD)

--
EI5DD

3414. Re: Faraday shields and radiation and misinterpretations

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-06 13:10:48 UTC
From: Dave <k1ttt@arrl.net>
Message-ID: <ae930864-6689-45d6-a211-cb8ace2efe43@j35g2000vbl.googlegroups.com>
Source record: 11776

On Dec 6, 1:14 am, tom <news4...@taring.org> wrote:
> Lostgallifreyan wrote:
> > Richard Clark <kb7...@comcast.net> wrote in
> >news:00alh5dmq3gtg57g2hkvgo3k29rvghbope@4ax.com:
>
> >> On Sat, 05 Dec 2009 02:44:40 -0600, Lostgallifreyan
> >> <no-...@nowhere.net> wrote:
>
> >>> Richard Clark <kb7...@comcast.net> wrote in
> >>>news:o0rjh5h0jm38edrarl5bb4lbpa9gtpegq7@4ax.com:
>
> >>>> The principal player
> >>>> endeavoured to behave as though under the illusion that he was alone
> >>>> in his glory, but he failed.
>
> >>> Interesting. A very different Art comes to mind here: Arthur Daley. Fits
> >>> like the proverbial.
> >> I am not familiar with Arthur Daley, but your close editing has very
> >> much converged on the psychology of this side-topic. We have with us
> >> now a late-coming ankle bighter kinetically trying to compete for that
> >> humorous wig.
>
> > Daley's great, well worth trying to see. (Minder, TV shows circa 1979 or so).
> > The books aren't high literature but they are good (written by Anthony
> > Masters) and do offer something beyond the shows, and they stand some repeat
> > reading too. I think Wodehouse is better and funnier, but Minder really has
> > its perks. Cheerful Charlie Chisolm, for example... Best detective since
> > Clouseau.
>
> >> However, that aside and in fitting to the context of the group, I
> >> offered a link to an equally old reference of Bellini and Tosi that
> >> should be very interesting to you, as a SWLer. If you revisit that
> >> reference, then take note of the goniometer where its receive
> >> application would allow you to perform your own crude beam steering
> >> using two orthogonal long wire antennas (or crossed dipoles).
>
> >> 73's
> >> Richard Clark, KB7QHC
>
> > Yes, I ought to have said, that IS interesting to me. I've often wondered
> > about direction finding so I earmarked it on the strength of that for a full
> > read soon. (Didn't have time today..)
>
> This discussion has significantly diverged from allowable r.r.a.a

> specifications. This non-group discussion is almost certainly
> disturbing others within this group since many are very sensitive and
> can't use the delete key. Please discontinue further discussions using
> this mode.
>
> Thank you.- Hide quoted text -
>
> - Show quoted text -

at least it is a civil discourse and the material is at least well
grounded in basic facts as opposed to the way the thread started.

3415. Re: Antenna Launcher

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-06 14:11:58 UTC
From: John Ferrell <jferrell13@triad.rr.com>
Message-ID: <hpenh5tt59b7msq6q4fr7ojruvrpudh6r0@4ax.com>
Source record: 11777

On Fri, 4 Dec 2009 23:23:39 -0500, "Ralph Mowery"

>
>You probably should have just cut the line off the reel and let the weight
>drop. When I miss, I cut the weight off and reel it back in, then reattach
>the weight. As mentioned, the weight will tend to wrap around places where
>it is not wanted.
>
>Looks like a radio day for me to John as I am just down the road near
>Salisbury.
>
>
>DE KU4PT
>
>
Good advice!
John Ferrell W8CCW

3416. Re: Antenna Launcher

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-06 14:22:12 UTC
From: John Ferrell <jferrell13@triad.rr.com>
Message-ID: <m6fnh5hlat34irm6t0t2l495sn4582o5r7@4ax.com>
Source record: 11778

On Fri, 04 Dec 2009 22:48:38 -0600, Lostgallifreyan
<no-one@nowhere.net> wrote:

>
>No, no, the snags are going to win. :) Friction can be a vicious mistress.
>Which might mean that very cold wet conditions favour the business, as it
>happens...
>
>One thought... how acccurate is this launcher? Any chance it can be aimed to
>hit the branch above target and bounce to assist further directed travel?
>(Sadly I wouldn't trust my stick and elastic trick with that move).
Too many non-precse variables for accuracy. Air pressure, temperature,
elastic accumulator, projectile geometry and line drag.
John Ferrell W8CCW
John Ferrell W8CCW

3417. Re: Fractal Antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-06 15:12:27 UTC
From: danl <daninxpasco@gmail.com>
Message-ID: <2ainh510c1eviue0daktv5j4epdqsv2doo@4ax.com>
Source record: 11779

On Sun, 6 Dec 2009 10:44:30 +0000, EI5DD
<EI5DD.5614748@radiobanter.com> wrote:

>
>Would anyone have a copy of an article from either 73 or CQ magazine
>somewhere around the 90's which contained an article on how to
>construct a Fractal Quad antenna for 10 metres. The design was based on
>work done by Nathan Coen N1IR.
>
>Steve (EI5DD)

Popcorn! GET YER HOT BUTTERD POPCORN HERE! Popcorn!

N9JBF
>Whisper< Does the Buffoon still come around?

3418. Re: Faraday shields and radiation and misinterpretations

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-06 16:49:53 UTC
From: Art Unwin <arthurunwin@gmail.com>
Message-ID: <2f454d49-f53b-431d-9db8-02d52abb8ab7@o33g2000vbu.googlegroups.com>
Source record: 11780

On Dec 3, 9:10 pm, tom <news4...@taring.org> wrote:
> Art Unwin wrote:
> > Of course one can go back to the basics of mathematics way back in
> > Arabic times where
> > the mere presence of an equal sign denotes equilibrium or balance. The
> > equal sign is part of Maxwells equations so equilibrium is in effect.
>
> "the mere presence of an equal sign denotes equilibrium or balance"
>
> So sayeth the master of the physical universe - Art Unwin...
>
> Hmmm, so if there is an equal sign, it means it's in equilibrium.
>
> So a half wave antenna = 468/f(Mhz).
>
> It is therefore in equilibrium.
>
> tom
> K0TAR

The book what you read lied to you!
When you look at a sinosoidal curve the area above and below the datum
line is never equal ! If it were you have invented perpetual motion.
Power is continually being injected to make up for frictional
losses incurred. After a full cycle you get to what is a repeatable
point termed as a period where you have adjusted the energy contained
to equal that of the beginning. With the areas not being equal because
of frictional losses the curve crosses the datum line at a point not
at the half way point of a period. This point is resistive, where as.
if you put it next to the true half way point you would see that the
points were not one and the same. This sequence of events is that of a
"tank circuit"
which you would learn about if you went to college!
Resonance is the point where the curve is totally resistive only and
it does not represent a point of equilibrium. A period or a FW point
is also totally resistive and in a state of equilibrium, a point of
repeatablity which the half wave point does not
When dealing with the laws of Maxwell, which includes an equal sign,
metrics used are only those that represent equilibrium which, in the
case of radiation requires multiples of a full wave (FW) where the use
of the half wave would nullify the equal sign and the whole equation
No where does Maxwell's equations suggests a particular shape or
elevation or even straght when describing a radiator, only that it is
at a state of equilibrium. Thus a radiator can conform to Maxwell's

equations when totally compressed to a point source which certanly would not require a reflector representing a straight length of the magnitude you have stated.
Note also that Maxwells equations refer to distributed loads only and not lumped loads which, if present, MUST therefore be canceled.
Art Unwin KB9MZ....xg (uk)
Hopefully you are now back on track with respect to the science of radiation.

3419. Re: Fractal Antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-06 17:12:24 UTC
From: Wayne <mygarbagecan@verizon.net>
Message-ID: <hfgolo$mh5$1@news.eternal-september.org>
Source record: 11781

"EI5DD" <EI5DD.5614748@radiobanter.com> wrote in message
news:EI5DD.5614748@radiobanter.com...
>
> Would anyone have a copy of an article from either 73 or CQ magazine
> somewhere around the 90's which contained an article on how to
> construct a Fractal Quad antenna for 10 metres. The design was based on
> work done by Nathan Coen N1IR.
>
> Steve (EI5DD)
>
IIRC, he had the design posted on his webpage and perhaps in QEX. I don't
remember him ever giving details to QST or to this group, but he did
eventually provide construction details on a "fractal vertical". Brings
back memories of spirited discussions. :)
--Wayne
W5GIE

3420. Re: Antenna Launcher

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-06 17:42:01 UTC
From: JIMMIE <JIMMIEDEE123@YAHOO.COM>
Message-ID: <34111b9c-cd5b-4e61-bde6-03a95d1eac11@v19g2000vbk.googlegroups.com>
Source record: 11782

On Nov 27, 12:27 pm, John Ferrell <jferrel...@triad.rr.com> wrote:
> There is an artical by W4SSY in the March 2009 QST Magazine. I am
> planning to duplicate it for use at my QTH. I am interested in any
> comments, especially from anyone who may have already built one.
>
> My available trees may be about 80 feet so that is my minimum
> expectations!
>
> There is a lot of Google information available but I am trying to
> focus on this example.
>
> John Ferrell W8CCW

I wonder if my spud gun could be used for this. No compressor
required.

Jimmie

3421. Re: Faraday shields and radiation and misinterpretations

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-06 18:27:37 UTC
From: Dave <k1ttt@arrl.net>
Message-ID: <ba49df08-a4d1-47bc-b015-6d100b16c9ef@e20g2000vbb.googlegroups.com>
Source record: 11783

On Dec 6, 4:49 pm, Art Unwin <arthurun...@gmail.com> wrote:
> On Dec 3, 9:10 pm, tom <news4...@taring.org> wrote:
>
>
>
>
>
> > Art Unwin wrote:
> > > Of course one can go back to the basics of mathematics way back in
> > > Arabic times where
> > > the mere presence of an equal sign denotes equilibrium or balance. The
> > > equal sign is part of Maxwells equations so equilibrium is in effect.
>
> > "the mere presence of an equal sign denotes equilibrium or balance"
>
> > So sayeth the master of the physical universe - Art Unwin...
>
> > Hmmm, so if there is an equal sign, it means it's in equilibrium.
>
> > So a half wave antenna = 468/f(Mhz).
>
> > It is therefore in equilibrium.
>
> > tom
> > K0TAR
>
> The book what you read lied to you!
> When you look at a sinosoidal curve the area above and below the datum
> line is never equal ! If it were you have invented perpetual motion.
> Power is continually being injected to make up for frictional
> losses incurred. After a full cycle you get to what is a repeatable
> point termed as a period where you have adjusted the energy contained
> to equal that of the beginning. With the areas not being equal because
> of frictional losses the curve crosses the datum line at a point not
> at the half way point of a period. This point is resistive, where as.
> if you put it next to the true half way point you would see that the
> points were not one and the same. This sequence of events is that of a
> "tank circuit"
> which you would learn about if you went to college!
> Resonance is the point where the curve is totally resistive only and
> it does not represent a point of equilibrium. A period or a FW point
> is also totally resistive and in a state of equilibrium, a point of
> repeatablity which the half wave point does not
> When dealing with the laws of Maxwell, which includes an equal sign,

> metrics used are only those that represent equilibrium which, in the
> case of radiation requires multiples of a full wave (FW) where the use
> of the half wave would nullify the equal sign and the whole equation
> No where does Maxwell's equations suggests a particular shape or
> elevation or even straght when describing a radiator, only that it is
> at a state of equilibrium. Thus a radiator can conform to Maxwell's
> equations when totally compressed to a point source which certanly
> would not require a reflector representing a straight length of the
> magnitude you have stated.
> Note also that Maxwells equations refer to distributed loads only and
> not lumped loads which, if present, MUST therefore be canceled.
> Art Unwin KB9MZ....xg (uk)
> Hopefully you are now back on track with respect to the science of
> radiation.- Hide quoted text -
>
> - Show quoted text -

rotflmao

3422. Re: G3JVL's 5/8 6m Vertical antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-06 18:34:19 UTC
From: 'Doc <ltdoc@yahoo.com>
Message-ID: <3c7eac6d-a59b-4299-b699-2d616bddefdf@20g2000vbz.googlegroups.com>
Source record: 11784

Kosmas,
The given diagram shows the number of turns and diameter of the
matching coil. I'm not sure that the exact spacing is going to make a
huge difference. And as long as it's at least 'close' to what's
shown, should take no more than the 'normal' amount of tuning.
Good luck.
- 'Doc

3423. Re: Antenna Launcher

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-06 18:40:03 UTC
From: Lostgallifreyan <no-one@nowhere.net>
Message-ID: <Xns9CD9BDE465F42zoodlewurdle@216.196.109.145>
Source record: 11785

JIMMIE <JIMMIEDEE123@YAHOO.COM> wrote in news:34111b9c-cd5b-4e61-bde6-03a95d1eac11@v19g2000vbk.googlegroups.com:

> On Nov 27, 12:27 pm, John Ferrell <jferrel...@triad.rr.com> wrote:
>> There is an artical by W4SSY in the March 2009 QST Magazine. I am
>> planning to duplicate it for use at my QTH. I am interested in any
>> comments, especially from anyone who may have already built one.
>>
>> My available trees may be about 80 feet so that is my minimum
>> expectations!
>>
>> There is a lot of Google information available but I am trying to
>> focus on this example.
>>
>> John Ferrell W8CCW
>
> I wonder if my spud gun could be used for this. No compressor
> required.
>
> Jimmie
>

Only if it can fire the whole spud, I imagine. :)

3424. Re: Faraday shields and radiation and misinterpretations

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-06 19:10:15 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <muvnh59ugh309cit8lviricbsfrtqjab64@4ax.com>
Source record: 11786

On Sun, 6 Dec 2009 some gomer wrote:

>> No where does Maxwell's equations suggests a particular shape or
>> elevation or even straght when describing a radiator

Hmmmm,

Did Maxwell design antennas? Did he describe them? If he had no particular shape in mind, did that mean it was a mesh like a fish net cast over the rocks? Did he try working the international space station with this limp radiator powered by the feeble force?

WWMD?

73's
Richard Clark, KB7QHC

3425. need co-ax adapters

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-06 20:01:57 UTC
From: walt <wbelsito@juno.com>
Message-ID: <d15cf05f-915c-4060-8717-92b3277861f6@31g2000vbf.googlegroups.com>
Source record: 11787

i need 2 co-ax adapters (actually 3)

2 double male (pl-259)

1 elbow (90 degrees)

for picture go to www.waltbelsito.4t.com

go to page 7 click misc. stuff

thanks WALT , waterbury , ct .

3426. Re: Fractal Antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-06 20:15:28 UTC
From: Bill <k4wge@arrl.net>
Message-ID: <54cc6014-0119-49be-af52-1f5180a577e1@x16g2000vbk.googlegroups.com>
Source record: 11788

On Dec 6, 5:44 am, EI5DD <EI5DD.5614...@radiobanter.com> wrote:
> Would anyone have a copy of an article from either 73 or CQ magazine
> somewhere around the 90's which contained an article on how to
> construct a Fractal Quad antenna for 10 metres. The design was based on
> work done by Nathan Coen N1IR.
>
> Steve (EI5DD)
>
> --
> EI5DD

Maybe this link could help?

http://www.freepatentsonline.com/7019695-0-large.jpg

3427. Re: need co-ax adapters

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-06 20:16:43 UTC
From: Dave <k1ttt@arrl.net>
Message-ID: <aa037047-2d02-4126-aea9-2b6de60d7af1@r1g2000vbp.googlegroups.com>
Source record: 11789

On Dec 6, 8:01 pm, walt <wbels...@juno.com> wrote:
> i need 2 co-ax adapters (actually 3)
>
> 2   double male (pl-259)
>
> 1   elbow (90 degrees)
>
> for picture go towww.waltbelsito.4t.com
>
> go to page 7   click misc. stuff
>
> thanks   WALT , waterbury , ct .

this is not a store, try radio shack or the big ham store down your
way.

3428. Re: Faraday shields and radiation and misinterpretations

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-06 20:52:39 UTC
From: Art Unwin <arthurunwin@gmail.com>
Message-ID: <eaeb0bc0-cff3-4444-8cda-c958054fd57b@g23g2000vbi.googlegroups.com>
Source record: 11790

On Dec 6, 1:10 pm, Richard Clark <kb7...@comcast.net> wrote:
> On Sun, 6 Dec 2009 some gomer wrote:
>
> >> No where does Maxwell's equations suggests a particular shape or
> >> elevation or even straght when describing a radiator
>
> Hmmmm,
>
> Did Maxwell design antennas? Did he describe them? If he had no
> particular shape in mind, did that mean it was a mesh like a fish net
> cast over the rocks? Did he try working the international space
> station with this limp radiator powered by the feeble force?
>
> WWMD?
>
> 73's
> Richard Clark, KB7QHC

Maxwell dealt only with the mathematics of the time where many people had arrived at equations with respect to scientific observations. Many of these equations from different countries were actually duplicates so he was able to side line some. reduce some and even combined some such that he has a set of equations. Ofcourse he was aware that with observations within the Universe one must obey the requirement of equilibrium. You can do this by placing all metrics on one side of the equal or equal ibrium side and zero ion the other side.
One of his final equations did not, in fact, equal zero and in fact the metric of time was missing among other things. Now he couldn't go back to Gauss or anybody for an explanation. If he had spoken to Gauss he may have told him that if he made a static field dynamic he could correct the initial equations provided as the product was one and the same! Instead Maxwell concerned himself only with the metrics of the equations and not the scale. So he cancelled the metrics that were available and then added some metrics so he could cancel what was remaining which implied equil ibrium noy knowing what the additions added signified. At that time he could not have cared less as he primarily a mathematician.
When Yagi and Uda came along they stumbled on intercoupling of planar forms with out any regard to Maxwells equations. For them, the use of half wave length was of no concern as it provided answers that were within 10% of real life. That aproach lasted to this very day when I came along and pointed out that by using the Gaussian law of statics

they could then account for the remaining 10% of radiation by accounting for other forces which could provide for 100% efficiency. When this observation was shared on the internet it met with disdain by those who in the absence of knoweledge followed the trend of the written books of science known for their plagarisms. After all, those who followed the books to the letter were resting on the mantle of perceived experts where all agreed on the same thing. Rather than learning new things about physics they decided to agree to bestow on the teacher the myth that he was wearing no clothes and threw away all the mesh available . To this day nobody can apply a time varying field and note that it radiated more efficiently than any radiater known and occupy a smaller volume than previously .possible thus preventing those with small gardens become such loud mouths as others were that were preventing the advance of science.
Now the antenna industry realizes that with the gaussian knowledge being denied to them the only resort they had for advancement was to invent a new technology so they could carry the battle to those who cannot accept change. Unfortunately God made only one technology for radiation leaving the industry to ponder for another 100 years.
Art Unwin KB9MZ.....xg

3429. Re: need co-ax adapters

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-06 22:02:05 UTC
From: gwatts <gwatts@frontiernet.net>
Message-ID: <xRVSm.17914$Lq5.11456@newsfe20.iad>
Source record: 11791

walt wrote:
> i need 2 co-ax adapters (actually 3)
>
> 2 double male (pl-259)
>
> 1 elbow (90 degrees)
>

http://www.cablexperts.com/

Look under 'Connectors and Interseries adapters-UHF(PL259)...'

3430. Re: Slinkey Antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-06 22:02:38 UTC
From: clyde <clyde.561f010@radiobanter.com>
Message-ID: <clyde.561f010@radiobanter.com>
Source record: 11794

'Doc;694986 Wrote:
> This is a metal slinky, not the plastic ones?
> - 'Doc

HI DOC,

YES IT IS METAL. I BOUGHT IT OFF EBAY. THANKS FOR YOUR REPLY.

CLYDE

--
clyde

3431. GET KELP,sick little Markie !

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-06 22:20:37 UTC
From: Roger RealHam <roger.realham@gmail.com>
Message-ID: <6d382173-a7ea-4827-b09a-d738f78ab97e@e22g2000vbm.googlegroups.com>
Source record: 11792
Cross-posted to:
alt.ham-radio.vhf-uhf,alt.usenet.kooks,rec.radio.amateur.policy,rec.radio.amateur.antenna,alt.dads-rights.unmoderated

On Dec 3, 12:25 pm, kb9rqz <m...@kb9rqz.com> wrote:
> On Dec 1, 4:50 pm, kb9...@yahoooo.com wrote:
>
>
>
> > On Fri, 01 Dec 2006 09:36:47 -0800, John Smith
>
> > <assemblywiz...@gmail.com> wrote:
> > >K4YZ wrote:
> > >> Nope.
>
> > >> The IP Address and servers are complete proof that I do NOT share
> > >> any annonymous character's "address".
>
> > >> Sounds like Lennie, to me....
>
> > >> Steve, K4YZ
>
> > >To anyone with even an elementary understanding of anonymous proxies,
> > >anonymous remailers, zombie backdoors, etc., the ability to change ones
> > >IP address and header details is simplistic, indeed, with little time
> > >spent anyone can appear to be "coming" from anywhere in the world.
>
> > >You waste my time. Worse, you think us all idiots here. You remind me
> > >of the "street smart" prosecutors and defense attorneys who stack jurys
> > >with members of little or no technical knowledge and then call in
> > >"expert witnesses" and propose arguments of technical details to boggle
> > >their minds.
>
> > >You have only proven that you, yourself are either ignorant to such
> > >technical details, or else you are indeed street smart, I favor the
> > >latter in this case (however, if you in the dark about such things, 15
> > >minutes on google will enlighten you.)
>
> > >JS
>
> > "one useless man is disgrace 2 become a law firm 3 or more become a congress"
> > adams
>
> > woger you are a Congress all in your own head
> > "http://www.3ix.org/sys/aff.php?aff=7439" target="_blank"

>
> > altopia is never used by KB9RQZhttp://kb9rqz.cc.cchttp://kd8ctl.com
> > nor is Konst...@hotmail.com ever
> > btw i can be found at
> > 17366 N River Rd
> > Chassel Mi
>
> > but the cowards asking lack the gut to act- Hide quoted text -
>
> > - Show quoted text -- Hide quoted text -
>
>
TEH PUNCE PUNCED HIM TO TEH LOONEY BIN.....INDEED !

3432. Re: need co-ax adapters

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-06 22:26:03 UTC
From: "pdrahn@coinet.com" <co_farmer@yahoo.com>
Message-ID: <699f5065-e612-487a-b06f-cc72765ae143@u1g2000pre.googlegroups.com>
Source record: 11793

On Dec 6, 12:01 pm, walt <wbels...@juno.com> wrote:
> i need 2 co-ax adapters (actually 3)
>
> 2   double male (pl-259)
>
> 1   elbow (90 degrees)
>
> for picture go towww.waltbelsito.4t.com
>
> go to page 7   click misc. stuff
>
> thanks   WALT , waterbury , ct .

Web link doesn't work, either.
KD7HB

3433. Re: Antenna Launcher

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-06 23:13:40 UTC
From: Wimpie <wimabctel@tetech.nl>
Message-ID: <0c2fad2f-8ff8-41cd-b09c-65cfa3caa7c9@j35g2000vbl.googlegroups.com>
Source record: 11795

On 6 dic, 15:22, John Ferrell <jferrel...@triad.rr.com> wrote:
> On Fri, 04 Dec 2009 22:48:38 -0600, Lostgallifreyan
>
> <no-...@nowhere.net> wrote:
>
> >No, no, the snags are going to win. :) Friction can be a vicious mistress.
> >Which might mean that very cold wet conditions favour the business, as it
> >happens...
>
> >One thought... how acccurate is this launcher? Any chance it can be aimed to
> >hit the branch above target and bounce to assist further directed travel?
> >(Sadly I wouldn't trust my stick and elastic trick with that move).
>
> Too many non-precse variables for accuracy. Air pressure, temperature,
> elastic accumulator, projectile geometry and line drag.
> John Ferrell W8CCW
> John Ferrell W8CCW

Hello John,

In my opinion pneumatic systems can have good shot to shot
performance. When you use projectiles of about 0.1 kg width about 25mm
diameter, the required muzzle velocity is in the 25 m/s range (to
reach >70 ft). As this is far below speed of sound, mass of the gas,
hence temperature effect should be negligible.

The weight to diameter ratio assures that air friction has less then
10% influence on height and distance. Maybe you can add something to
avoid tumbling of the projectile.

When you have a large bore fast opening valve (< 10ms) you should have
good performance with relative low pressure (<50 psi). When you
experience bad repeatability, it must be the valve. If you like to
experiment further, you may construct your own piston valve that
interfaces directly with the barrel (coaxial structure).

Over here (Netherlands), law is very strict. Even pneumatic spud guns
are weapons and you may not make them as far as I know.

Good luck with the launcher!

Wim
PA3DJS
www.tetech.nl
remove abc in case of PM.

3434. Re: an ontopic post about code

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-06 23:56:00 UTC
From: kb9rqz <mark@kb9rqz.com>
Message-ID: <ef868f2c-f10f-450c-88f6-08ca491afad4@p30g2000vbt.googlegroups.com>
Source record: 11796
Cross-posted to: alt.ham-radio.vhf-uhf,rec.radio.amateur.policy,rec.radio.amateur.antenna

On Dec 3, 1:25 pm, kb9rqz <m...@kb9rqz.com> wrote:
> On Dec 1, 4:50 pm, kb9...@yahoooo.com wrote:
>
>
>
> > On Fri, 01 Dec 2006 09:36:47 -0800, John Smith
>
> > <assemblywiz...@gmail.com> wrote:
> > >K4YZ wrote:
> > >>   Nope.
>
> > >>   The IP Address and servers are complete proof that I do NOT share
> > >> any annonymous character's "address".
>
> > >>   Sounds like Lennie, to me....
>
> > >> Steve, K4YZ
>
> > >To anyone with even an elementary understanding of anonymous proxies,
> > >anonymous remailers, zombie backdoors, etc., the ability to change ones
> > >IP address and header details is simplistic, indeed, with little time
> > >spent anyone can appear to be "coming" from anywhere in the world.
>
> > >You waste my time. Worse, you think us all idiots here. You remind me
> > >of the "street smart" prosecutors and defense attorneys who stack jurys
> > >with members of little or no technical knowledge and then call in
> > >"expert witnesses" and propose arguments of technical details to boggle
> > >their minds.
>
> > >You have only proven that you, yourself are either ignorant to such
> > >technical details, or else you are indeed street smart, I favor the
> > >latter in this case (however, if you in the dark about such things, 15
> > >minutes on google will enlighten you.)
>
> > >JS
>
> > "one useless man is disgrace 2 become a law firm 3 or more become a congress"
> > adams
>
> > woger you are a Congress all in your own head
> > "http://www.3ix.org/sys/aff.php?aff=7439" target="_blank"
>
> > altopia is never used by KB9RQZhttp://kb9rqz.cc.cchttp://kd8ctl.com

> > nor is Konst...@hotmail.com ever
> > btw i can be found at
> > 17366 N River Rd
> > Chassel Mi
>
> > but the cowards asking lack the gut to act- Hide quoted text -
>
> > - Show quoted text -- Hide quoted text -
>
> - Show quoted text -

3435. Re: Faraday shields and radiation and misinterpretations

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-07 00:47:30 UTC
From: tom <news4792@taring.org>
Message-ID: <4b1c5078$0$33859$8046368a@newsreader.iphouse.net>
Source record: 11797

Richard Clark wrote:
> On Sun, 6 Dec 2009 some gomer wrote:
>
>>> No where does Maxwell's equations suggests a particular shape or
>>> elevation or even straght when describing a radiator
>
> Hmmmm,
>
> Did Maxwell design antennas? Did he describe them? If he had no
> particular shape in mind, did that mean it was a mesh like a fish net
> cast over the rocks? Did he try working the international space
> station with this limp radiator powered by the feeble force?
>
> WWMD?
>
> 73's
> Richard Clark, KB7QHC

What Would Unwin Do?

Make up an answer, of course!

tom
K0TAR

3436. Re: Fractal Antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-07 01:32:53 UTC
From: amdx <amdx@knology.net>
Message-ID: <f3623$4b1c5b44$18ec6dd7$4988@KNOLOGY.NET>
Source record: 11798

"EI5DD" <EI5DD.5614748@radiobanter.com> wrote in message
news:EI5DD.5614748@radiobanter.com...
>
> Would anyone have a copy of an article from either 73 or CQ magazine
> somewhere around the 90's which contained an article on how to
> construct a Fractal Quad antenna for 10 metres. The design was based on
> work done by Nathan Coen N1IR.
>
> Steve (EI5DD)
>
>
>
>
> --
> EI5DD
I remember seeing a construction article, but not sure where.
I looked through my Communications Quarterlys and found summer 1995
has an article "Fractal Antennas Part 1, Introduction and the Fractal Quad"
You might be able to build an antenna from the article, I couldn't.
They sell the article here.
http://www.fractenna.com/nca_reprint.html
I don't know if part two was ever printed.
Chip took a lot of heat about this idea, probably would have
saved himself a lot of grief if he would have skipped the whole ham thing
and just started marketing them as shrunken antennas.
Mike

3437. Re: Fractal Antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-07 01:47:28 UTC
From: amdx <amdx@knology.net>
Message-ID: <c9298$4b1c5eaf$18ec6dd7$6165@KNOLOGY.NET>
Source record: 11799

"danl" <daninxpasco@gmail.com> wrote in message
news:2ainh510c1eviue0daktv5j4epdqsv2doo@4ax.com...
> On Sun, 6 Dec 2009 10:44:30 +0000, EI5DD
> <EI5DD.5614748@radiobanter.com> wrote:
>
>>
>>Would anyone have a copy of an article from either 73 or CQ magazine
>>somewhere around the 90's which contained an article on how to
>>construct a Fractal Quad antenna for 10 metres. The design was based on
>>work done by Nathan Coen N1IR.
>>
>>Steve (EI5DD)
>
> Popcorn! GET YER HOT BUTTERD POPCORN HERE! Popcorn!
>
> N9JBF
> >Whisper< Does the Buffoon still come around?
I don't think he is buffoon, he had an idea that was novel and looks like
he is selling a bunch of them.
Mike

3438. Re: Fractal Antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-07 02:20:17 UTC
From: Art Unwin <arthurunwin@gmail.com>
Message-ID: <871c56a2-25f3-4948-8b22-d2e2352e16cd@n13g2000vbe.googlegroups.com>
Source record: 11800

On Dec 6, 7:47 pm, "amdx" <a...@knology.net> wrote:
> "danl" <daninxpa...@gmail.com> wrote in message
>
> news:2ainh510c1eviue0daktv5j4epdqsv2doo@4ax.com...> On Sun, 6 Dec 2009 10:44:30 +0000, EI5DD
> > <EI5DD.5614...@radiobanter.com> wrote:
>
> >>Would anyone have a copy of an article from either 73 or CQ magazine
> >>somewhere around the 90's which contained an article on how to
> >>construct a Fractal Quad antenna for 10 metres. The design was based on
> >>work done by Nathan Coen N1IR.
>
> >>Steve (EI5DD)
>
> > Popcorn! GET YER HOT BUTTERD POPCORN HERE! Popcorn!
>
> > N9JBF
> > >Whisper< Does the Buffoon still come around?
>
> I don't think he is buffoon, he had an idea that was novel and looks like
> he is selling a bunch of them.
>   Mike

No he isn't a buffoon, he had a Doctorate! Yes this group did go after
him with insults e.t.c. until he finally left and went into business
leaving the group devoid of experts again. He has several law suits
filed against the biggest phone makers in the world where they were
using his ideas with out his knowlege and not paying for them.If it
is found that he is correct that other phone makers felt they had to
use his ideas to stay in business then it would appear the ideas had
merit.
He wasn't the last antenna expert to leave the insults from this
group,
Tom W8ti was one , Litchfield is another who left, Llewellen rarely
appears now and there were a lot more that left. The pseudo experts
are still here and easily recognisable and there are many a day that
the newbies will not come near this newsgroup to ask a question. No,
Chip was not a buffoon and is laughing all the way to the bank despite
criticism from those from those who decided there was no need to go
to college or even high school because they could holler louder than
anybody else and win.

3439. Re: Fractal Antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-07 02:21:57 UTC
From: amdx <amdx@knology.net>
Message-ID: <10e94$4b1c66c5$18ec6dd7$28065@KNOLOGY.NET>
Source record: 11651

"amdx" <amdx@knology.net> wrote in message
news:f3623$4b1c5b44$18ec6dd7$4988@KNOLOGY.NET...
>
> "EI5DD" <EI5DD.5614748@radiobanter.com> wrote in message
> news:EI5DD.5614748@radiobanter.com...
>>
>> Would anyone have a copy of an article from either 73 or CQ magazine
>> somewhere around the 90's which contained an article on how to
>> construct a Fractal Quad antenna for 10 metres. The design was based on
>> work done by Nathan Coen N1IR.
>>
>> Steve (EI5DD)
>>
>>
>>
>>
>> --
>> EI5DD
> I remember seeing a construction article, but not sure where.
> I looked through my Communications Quarterlys and found summer 1995
> has an article "Fractal Antennas Part 1, Introduction and the Fractal
> Quad"
> You might be able to build an antenna from the article, I couldn't.
> They sell the article here.
> http://www.fractenna.com/nca_reprint.html
> I don't know if part two was ever printed.
> Chip took a lot of heat about this idea, probably would have
> saved himself a lot of grief if he would have skipped the whole ham thing
> and just started marketing them as shrunken antennas.
> Mike
I found a Comm Quarterly index, Chip has more Fractal articles.
summer 1995, spring 1996, summer 1996 and winter 1996.
I dont know if any are construction articles.
Mike

3440. Re: Fractal Antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-07 03:49:51 UTC
From: "J. Mc Laughlin" <jcm@power-net.net>
Message-ID: <Ps2dnTM7vsjH5oHWnZ2dnUVZ_rqdnZ2d@bright.net>
Source record: 11652

Dear Group:

Dr. Nathan Cohen

See also US Patents: (some may have been missed) (just antenna related)
6104349
6140975
6127977
6445352
6452553
6476766
6985122
7019695
7126537
7145513
7190318
7215290
7256751
7345642
7456799

and perhaps five published applications

This set must have cost a serious amount of money.

73, Mac N8TT

--
J. McLaughlin; Michigan, USA
Home: JCM@power-net.net

3441. Re: Faraday shields and radiation and misinterpretations

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-07 04:02:25 UTC
From: Art Unwin <arthurunwin@gmail.com>
Message-ID: <e8dc780a-f09d-4ef6-9af9-7b74a434309a@m11g2000vbo.googlegroups.com>
Source record: 11653

On Dec 6, 2:52 pm, Art Unwin <arthurun...@gmail.com> wrote:
> On Dec 6, 1:10 pm, Richard Clark <kb7...@comcast.net> wrote:
>
>
>
> > On Sun, 6 Dec 2009 some gomer wrote:
>
> > >> No where does Maxwell's equations suggests a particular shape or
> > >> elevation or even straght when describing a radiator
>
> > Hmmmm,
>
> > Did Maxwell design antennas? Did he describe them? If he had no
> > particular shape in mind, did that mean it was a mesh like a fish net
> > cast over the rocks? Did he try working the international space
> > station with this limp radiator powered by the feeble force?
>
> > WWMD?
>
> > 73's
> > Richard Clark, KB7QHC
>
> Maxwell dealt only with the mathematics of the time where many people
> had arrived at equations with respect to scientific observations.
> Many of these equations from different countries were actually
> duplicates so he was able to side line some. reduce some and even
> combined some such that he has a set of equations. Ofcourse he was
> aware that with observations within the Universe one must obey the
> requirement of equilibrium. You can do this by placing all metrics on
> one side of the equal or equal ibrium side and zero ion the other
> side.
> One of his final equations did not, in fact, equal zero and in fact
> the metric of time was missing among other things. Now he couldn't go
> back to Gauss or anybody for an explanation. If he had spoken to Gauss
> he may have told him that if he made a static field dynamic he could
> correct the initial equations provided as the product was one and the
> same! Instead Maxwell concerned himself only with the metrics of the
> equations and not the scale. So he cancelled the metrics that were
> available and then added some metrics so he could cancel what was
> remaining which implied equil ibrium noy knowing what the additions
> added signified. At that time he could not have cared less as he
> primarily a mathematician.
> When Yagi and Uda came along they stumbled on intercoupling of planar
> forms with out any regard to Maxwells equations. For them, the use of

> half wave length was of no concern as it provided answers that
> were within 10% of real life. That aproach lasted to this very day
> when I came along and pointed out that by using the Gaussian law of
> statics
> they could then account for the remaining 10% of radiation by
> accounting for other forces which could provide for 100% efficiency.
> When this observation was shared on the internet it met with disdain
> by those who in the absence of knoweledge followed the trend of the
> written books of science known for their plagarisms. After all, those
> who followed the books to the letter were resting on the mantle of
> perceived experts where all agreed on the same thing. Rather than
> learning new things about physics they decided to agree to bestow on
> the teacher the myth that he was wearing no clothes and threw away all
> the mesh available . To this day nobody can apply a time varying field
> and note that it radiated more efficiently than any radiater known and
> occupy a smaller volume than previously .possible thus preventing
> those with small gardens become such loud mouths as others were that
> were preventing the advance of science.
> Now the antenna industry realizes that with the gaussian knowledge
> being denied to them the only resort they had for advancement was to
> invent a new technology so they could carry the battle to those who
> cannot accept change. Unfortunately God made only one technology for
> radiation leaving the industry to ponder for another 100 years.
> Art Unwin KB9MZ.....xg

Ofcourse the biggest thing to come from the Gaussian observation was
that his static particles must be in equilibrium and also could only
come to rest without harm was a diamagnetic material which could
encapsulate vie their density. Most other things on earth are
considered diamagnetic including water. Many people have seen beads of
water that can exist in a pherical shape as you see with mercury and
the like. This is because the liquid is bound so tight by the resting
particles that they assume the shape of a sphere where internal
pressure equates to the outside pressure. When the winds pick up
particles are drawn up while clinging to the water where the surface
area of water diminishes with altitude The resting electrons or
particles receive a charge via the assending movement while at the
same time struggle to look for a viable new resting place such as a
close by cloud while all the time gathering increased charge. These
electrons collect in a cloud like form themselves as points of rest
diminish such they are attracted away from the higher elevation back
to earth which is now the easiest place to reach and rest. Thus we
have lightning produced when the cloud of electrons hit the ground
such that the charge removes itself from the charge.
You might also notice that the radiation resistance increases as the
metallic resistance decreases. This is due to the encapsulating
electrons carry more and more of the current available such that the
skin depth starts to disapear such that we have to review what the
lowest impedance that can be handled for radiatiation. The action that
removes the encapsulating particles is both a directive force and one

of spin. These same two forces are responsible for all actions on earth such as gravity associated with spin all the way back to the big bang where equilibrium is broken via a emerging particle from the suns boundary. So what was originall thought of as being a wave is now seen as a total error as the particle is the initial subject of force together with spin which thus brings to the fore the formation of voltage, light magnetism and even gravity byt he adherance to Newtons law that require s from every action an equal and opposite reaction which travels thru the Universe by the single ejection of a particle creating the two basic forces from which everything comes about. Even the Faraday shield follows the same pattern where the field outside equals the field inside until the internal or external equilibrium is broken creating the same two originating forces of the universe. Now if I made all that up myself wouldn't one think of me as a visionary that really should write a physics book to steer the world in the right direction of fictional law?
Had a great long week end in StLouis which has revitalised me back home in Central Illinois to with stand the new oncomming insults who feel that they know all about antennas before I was born.

3442. Seeking New FAQ/Intro Maintainers for rec.radio.amateur.*

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-07 07:05:00 UTC
From: rram@panix.com
Message-ID: <radio/ham-radio/recruitment-1-1260169500@panix.com>
Source record: 11654
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.dx,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.policy,rec.radio.info

```
Posted-By: auto-faq 3.3.2 beta (PGPMoose V2.0, Perl 5.005)
Archive-name: radio/ham-radio/recruitment
Revision: 1.2 2009/11/25 14:41:01
Posting-Frequency: posted monthly
URL: http://www.faqs.org/faqs/radio/personal-intro/

Changes followed by "|".

The rec.radio.info newsgroup, first established in 1993, has been
recently revived by an active moderation team. We are currently seeking
suitable information, FAQ, and bulletin articles from the entire
rec.radio.* newsgroup hierarchy for simultaneous cross-posting to our
newsgroup.

We are seeking a replacement maintainer for the following information
bulletin formerly posted to rec.radio.amateur.* (and currently archived
at http://www.faqs.org/faqs/radio/personal-intro/ ):

radio/personal-intro
Subject: Guide to the rec.radio Newsgroups
Maintainer: jeffreyh@Hawaii.Edu (Jeffrey Herman)
Last Posted: 9 Nov 2001 06:18:17 GMT
Posting-Frequency: 15th of each month

One significant omission, requiring immediate updates, for this article |
is that it does not mention newer amateur radio newsgroups created since |
it was written, including: |

rec.radio.amateur.antenna |
rec.radio.amateur.boatanchors |
rec.radio.amateur.dx |
rec.radio.amateur.equipment |
rec.radio.amateur.homebrew |
rec.radio.amateur.moderated |
rec.radio.amateur.space |

We are willing to provide any technical support necessary to get this
article updated and automatically posted again at a regular interval.
This would include establishing contact with the original maintainer for
any necessary permissions. We would prefer to seek a new, dedicated
maintainer at this time, rather than start auto-posting the original
article ourselves.

For more information about our newsgroup, see:
```

http://www.panix.com/~rram/usenet/rri/index.html

Please direct any comments, questions, or criticisms to
rec-radio-info-request@panix.com.

3443. Re: Fractal Antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-07 13:07:53 UTC
From: tom <news4792@taring.org>
Message-ID: <4b1cfe02$0$47480$8046368a@newsreader.iphouse.net>
Source record: 11655

J. Mc Laughlin wrote:
> Dear Group:
>
> Dr. Nathan Cohen
>
> See also US Patents: (some may have been missed) (just antenna related)
> 6104349
> 6140975
> 6127977
> 6445352
> 6452553
> 6476766
> 6985122
> 7019695
> 7126537
> 7145513
> 7190318
> 7215290
> 7256751
> 7345642
> 7456799
>
> and perhaps five published applications
>
> This set must have cost a serious amount of money.
>
> 73, Mac N8TT
>

What those patents cost to get would make a handsome annual salary.
Especially if any were initially rejected.

tom
K0TAR

3444. Re: need co-ax adapters

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-07 15:40:03 UTC
From: MTV <volztexas@comcast.net>
Message-ID: <Hl9Tm.295645$8m4.142241@en-nntp-07.dc1.easynews.com>
Source record: 11656

pdrahn@coinet.com wrote:
> On Dec 6, 12:01 pm, walt <wbels...@juno.com> wrote:
>> i need 2 co-ax adapters (actually 3)
>>
>> 2 double male (pl-259)
>>
>> 1 elbow (90 degrees)
>>
>> for picture go towww.waltbelsito.4t.com
>>
>> go to page 7 click misc. stuff
>>
>> thanks WALT , waterbury , ct .
>
> Web link doesn't work, either.
> KD7HB

Works for me.
MTV

3445. Re: Fractal Antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-07 18:14:59 UTC
From: Bill <k4wge@arrl.net>
Message-ID: <ea37b291-57c8-4b52-a942-585f4ce02d0d@j9g2000prh.googlegroups.com>
Source record: 11657

On Dec 6, 9:20 pm, Art Unwin <arthurun...@gmail.com> wrote:
> On Dec 6, 7:47 pm, "amdx" <a...@knology.net> wrote:
>
>
>
>
>
> > "danl" <daninxpa...@gmail.com> wrote in message
>
> >news:2ainh510c1eviue0daktv5j4epdqsv2doo@4ax.com...> On Sun, 6 Dec 2009 10:44:30 +0000,
EI5DD
> > > <EI5DD.5614...@radiobanter.com> wrote:
>
> > >>Would anyone have a copy of an article from either 73 or CQ magazine
> > >>somewhere around the 90's which contained an article on how to
> > >>construct a Fractal Quad antenna for 10 metres. The design was based on
> > >>work done by Nathan Coen N1IR.
>
> > >>Steve (EI5DD)
>
> > > Popcorn! GET YER HOT BUTTERD POPCORN HERE! Popcorn!
>
> > > N9JBF
> > > >Whisper< Does the Buffoon still come around?
>
> > I don't think he is buffoon, he had an idea that was novel and looks like
> > he is selling a bunch of them.
> >   Mike
>
> No he isn't a buffoon, he had a Doctorate!

A non sequitur. Look at posts by fractenna@aol.com and decide about
buffoonery. Cohen loved to threaten people. http://opsyhopsy.com/MiscJunk/who_is_nc.htm

3446. Re: need co-ax adapters

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-07 18:15:08 UTC
From: "pdrahn@coinet.com" <co_farmer@yahoo.com>
Message-ID: <7324f16d-c342-4e43-9430-b098a5f640f8@f18g2000prf.googlegroups.com>
Source record: 11658

On Dec 7, 7:40 am, MTV <volzte...@comcast.net> wrote:
> pdr...@coinet.com wrote:
> > On Dec 6, 12:01 pm, walt <wbels...@juno.com> wrote:
> >> i need 2 co-ax adapters (actually 3)
>
> >> 2   double male (pl-259)
>
> >> 1   elbow (90 degrees)
>
> >> for picture go towww.waltbelsito.4t.com
>
> >> go to page 7   click misc. stuff
>
> >> thanks   WALT , waterbury , ct .
>
> > Web link doesn't work, either.
> > KD7HB
>
> Works for me.
> MTV

That's very interesting! I am using Firefox 3.55 as browser and Google
as home page. Google says his web site doesn't exist. Wonder what
Google is having a problem with?

Paul

3447. Re: need co-ax adapters

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-07 18:29:28 UTC
From: gwatts <gwatts@frontnet.net>
Message-ID: <cQbTm.35717$kY2.12693@newsfe01.iad>
Source record: 11659

pdrahn@coinet.com wrote:
> On Dec 7, 7:40 am, MTV <volzte...@comcast.net> wrote:
>> pdr...@coinet.com wrote:
>>> On Dec 6, 12:01 pm, walt <wbels...@juno.com> wrote:
>>>> i need 2 co-ax adapters (actually 3)
>>>> 2 double male (pl-259)
>>>> 1 elbow (90 degrees)
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>>>> go to page 7 click misc. stuff
>>>> thanks WALT , waterbury , ct .
>>> Web link doesn't work, either.
>>> KD7HB
>> Works for me.
>> MTV
>
> That's very interesting! I am using Firefox 3.55 as browser and Google
> as home page. Google says his web site doesn't exist. Wonder what
> Google is having a problem with?

I just tried it (www.waltbelsito.4t.com) again and it worked just fine,
my browser (FF 3.5.2) lists the full URL as
http://www.waltbelsito.4t.com/

- W8LNA

3448. Re: Fractal Antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-07 18:32:55 UTC
From: Art Unwin <arthurunwin@gmail.com>
Message-ID: <fe65cba6-28d9-488d-af32-d06a908d7d5f@u16g2000pru.googlegroups.com>
Source record: 11660

On Dec 7, 12:14 pm, Bill <k4...@arrl.net> wrote:
> On Dec 6, 9:20 pm, Art Unwin <arthurun...@gmail.com> wrote:
>
>
>
> > On Dec 6, 7:47 pm, "amdx" <a...@knology.net> wrote:
>
> > > "danl" <daninxpa...@gmail.com> wrote in message
>
> > >news:2ainh510c1eviue0daktv5j4epdqsv2doo@4ax.com...> On Sun, 6 Dec 2009 10:44:30
+0000, EI5DD
> > > > <EI5DD.5614...@radiobanter.com> wrote:
>
> > > >>Would anyone have a copy of an article from either 73 or CQ magazine
> > > >>somewhere around the 90's which contained an article on how to
> > > >>construct a Fractal Quad antenna for 10 metres. The design was based on
> > > >>work done by Nathan Coen N1IR.
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> > > > Popcorn! GET YER HOT BUTTERD POPCORN HERE! Popcorn!
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> > > > N9JBF
> > > > >Whisper< Does the Buffoon still come around?
>
> > > I don't think he is buffoon, he had an idea that was novel and looks like
> > > he is selling a bunch of them.
> > >   Mike
>
> > No he isn't a buffoon, he had a Doctorate!
>
> A non sequitur. Look at posts by fracte...@aol.com and decide about
> buffoonery. Cohen loved to threaten people.http://opsyhopsy.com/MiscJunk/who_is_nc.htm

He stood up for himself, nothing wrong with that

3449. Re: need co-ax adapters

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-07 19:07:40 UTC
From: "pdrahn@coinet.com" <co_farmer@yahoo.com>
Message-ID: <bd38ac8f-17ef-42d9-9119-81459cd96d8e@s21g2000prm.googlegroups.com>
Source record: 11661

```
On Dec 7, 10:29 am, gwatts <gwa...@frontnet.net> wrote:
> pdr...@coinet.com wrote:
> > On Dec 7, 7:40 am, MTV <volzte...@comcast.net> wrote:
> >> pdr...@coinet.com wrote:
> >>> On Dec 6, 12:01 pm, walt <wbels...@juno.com> wrote:
> >>>> i need 2 co-ax adapters ( actually 3 )
> >>>> 2   double male ( pl-259 )
> >>>> 1   elbow ( 90 degrees )
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> >>>> thanks    WALT  ,  waterbury , ct .
> >>> Web link doesn't work, either.
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> >> Works for me.
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>
> > That's very interesting! I am using Firefox 3.55 as browser and Google
> > as home page. Google says his web site doesn't exist. Wonder what
> > Google is having a problem with?
>
> I just tried it (www.waltbelsito.4t.com) again and it worked just fine,
> my browser (FF 3.5.2) lists the full URL ashttp://www.waltbelsito.4t.com/
>
> - W8LNA

The problem is with Google. When I went to Yahoo and pasted in the
URL, it went immediately to the web site. The Google Help pages have a
multitude of problems of this type reported since early this year.
Some seem to be much more serious than mine. Well, it's not really a
problem, just interesting.

Isn't the internet wonderful and at the same time gives you pause. I
worked a Portugal station Saturday morning and he came right back to
me with my name. I had to wonder for a moment if we had worked before
or I had said my name. Then I remembered, he probably had high speed
access to QRZ and was a fast typist!

Paul, KD7HB
```

3450. Re: Fractal Antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-07 19:27:31 UTC
From: JIMMIE <JIMMIEDEE123@YAHOO.COM>
Message-ID: <124bf011-b239-42b5-96d6-97bed0a3e9d9@h14g2000pri.googlegroups.com>
Source record: 11662

On Dec 6, 5:44 am, EI5DD <EI5DD.5614...@radiobanter.com> wrote:
> Would anyone have a copy of an article from either 73 or CQ magazine
> somewhere around the 90's which contained an article on how to
> construct a Fractal Quad antenna for 10 metres. The design was based on
> work done by Nathan Coen N1IR.
>
> Steve (EI5DD)
>
> --
> EI5DD

Folding wire in a fractal pattern to shorten an antenna is probably as
good as any other way of folding wire. Maybe better than some.

JImmie

3451. Re: Faraday shields and radiation and misinterpretations

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-07 19:35:16 UTC
From: JIMMIE <JIMMIEDEE123@YAHOO.COM>
Message-ID: <8709a4f4-4b49-4359-aae8-909eab1e8a65@2g2000prl.googlegroups.com>
Source record: 11663

On Dec 6, 11:02 pm, Art Unwin <arthurun...@gmail.com> wrote:
> On Dec 6, 2:52 pm, Art Unwin <arthurun...@gmail.com> wrote:
>
>
>
>
>
> > On Dec 6, 1:10 pm, Richard Clark <kb7...@comcast.net> wrote:
>
> > > On Sun, 6 Dec 2009 some gomer wrote:
>
> > > >> No where does Maxwell's equations suggests a particular shape or
> > > >> elevation or even straght when describing a radiator
>
> > > Hmmmm,
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> > > Did Maxwell design antennas? Did he describe them? If he had no
> > > particular shape in mind, did that mean it was a mesh like a fish net
> > > cast over the rocks? Did he try working the international space
> > > station with this limp radiator powered by the feeble force?
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> > > 73's
> > > Richard Clark, KB7QHC
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> > Maxwell dealt only with the mathematics of the time where many people
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> > Many of these equations from different countries were actually
> > duplicates so he was able to side line some. reduce some and even
> > combined some such that he has a set of equations. Ofcourse he was
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> > requirement of equilibrium. You can do this by placing all metrics on
> > one side of the equal or equal ibrium side and zero ion the other
> > side.
> > One of his final equations did not, in fact, equal zero and in fact
> > the metric of time was missing among other things. Now he couldn't go
> > back to Gauss or anybody for an explanation. If he had spoken to Gauss
> > he may have told him that if he made a static field dynamic he could
> > correct the initial equations provided as the product was one and the
> > same! Instead Maxwell concerned himself only with the metrics of the
> > equations and not the scale. So he cancelled the metrics that were
> > available and then added some metrics so he could cancel what was
> > remaining which implied equil ibrium noy knowing what the additions

> > added signified. At that time he could not have cared less as he
> > primarily a mathematician.
> > When Yagi and Uda came along they stumbled on intercoupling of planar
> > forms with out any regard to Maxwells equations. For them, the use of
> > half wave length was of no concern as it provided answers that
> > were within 10% of real life. That aproach lasted to this very day
> > when I came along and pointed out that by using the Gaussian law of
> > statics
> > they could then account for the remaining 10% of radiation by
> > accounting for other forces which could provide for 100% efficiency.
> > When this observation was shared on the internet it met with disdain
> > by those who in the absence of knoweledge followed the trend of the
> > written books of science known for their plagarisms. After all, those
> > who followed the books to the letter were resting on the mantle of
> > perceived experts where all agreed on the same thing. Rather than
> > learning new things about physics they decided to agree to bestow on
> > the teacher the myth that he was wearing no clothes and threw away all
> > the mesh available . To this day nobody can apply a time varying field
> > and note that it radiated more efficiently than any radiater known and
> > occupy a smaller volume than previously .possible thus preventing
> > those with small gardens become such loud mouths as others were that
> > were preventing the advance of science.
> > Now the antenna industry realizes that with the gaussian knowledge
> > being denied to them the only resort they had for advancement was to
> > invent a new technology so they could carry the battle to those who
> > cannot accept change. Unfortunately God made only one technology for
> > radiation leaving the industry to ponder for another 100 years.
> > Art Unwin KB9MZ.....xg
>
> Ofcourse the biggest thing to come from the Gaussian observation was
> that his static particles must be in equilibrium and also could only
> come to rest without harm was a diamagnetic material which could
> encapsulate vie their density. Most other things on earth are
> considered diamagnetic including water. Many people have seen beads of
> water that can exist in a pherical shape as you see with mercury and
> the like. This is because the liquid is bound so tight by the resting
> particles that they assume the shape of a sphere where internal
> pressure equates to the outside pressure. When the winds pick up
> particles are drawn up while clinging to the water where the surface
> area of water diminishes with altitude The resting electrons or
> particles receive a charge via the assending movement while at the
> same time struggle to look for a viable new resting place such as a
> close by cloud while all the time gathering increased charge. These
> electrons collect in a cloud like form themselves as points of rest
> diminish such they are attracted away from the higher elevation back
> to earth which is now the easiest place to reach and rest. Thus we
> have lightning produced when the cloud of electrons hit the ground
> such that the charge removes itself from the charge.
> You might also notice that the radiation resistance increases as the
> metallic resistance decreases. This is due to the encapsulating

> electrons carry more and more of the current available such that the
> skin depth starts to disapear such that we have to review what the
> lowest impedance that can be handled for radiatiation. The action that
> removes the encapsulating particles is both a directive force and one
> of spin. These same two forces are responsible for all actions on
> earth such as gravity associated with spin all the way back to the big
> bang where equilibrium is broken via a emerging particle from the suns
> boundary. So what was originall thought of as being a wave is now seen
> as a total error as the particle is the initial subject of force
> together with spin which thus brings to the fore the formation of
> voltage, light magnetism and even gravity byt he adherance to Newtons
> law that require s from every action an equal and opposite reaction
> which travels thru the Universe by the single ejection of a particle
> creating the two basic forces from which everything comes about. Even
> the Faraday shield follows the same pattern where the field outside
> equals the field inside until the internal or external equilibrium is
> broken creating the same two originating forces of the universe. Now
> if I made all that up myself wouldn't one think of me as a visionary
> that really should write a physics book to steer the world in the
> right direction of fictional law?
> Had a great long week end in StLouis which has revitalised me back
> home in Central Illinois to with stand the new oncomming insults who
> feel that they know all about antennas before I was born.- Hide quoted text -
>
> - Show quoted text -

Lets make sure I follow, You are saying that radio communication
occurs because and antenna emits statically charged particle that then
imparts their charge to the receiving antenna when they strike the
antenna. Is this what you are saying.

Jimmie

3452. Re: Faraday shields and radiation and misinterpretations

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-07 20:03:34 UTC
From: Art Unwin <arthurunwin@gmail.com>
Message-ID: <a712f0b6-9dfe-4509-b835-f0a89cdde56e@e4g2000prn.googlegroups.com>
Source record: 11664

On Dec 7, 1:35 pm, JIMMIE <JIMMIEDEE...@YAHOO.COM> wrote:
> On Dec 6, 11:02 pm, Art Unwin <arthurun...@gmail.com> wrote:
>
>
>
> > On Dec 6, 2:52 pm, Art Unwin <arthurun...@gmail.com> wrote:
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> > > > On Sun, 6 Dec 2009 some gomer wrote:
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> > > > >> No where does Maxwell's equations suggests a particular shape or
> > > > >> elevation or even straght when describing a radiator
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> > > > Did Maxwell design antennas? Did he describe them? If he had no
> > > > particular shape in mind, did that mean it was a mesh like a fish net
> > > > cast over the rocks? Did he try working the international space
> > > > station with this limp radiator powered by the feeble force?
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> > > > WWMD?
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> > > and note that it radiated more efficiently than any radiater known and
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> > the like. This is because the liquid is bound so tight by the resting
> > particles that they assume the shape of a sphere where internal
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> > particles receive a charge via the assending movement while at the
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> > electrons collect in a cloud like form themselves as points of rest
> > diminish such they are attracted away from the higher elevation back
> > to earth which is now the easiest place to reach and rest. Thus we
> > have lightning produced when the cloud of electrons hit the ground
> > such that the charge removes itself from the charge.
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> > metallic resistance decreases. This is due to the encapsulating

> > electrons carry more and more of the current available such that the
> > skin depth starts to disapear such that we have to review what the
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> > removes the encapsulating particles is both a directive force and one
> > of spin. These same two forces are responsible for all actions on
> > earth such as gravity associated with spin all the way back to the big
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> > voltage, light magnetism and even gravity byt he adherance to Newtons
> > law that require s from every action an equal and opposite reaction
> > which travels thru the Universe by the single ejection of a particle
> > creating the two basic forces from which everything comes about. Even
> > the Faraday shield follows the same pattern where the field outside
> > equals the field inside until the internal or external equilibrium is
> > broken creating the same two originating forces of the universe. Now
> > if I made all that up myself wouldn't one think of me as a visionary
> > that really should write a physics book to steer the world in the
> > right direction of fictional law?
> > Had a great long week end in StLouis which has revitalised me back
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> Lets make sure I follow, You are saying that radio communication
> occurs because and antenna emits statically charged particle that then
> imparts their charge to the receiving antenna when they strike the
> antenna. Is this what you are saying.
>
> Jimmie

yup

3453. Re: Fractal Antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-07 20:18:13 UTC
From: Art Unwin <arthurunwin@gmail.com>
Message-ID: <d64df5b3-2c10-4c0d-b1e6-400ae5ee4706@m33g2000pri.googlegroups.com>
Source record: 11665

On Dec 7, 1:27 pm, JIMMIE <JIMMIEDEE...@YAHOO.COM> wrote:
> On Dec 6, 5:44 am, EI5DD <EI5DD.5614...@radiobanter.com> wrote:
>
> > Would anyone have a copy of an article from either 73 or CQ magazine
> > somewhere around the 90's which contained an article on how to
> > construct a Fractal Quad antenna for 10 metres. The design was based on
> > work done by Nathan Coen N1IR.
>
> > Steve (EI5DD)
>
> > --
> > EI5DD
>
> Folding wire in a fractal pattern to shorten an antenna is probably as
> good as any other way of folding wire. Maybe better than some.
>
> JImmie

Correct, Maxwell's laws referes only to the distributed loads which
remain in place no matter what you do to the wire. For way to long the
notion of straight radiators have been staked into the folk lore of
radio
by those who oppose change. Actually it was present members of this
particular group who attacked his ideas as a false technology without
presenting proof, only derision. A line eagerly joined by the pseudo
experts from the CB era, some of which remain today.

3454. Re: Faraday shields and radiation and misinterpretations

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-07 20:39:11 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <48pqh5162pk4r67v9439riehg4ei0ijout@4ax.com>
Source record: 11666

On Mon, 7 Dec 2009 11:35:16 -0800 (PST), JIMMIE
<JIMMIEDEE123@YAHOO.COM> wrote:

>Lets make sure I follow, You are saying that radio communication
>occurs because and antenna emits statically charged particle that then
>imparts their charge to the receiving antenna when they strike the
>antenna. Is this what you are saying.

Let's see, dust or soot are particles and can be charged. The VOA,
BBC and Deutsche Welle have big, big tranmitters capable of generating
considerable dust storms that have been tracked by satellite since
Gauss was in knee pants.

Well, maybe not.

Electrons are particles that are charged (just one charge, and only
negative), but awfully difficult to rip out of an atom without a few
KV (doesn't sound like an HT will be up to the job, so despite
evidence to the contrary - all lies - HTs do not work UNLESS their
antenna has a filament, screen grid, and a surrounding plate with an
opposite charge of several hundred volts).

Photons are particles (maybe) that are NOT charged, otherwise if when
you rub a balloon (diamagnetic material) on your hair (diamagnetic
material), it (diamagnetic material) would glow like a night light
instead of attracting, um, dust (diamagnetic material) and soot
(diamagnetic material) with its feeble force.

As antennas are not diamagnetic material - contrary to experience, all
lies - then antennas do not work UNLESS you have photographic proof of
a soot or dust layer coating one (aka skin-depth).

I hope this helps.

73's
Richard Clark, KB7QHC

3455. Re: Antenna Launcher

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-07 20:54:32 UTC
From: Tim Shoppa <shoppa@trailing-edge.com>
Message-ID: <2f45c2e1-5ec9-49a6-b1f7-8b6ec92a0fe9@o9g2000prg.googlegroups.com>
Source record: 11667

On Dec 4, 11:48 pm, Lostgallifreyan <no-...@nowhere.net> wrote:
> Richard Clark <kb7...@comcast.net> wrote
innews:j6gjh556unbbsk51rrbru30v9o3k8ngrpr@4ax.com:
>
> > On Fri, 04 Dec 2009 20:40:09 -0500, John Ferrell
> > <jferrel...@triad.rr.com> wrote:
>
> >>What I am getting to is that you will need a plan for what to do when
> >>you pitch the weight in the tree and it don't come down!
>
> > Hi John,
>
> > Barring snags, time and gravity always wins.
>
> > 73's
> > Richard Clark, KB7QHC
>
> No, no, the snags are going to win. :) Friction can be a vicious mistress.
> Which might mean that very cold wet conditions favour the business, as it
> happens...
>
> One thought... how acccurate is this launcher? Any chance it can be aimed to
> hit the branch above target and bounce to assist further directed travel?
> (Sadly I wouldn't trust my stick and elastic trick with that move).

Having tried this several different ways, my advice: Just shoot over
the tree. Trying to shoot between a set of branches in the tree may
sometimes make sense but I've never encountered a situation where it
was best.

Now, the gotcha is, if you shoot over the tree, you might also clear
the 3 or 5 trees behind that! What I do is use a fishing reel and
reach out and gently grab the fishing line after the ball clears the
first tree. This kills the forward momentum of the ball. Then: LET GO
and let the ball and line drop.

Cutting a slit in the tennis ball and loading it up with washers or
pennies can give it a little extra weight.

Yes, I've stranded a few tennis balls in trees over the years.

Tim N3QE.

3456. Re: Faraday shields and radiation and misinterpretations

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-07 20:55:24 UTC
From: Art Unwin <arthurunwin@gmail.com>
Message-ID: <cf6a8f88-dbe3-4a9c-9cfd-4f48e1acef2d@z35g2000prh.googlegroups.com>
Source record: 11668

On Dec 7, 2:03 pm, Art Unwin <arthurun...@gmail.com> wrote:
> On Dec 7, 1:35 pm, JIMMIE <JIMMIEDEE...@YAHOO.COM> wrote:
>
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> > On Dec 6, 11:02 pm, Art Unwin <arthurun...@gmail.com> wrote:
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> > > > On Dec 6, 1:10 pm, Richard Clark <kb7...@comcast.net> wrote:
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> > > > > On Sun, 6 Dec 2009 some gomer wrote:
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> > imparts their charge to the receiving antenna when they strike the
> > antenna. Is this what you are saying.
>
> > Jimmie
>
> yup

When you apply a time varying current to a radiator you arrive at an
impedance derived by two resistances. Radiation resistance and skin
resistance.
The more efficient the radiator becomes the less skin resistance depth
is used where the loss is added to the radiation resistance. When the
current ceases to flow within the radiator resistance the radiation
resistance becomes a maximum which is what we seek. This suggests
that maximum radiation is created by current that flows outside the
metallic member and underneath the encapsulating particle or unbound
electron. With the current flowing along the joint of the materials 2
forces are applied underneath the encapsulating electrons.
These two forces are the same as gravity and the rotation of the
earth.

In a time varying current these same two forces are represented by displacement current encircling a static field in eddy current form. The twistin g action applies a poealing action on the unbound electron and the displacement current supplies the ejection force the result of which
is a straight line projection with spin impressed on the electron.
Now we know that radiation is created by an accelerating charge so we must consider where the acceleration comes from. When the electron is launched it passes thru the afore mentioned static fieldwhich is being interfered with by a field at right angles to the main current flow. When the particle enteres the static field in the area the external field is impinged upon the electron or particle is placed into an acceleration mode until it clears the static field where it achieves a speed which incidently was found to be the same as that measured for light. Now the electron which is now charged follows a straight line projection of mass with spin and a generated electrical field. It is now a particle or electron back into its original mode looking for a place to rest which means it is looking for a diamagnetic material that is resonant, the part that an amatuer has directed it at. It arrives at the receiving antenna with a thump dislodging existing particles where it disposers its electrical field upon the receiving radiator for processing
in a mirror actions to that taken on transmission.
This single electron is a exact example of point radiation which can be seen as an ejection from a point source containing distributed loads
Note that the particles projection is of a straight line without effect from gravity as it is exhibiting the reacting forces around earth(gravity and rotation in line with Newtons equations. This actually became into being when a particle of the sun impinged on its barrier thus breaking equilibrium with both a direct force and a bending or spin force now known as the BIG BANG. These same two forces generate all the vector forces that exist in the universe such as gravity, electricity, magnetism etc as well as the well known ribbon with a helical action that represents the DNA of human life.
Art Unwin KB9MZ.....xg (uk)

3457. Re: Sunspot news

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-07 21:10:13 UTC
From: Antonio Vernucci <vernucci@tin.it>
Message-ID: <4b1d6f36$0$645$4fafbaef@reader4.news.tin.it>
Source record: 11669

> Interesting times;
> The y2k bug demonstrated the corruption of engineering.
> WMDs demonstrated the corruption of the intelligence communities.
> World Financial Crisis demonstrated the corruption of the financial system.
> And now science!

We are going OT, but just to add a few more:
- the widely claimed, though undemonstrated, hazard caused by (low-level) radio waves demonstrates the corruption of the "green" parties around the world, which use that argument to threaten the cellular phone companies

- the unjustified panic for some deseases (mad cow, h2n1 swine flu) demonstrates the corruption of the organization who should look after our health

73

Tony I0JX

Rome, Italy

3458. Re: Faraday shields and radiation and misinterpretations

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-07 22:16:34 UTC
From: JIMMIE <JIMMIEDEE123@YAHOO.COM>
Message-ID: <a7690566-0408-4bde-a52b-30f981495743@s20g2000yqd.googlegroups.com>
Source record: 11670

On Dec 7, 3:03 pm, Art Unwin <arthurun...@gmail.com> wrote:
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> > > which travels thru the Universe by the single ejection of a particle
> > > creating the two basic forces from which everything comes about. Even
> > > the Faraday shield follows the same pattern where the field outside
> > > equals the field inside until the internal or external equilibrium is
> > > broken creating the same two originating forces of the universe. Now
> > > if I made all that up myself wouldn't one think of me as a visionary
> > > that really should write a physics book to steer the world in the
> > > right direction of fictional law?
> > > Had a great long week end in StLouis which has revitalised me back
> > > home in Central Illinois to with stand the new oncomming insults who
> > > feel that they know all about antennas before I was born.- Hide quoted text -
>
> > > - Show quoted text -
>
> > Lets make sure I follow, You are saying that radio communication
> > occurs because and antenna emits statically charged particle that then
> > imparts their charge to the receiving antenna when they strike the
> > antenna. Is this what you are saying.
>
> > Jimmie
>
> yup- Hide quoted text -
>
> - Show quoted text -

Exactly which particles are you saying are responsible for this?.

Jimmie

3459. Re: Faraday shields and radiation and misinterpretations

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-07 23:14:48 UTC
From: Art Unwin <arthurunwin@gmail.com>
Message-ID: <7a4653d9-77a7-4b23-b106-56b9ec53e2e6@s31g2000yqs.googlegroups.com>
Source record: 11671

On Dec 7, 4:16 pm, JIMMIE <JIMMIEDEE...@YAHOO.COM> wrote:
> On Dec 7, 3:03 pm, Art Unwin <arthurun...@gmail.com> wrote:
>
>
>
> > On Dec 7, 1:35 pm, JIMMIE <JIMMIEDEE...@YAHOO.COM> wrote:
>
> > > On Dec 6, 11:02 pm, Art Unwin <arthurun...@gmail.com> wrote:
>
> > > > On Dec 6, 2:52 pm, Art Unwin <arthurun...@gmail.com> wrote:
>
> > > > > On Dec 6, 1:10 pm, Richard Clark <kb7...@comcast.net> wrote:
>
> > > > > > On Sun, 6 Dec 2009 some gomer wrote:
>
> > > > > > >> No where does Maxwell's equations suggests a particular shape or
> > > > > > >> elevation or even straght when describing a radiator
>
> > > > > > Hmmmm,
>
> > > > > > Did Maxwell design antennas? Did he describe them? If he had no
> > > > > > particular shape in mind, did that mean it was a mesh like a fish net
> > > > > > cast over the rocks? Did he try working the international space
> > > > > > station with this limp radiator powered by the feeble force?
>
> > > > > > WWMD?
>
> > > > > > 73's
> > > > > > Richard Clark, KB7QHC
>
> > > > > Maxwell dealt only with the mathematics of the time where many people
> > > > > had arrived at equations with respect to scientific observations.
> > > > > Many of these equations from different countries were actually
> > > > > duplicates so he was able to side line some. reduce some and even
> > > > > combined some such that he has a set of equations. Ofcourse he was
> > > > > aware that with observations within the Universe one must obey the
> > > > > requirement of equilibrium. You can do this by placing all metrics on
> > > > > one side of the equal or equal ibrium side and zero ion the other
> > > > > side.
> > > > > One of his final equations did not, in fact, equal zero and in fact
> > > > > the metric of time was missing among other things. Now he couldn't go
> > > > > back to Gauss or anybody for an explanation. If he had spoken to Gauss
> > > > > he may have told him that if he made a static field dynamic he could
> > > > > correct the initial equations provided as the product was one and the

> > > > > same! Instead Maxwell concerned himself only with the metrics of the
> > > > > equations and not the scale. So he cancelled the metrics that were
> > > > > available and then added some metrics so he could cancel what was
> > > > > remaining which implied equil ibrium noy knowing what the additions
> > > > > added signified. At that time he could not have cared less as he
> > > > > primarily a mathematician.
> > > > > When Yagi and Uda came along they stumbled on intercoupling of planar
> > > > > forms with out any regard to Maxwells equations. For them, the use of
> > > > > half wave length was of no concern as it provided answers that
> > > > > were within 10% of real life. That aproach lasted to this very day
> > > > > when I came along and pointed out that by using the Gaussian law of
> > > > > statics
> > > > > they could then account for the remaining 10% of radiation by
> > > > > accounting for other forces which could provide for 100% efficiency.
> > > > > When this observation was shared on the internet it met with disdain
> > > > > by those who in the absence of knoweledge followed the trend of the
> > > > > written books of science known for their plagarisms. After all, those
> > > > > who followed the books to the letter were resting on the mantle of
> > > > > perceived experts where all agreed on the same thing. Rather than
> > > > > learning new things about physics they decided to agree to bestow on
> > > > > the teacher the myth that he was wearing no clothes and threw away all
> > > > > the mesh available . To this day nobody can apply a time varying field
> > > > > and note that it radiated more efficiently than any radiater known and
> > > > > occupy a smaller volume than previously .possible thus preventing
> > > > > those with small gardens become such loud mouths as others were that
> > > > > were preventing the advance of science.
> > > > > Now the antenna industry realizes that with the gaussian knowledge
> > > > > being denied to them the only resort they had for advancement was to
> > > > > invent a new technology so they could carry the battle to those who
> > > > > cannot accept change. Unfortunately God made only one technology for
> > > > > radiation leaving the industry to ponder for another 100 years.
> > > > > Art Unwin KB9MZ.....xg
> > > >
> > > > Ofcourse the biggest thing to come from the Gaussian observation was
> > > > that his static particles must be in equilibrium and also could only
> > > > come to rest without harm was a diamagnetic material which could
> > > > encapsulate vie their density. Most other things on earth are
> > > > considered diamagnetic including water. Many people have seen beads of
> > > > water that can exist in a pherical shape as you see with mercury and
> > > > the like. This is because the liquid is bound so tight by the resting
> > > > particles that they assume the shape of a sphere where internal
> > > > pressure equates to the outside pressure. When the winds pick up
> > > > particles are drawn up while clinging to the water where the surface
> > > > area of water diminishes with altitude The resting electrons or
> > > > particles receive a charge via the assending movement while at the
> > > > same time struggle to look for a viable new resting place such as a
> > > > close by cloud while all the time gathering increased charge. These
> > > > electrons collect in a cloud like form themselves as points of rest
> > > > diminish such they are attracted away from the higher elevation back
> > > > to earth which is now the easiest place to reach and rest. Thus we

> > > > have lightning produced when the cloud of electrons hit the ground
> > > > such that the charge removes itself from the charge.
> > > > You might also notice that the radiation resistance increases as the
> > > > metallic resistance decreases. This is due to the encapsulating
> > > > electrons carry more and more of the current available such that the
> > > > skin depth starts to disapear such that we have to review what the
> > > > lowest impedance that can be handled for radiatiation. The action that
> > > > removes the encapsulating particles is both a directive force and one
> > > > of spin. These same two forces are responsible for all actions on
> > > > earth such as gravity associated with spin all the way back to the big
> > > > bang where equilibrium is broken via a emerging particle from the suns
> > > > boundary. So what was originall thought of as being a wave is now seen
> > > > as a total error as the particle is the initial subject of force
> > > > together with spin which thus brings to the fore the formation of
> > > > voltage, light magnetism and even gravity byt he adherance to Newtons
> > > > law that require s from every action an equal and opposite reaction
> > > > which travels thru the Universe by the single ejection of a particle
> > > > creating the two basic forces from which everything comes about. Even
> > > > the Faraday shield follows the same pattern where the field outside
> > > > equals the field inside until the internal or external equilibrium is
> > > > broken creating the same two originating forces of the universe. Now
> > > > if I made all that up myself wouldn't one think of me as a visionary
> > > > that really should write a physics book to steer the world in the
> > > > right direction of fictional law?
> > > > Had a great long week end in StLouis which has revitalised me back
> > > > home in Central Illinois to with stand the new oncomming insults who
> > > > feel that they know all about antennas before I was born.- Hide quoted text -
>
> > > > - Show quoted text -
>
> > > Lets make sure I follow, You are saying that radio communication
> > > occurs because and antenna emits statically charged particle that then
> > > imparts their charge to the receiving antenna when they strike the
> > > antenna. Is this what you are saying.
>
> > > Jimmie
>
> > yup- Hide quoted text -
>
> > - Show quoted text -
>
> Exactly which particles are you saying are responsible for this?.
>
> Jimmie

Hard to say. We know what is termed as Leptons which escape from the
sun and get taken along in the solar stream towards earth.Some where
along the line they apparently finish up as neutrinos.
What happens between these events is considered to be Higgs field
which creates change in the particles. Then there is the connection to

light and supposed photons which initially attached to particles and
we know that when the particles from the solar stream provide charge
to the earths magnetic boundary. But these are just dots in the story
that wait to be connected but there are many things unknown between
the points that we theoretically know of which we have no evidence.
At the moment we have the observations of the masters and to this day
there is contraversy about particles, waves and the emmission of light
where the masters observations and equations are still a question of
discussion. What I have done is to use the equations of the masters
and connected them in a different mathematical way such they provide
tracable links between the BIG BANG, the Standard model and radiation
that matches the computer derivitatation of
radiation that is in sync with the teachings of the masters especially
Maxwell, Gauss and of course the Faraday shield, all of which now seem
to fit together nicely. The true bottom line is that the use of
Maxwells equations where accountability is taken of all forces
involved
have in essense via computer programs provide authenticity to the idea
of point radiation which leads to efficient small volume antennas.
And following these edicts I have been able to make radiators of a
smnaller volume that is known in the present state of the art.

3460. Re: Faraday shields and radiation and misinterpretations

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-07 23:20:17 UTC
From: Dave <k1ttt@arrl.net>
Message-ID: <502a1bb1-e24a-4b6a-8720-942473ea07c8@m25g2000yqc.googlegroups.com>
Source record: 11672

i don't care if this guy is a troll or an idiot... keep him going, its
great stuff.

still rotflmao

3461. Re: need co-ax adapters

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-07 23:34:00 UTC
From: MTV <volztexas@comcast.net>
Message-ID: <0igTm.124100$mn3.123617@en-nntp-03.dc1.easynews.com>
Source record: 11673

pdrahn@coinet.com wrote:
> On Dec 7, 10:29 am, gwatts <gwa...@frontnet.net> wrote:
>> pdr...@coinet.com wrote:
>>> On Dec 7, 7:40 am, MTV <volzte...@comcast.net> wrote:
>>>> pdr...@coinet.com wrote:
>>>>> On Dec 6, 12:01 pm, walt <wbels...@juno.com> wrote:
>>>>>> i need 2 co-ax adapters (actually 3)
>>>>>> 2 double male (pl-259)
>>>>>> 1 elbow (90 degrees)
>>>>>> for picture go towww.waltbelsito.4t.com
>>>>>> go to page 7 click misc. stuff
>>>>>> thanks WALT , waterbury , ct .
>>>>> Web link doesn't work, either.
>>>>> KD7HB
>>>> Works for me.
>>>> MTV
>>> That's very interesting! I am using Firefox 3.55 as browser and Google
>>> as home page. Google says his web site doesn't exist. Wonder what
>>> Google is having a problem with?
>> I just tried it (www.waltbelsito.4t.com) again and it worked just fine,
>> my browser (FF 3.5.2) lists the full URL ashttp://www.waltbelsito.4t.com/
>>
>> - W8LNA
>
> The problem is with Google. When I went to Yahoo and pasted in the
> URL, it went immediately to the web site. The Google Help pages have a
> multitude of problems of this type reported since early this year.
> Some seem to be much more serious than mine. Well, it's not really a
> problem, just interesting.
>
> Isn't the internet wonderful and at the same time gives you pause. I
> worked a Portugal station Saturday morning and he came right back to
> me with my name. I had to wonder for a moment if we had worked before
> or I had said my name. Then I remembered, he probably had high speed
> access to QRZ and was a fast typist!
>
> Paul, KD7HB

Clarification: I meant the http://www.cablexperts.com/ site. I'm a
regular customer there.

MTV

3462. Re: Sunspot news

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-08 01:17:34 UTC
From: tom <news4792@taring.org>
Message-ID: <4b1da903$0$47483$8046368a@newsreader.iphouse.net>
Source record: 11674

Peter wrote:
> Interesting times;
> The y2k bug demonstrated the corruption of engineering.

Incorrect.

The Y2K bug demonstrated that in many cases companies wouldn't listen to engineers, or more correctly, programmers. Some did, most didn't until very late. I was working on Y2K upgrades in 1991 at utility companies. Many other, less critical types waited until much later.

Most programs that really counted, like utility companies billing and control programs, were written in the 1960s and no one ever expected them to be used for even 10 years without replacement, let alone 30+. To blame engineers is foolish, since they had little to do with the programs in the first place, or the programmers, who could not foresee the future.

And some languages turned out not to have a Y2K "bug" even if you didn't handle the years correctly. Like Perl. In most cases the worst thing that happened was that it gave a 3 digit year where you expected 2. So year 2000 showed as 100. Wasn't a problem in calculations involving time spans.

And what little real bits of the Y2K bug that existed was SQUASHED before it ever got a chance to happen. By the next and a half generation of engineers and programmers. And management that finally understood how much they had to lose. At a tremendous cost, 95% of which was wasted because management was soooo worried.

tom
K0TAR

3463. Re: Faraday shields and radiation and misinterpretations

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-08 01:34:00 UTC
From: Art Unwin <arthurunwin@gmail.com>
Message-ID: <5be3d7d5-2264-4cf1-a2b4-6a8171f2ac14@m3g2000yqf.googlegroups.com>
Source record: 11675

On Dec 7, 5:20 pm, Dave <k1...@arrl.net> wrote:
> i don't care if this guy is a troll or an idiot... keep him going, its
> great stuff.
>
> still rotflmao

If one would just read in succession the posts above one might get the impression that I sat at a desk while in deep thought until I connected the dots which provided a exp-lanation of radiation where the books stated that radiation in itself was not fully understood. That is so far from the truth. Going to the physics books one can see examples where the maxwell equations was proven in many ways by the use of contributingequations. One proof that you don't see is the gaussian static field as a proof possibly because we had a conflict in metrics ie cgs and MKS
which possibly authors did not want to use for fear of muddying the water. From my point of view I saw it as a transition from a static field to a dynamic field which in itself was swhat Maxwell equations were showing. Sharing this observation on this group and other places drew nothing but cat calls because of the sillines of connecting statics with electricity as presently known. Pursuit via computer programs and other thoughts regarding equilibrium allowed me to formulate an array
where equilibrrium was in existance and all elements were resonant in the form of a full wave. Thus my work on unwinantennas .com began because I had destroyed some old wives tales. Then the second patent came where again I focussed on FW antennas to obsolete the idea of ground planes which I did by folding the FW dipole into an end fed form but with the question remaining regarding my thoughts on the standard model. Needless to say it showed that a verticle must be tipped with respect to ground via the very nature of these two fectors representing gravity and rotation. Going back to the end fed folded full wave it can be seen that one could section the FW in calculus form
in the form of many square circuits. In fact it could be expanded more into mesh form where a transmitted circuit could be one of many in parallel and where I was able to measure a resonant point on a small piece of mesh. Thus the second patent started to grow when I changed a std helix to where the lumped load was cancelled and introducing the mesh radiator to a ground mounted form for top band
instead of the requirement for height. Thus multi frequency small antennas were formed the holy grail of radio.
So that is a rough explanation as to how I got to understand radiation in a different way from the books where as an engineer I started with

Gauss and Maxwell while placing all written theories to the side lines
and working from first principles as I now saw it. Of course looking
at my home page I made many samples and experiments along the way
where I now have a large Faraday cage radiator on the ground and
making a small loop mesh radiator to insert into the Faraday cage to
emulate velocity increase of a beam as with a fire nozzle and
Bernollis theorems where I can reduce the area of resting for
particles
where the number of particles remains a constant where equilibrium
requires a increase in velocity and a tighter beam.
Regards
Art Unwin...KB89MZ...xg (uk)

3464. Re: Faraday shields and radiation and misinterpretations

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-08 01:38:48 UTC
From: tom <news4792@taring.org>
Message-ID: <4b1dadf9$0$33863$8046368a@newsreader.iphouse.net>
Source record: 11676

Art Unwin wrote:
>
> Hard to say. We know what is termed as Leptons which escape from the
> sun and get taken along in the solar stream towards earth.Some where
> along the line they apparently finish up as neutrinos.
> What happens between these events is considered to be Higgs field
> which creates change in the particles. Then there is the connection to
> light and supposed photons which initially attached to particles and
> we know that when the particles from the solar stream provide charge
> to the earths magnetic boundary. But these are just dots in the story
> that wait to be connected but there are many things unknown between
> the points that we theoretically know of which we have no evidence.
> At the moment we have the observations of the masters and to this day
> there is contraversy about particles, waves and the emmission of light
> where the masters observations and equations are still a question of
> discussion. What I have done is to use the equations of the masters
> and connected them in a different mathematical way such they provide
> tracable links between the BIG BANG, the Standard model and radiation
> that matches the computer derivitatation of
> radiation that is in sync with the teachings of the masters especially
> Maxwell, Gauss and of course the Faraday shield, all of which now seem
> to fit together nicely. The true bottom line is that the use of
> Maxwells equations where accountability is taken of all forces
> involved
> have in essense via computer programs provide authenticity to the idea
> of point radiation which leads to efficient small volume antennas.
> And following these edicts I have been able to make radiators of a
> smnaller volume that is known in the present state of the art.

Which all means, according to Lord Art, that an antenna won't radiate in deep space due to lack of the particles (that he isn't sure of the type of) won't be available to coat your antenna in the correct manner so that it will be able to make them leap from it.

Of course if a radio signal consisted of charged particles, like he claims, you could easily bend a radio signal with a static electric field or magnetic field, which you can't. Heck you could run a radio signal around right along with the protons in the Large Hadron Collider. Except for the fact that you can't.

tom
K0TAR

3465. Re: Sunspot news

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-08 01:46:43 UTC
From: JIMMIE <JIMMIEDEE123@YAHOO.COM>
Message-ID: <688028ff-5333-4147-96ce-c2c5cd104fe4@r24g2000yqd.googlegroups.com>
Source record: 11677

On Dec 7, 8:17 pm, tom <news4...@taring.org> wrote:
> Peter wrote:
> > Interesting times;
> > The y2k bug demonstrated the corruption of engineering.
>
> Incorrect.
>
> The Y2K bug demonstrated that in many cases companies wouldn't listen to
> engineers, or more correctly, programmers. Some did, most didn't until
> very late. I was working on Y2K upgrades in 1991 at utility companies.
>   Many other, less critical types waited until much later.
>
> Most programs that really counted, like utility companies billing and
> control programs, were written in the 1960s and no one ever expected
> them to be used for even 10 years without replacement, let alone 30+.
> To blame engineers is foolish, since they had little to do with the
> programs in the first place, or the programmers, who could not foresee
> the future.
>
> And some languages turned out not to have a Y2K "bug" even if you didn't
> handle the years correctly. Like Perl. In most cases the worst thing
> that happened was that it gave a 3 digit year where you expected 2. So
> year 2000 showed as 100. Wasn't a problem in calculations involving
> time spans.
>
> And what little real bits of the Y2K bug that existed was SQUASHED
> before it ever got a chance to happen. By the next and a half
> generation of engineers and programmers. And management that finally
> understood how much they had to lose. At a tremendous cost, 95% of
> which was wasted because management was soooo worried.
>
> tom
> K0TAR

Y2k was certainly no surprise to people in the programming field.
Most off those that it was going to have an effect on were already
aware long before the doomsday predictions began. I know I heard of
this in the 60's when I was in high school.

Jimmie

3466. Re: Fractal Antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-08 02:08:59 UTC
From: JIMMIE <JIMMIEDEE123@YAHOO.COM>
Message-ID: <ccaf2d10-6a26-49bc-aa42-76ce3e1caafc@n35g2000yqm.googlegroups.com>
Source record: 11678

On Dec 7, 3:18 pm, Art Unwin <arthurun...@gmail.com> wrote:
> On Dec 7, 1:27 pm, JIMMIE <JIMMIEDEE...@YAHOO.COM> wrote:
>
>
>
>
>
> > On Dec 6, 5:44 am, EI5DD <EI5DD.5614...@radiobanter.com> wrote:
>
> > > Would anyone have a copy of an article from either 73 or CQ magazine
> > > somewhere around the 90's which contained an article on how to
> > > construct a Fractal Quad antenna for 10 metres. The design was based on
> > > work done by Nathan Coen N1IR.
>
> > > Steve (EI5DD)
>
> > > --
> > > EI5DD
>
> > Folding wire in a fractal pattern to shorten an antenna is probably as
> > good as any other way of folding wire. Maybe better than some.
>
> > JImmie
>
> Correct, Maxwell's laws referes only to the distributed loads which
> remain in place no matter what you do to the wire. For way to long the
> notion of straight radiators have been staked into the folk lore of
> radio
> by those who oppose change. Actually it was present members of this
> particular group who attacked his ideas as a false technology without
> presenting proof, only derision. A line eagerly joined by the pseudo
> experts from the CB era, some of which remain today.- Hide quoted text -
>
> - Show quoted text -

Antenna physically shortened by bending the wires is certainly not new
to amateur radio as any ham with a small yard will atest. To say that
these antennas will work without degradation when compared to their
unaltered counterparts is just wrong.

Jimmie.

3467. Re: Faraday shields and radiation and misinterpretations

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-08 02:23:49 UTC
From: tom <news4792@taring.org>
Message-ID: <4b1db886$0$33862$8046368a@newsreader.iphouse.net>
Source record: 11679

tom wrote:
> Which all means, according to Lord Art, that an antenna won't radiate in
> deep space due to lack of the particles (that he isn't sure of the type
> of) won't be available to coat your antenna in the correct manner so
> that it will be able to make them leap from it.
>
> Of course if a radio signal consisted of charged particles, like he
> claims, you could easily bend a radio signal with a static electric
> field or magnetic field, which you can't. Heck you could run a radio
> signal around right along with the protons in the Large Hadron Collider.
> Except for the fact that you can't.
>
> tom
> K0TAR

Holy Cow! I've discovered the Holy Grail!

I beat you at your own game Art!

If these antennas work like you say, I should be able to make a beam
antenna to any specifications I'd like with magnets or charged plates.

I hereby claim that an antenna type made with charged plates surrounding
a dipole shall be called the K0TAR Unmodulated Electric Plate Beam
Antenna, and the type with cow magnets surrounding a dipole shall be
called the K0TAR Mystifying Magnetic Beam Antenna. And the type with
charged plates AND cow magnets be called the Super Whizbang
ElectroMagnetic Antenna.

Hmm. That last one could be a problem. Since Art has disproved that
there are really EM waves involved here.

I'll have to think about this some more.

I'll get back to you all later.

tom
K0TAR

3468. Re: Best Antenna books?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-08 03:11:33 UTC
From: Jeff Liebermann <jeffl@cruzio.com>
Message-ID: <lkgrh5pobu3492c1fmgmcnjk29dv1tt86n@4ax.com>
Source record: 11680

On Fri, 04 Dec 2009 11:11:53 -0800, Bill Baka <bbaka@comcast.net>
wrote:

>> Many years ago, I used to make the pilgrimage to the Sunnyvale Fry's,
>> Ham Radio Outlet, various nearby surplus stores, and then Computer
>> Literacy Bookstore. After spending far too much money on books, I
>> started to avoid the bookstore. They solved the problem for me by
>> moving locations and finally closing in 2001.
>
>WTF? That was one of my favorite stores to hang out and spend $$$ when I
>lived down there. What happened? They always seemed to be thriving and
>had books on other subjects. Fry's simply never had the books to compete.

I found out the hard way. I prepared an expedition to Computer
Literacy and discovered they were closed. I was seriously bummed as
Stacy's in SF was too far away to drive.

I don't know exactly why they failed, but I think online shopping for
books might have killed them off.

This may help:
<http://en.wikipedia.org/wiki/Computer_Literacy_Bookstore>

>Is there anything in the Sacramento area or even the Silicon Valley area
>anymore?

Dunno. I've been doing most of my book shopping via Alibris and
Amazon.

--
Jeff Liebermann 150 Felker St #D Santa Cruz CA 95060
831-336-2558
http://802.11junk.com jeffl@cruzio.com
http://www.LearnByDestroying.com AE6KS

3469. Re: Sunspot news

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-08 04:09:37 UTC
From: Lostgallifreyan <no-one@nowhere.net>
Message-ID: <Xns9CDB2A4F75EA8zoodlewurdle@216.196.109.145>
Source record: 11681

"Antonio Vernucci" <vernucci@tin.it> wrote in
news:4b1d6f36$0$645$4fafbaef@reader4.news.tin.it:

>> Interesting times;
>> The y2k bug demonstrated the corruption of engineering.
>> WMDs demonstrated the corruption of the intelligence communities.
>> World Financial Crisis demonstrated the corruption of the financial
>> system. And now science!
>
> We are going OT, but just to add a few more:
> - the widely claimed, though undemonstrated, hazard caused by
> (low-level) radio waves demonstrates the corruption of the "green"
> parties around the world, which use that argument to threaten the
> cellular phone companies
>
> - the unjustified panic for some deseases (mad cow, h2n1 swine flu)
> demonstrates the corruption of the organization who should look after
> our health
>
> 73
>
> Tony I0JX
>
> Rome, Italy
>
>

Comes from the illusion of control. Instead of learning from King Canute's demonstration to his courtiers of their folly, a demonstration so vivid we remember it today all over the world, although those who teach it to us deliberately in schools more often try to make him look like the fool while trying to control us and rear us in turn for control.

One reason I'm taking up SWL is that the internet has been great, most useful, but it easily undermines a sense of how large and complex the world is. SWL leaves no illusions about difficulty, distance, and luck, and fate. It reminds me of days when it wasn't so easy to believe in illusions of control.

3470. Re: Sunspot news

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-08 04:29:08 UTC
From: Lostgallifreyan <no-one@nowhere.net>
Message-ID: <Xns9CDB2D9E63471zoodlewurdle@216.196.109.145>
Source record: 11682

tom <news4792@taring.org> wrote in
news:4b1da903$0$47483$8046368a@newsreader.iphouse.net:

> Incorrect.
>
> The Y2K bug demonstrated that in many cases companies wouldn't listen to
> engineers, or more correctly, programmers. Some did, most didn't until
> very late. I was working on Y2K upgrades in 1991 at utility companies.
> Many other, less critical types waited until much later.
>
> Most programs that really counted, like utility companies billing and
> control programs, were written in the 1960s and no one ever expected
> them to be used for even 10 years without replacement, let alone 30+.
> To blame engineers is foolish, since they had little to do with the
> programs in the first place, or the programmers, who could not foresee
> the future.
>

This is true but it doesn't render an 'opposing' view false. People do various things, some change with fashion, maybe don't beleive they're getting value unless it's changed whimsically, bloated to look bigger than the competitor's offering... Others (like me) prefer small efficient modular systems whose parts serve long after and beyond any intent because their makers managed to focus on a singular issue while not losing sight of context while they worked, in effect future-proofing their design to some extent. This lets me adapt things where they won't just continue to work as is.

I think the Y2K 'bug' wasn't corruption, but folly. It only takes a few more bits to store the full year values, yet they were not used. No doubt some engineers did think of it. Similar problems happened in hard disk addressing. I think people are quickly learning that allocating storage for large addresses is MUCH cheaper than fixing it too late, several times a decade. Network addressing with IPv6 for example, that one might never have to change in all our future. We could populate the local group of stars with people before we ran out of addresses that way. (Although I guess many people are more likely to want to network toilets and toasters instead). Even Microsoft deserve a bit of credit with their 2-byte text allocations filled for years with alternating ASCII and zero bytes. Looked stupidly wasteful to me all those years but it's paying off now that Unicode usage extends so much. They evidently learned from Gates' assertion that 640 KB of RAM was more than enough for anyone.

While it's not easy to forsee the future, it IS easy to forsee that modest size addressing systems will be outdated fast, because any successful system gets adapted to more uses even if the total number of users doesn't change.

MIDI, used in music, has become a versatile machine control language, mainly because its inventors did think of this, in 1983, and MIDI continuously outlives its huge number of obituaries.

3471. Re: Faraday shields and radiation and misinterpretations

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-08 08:51:03 UTC
From: Szczepan Bialek <sz.bialek@wp.pl>
Message-ID: <hfl2ut$7a2$1@node1.news.atman.pl>
Source record: 11683

"JIMMIE" <JIMMIEDEE123@YAHOO.COM> wrote
news:a7690566-0408-4bde-a52b-30f981495743@s20g2000yqd.googlegroups.com...
On Dec 7, 3:03 pm, Art Unwin <arthurun...@gmail.com> wrote:
> >
> > > - Show quoted text -
>
> > Lets make sure I follow, You are saying that radio communication
> > occurs because and antenna emits statically charged particle that then
> > imparts their charge to the receiving antenna when they strike the
> > antenna. Is this what you are saying.

Yes. But in form of longitudinal waves. Electrons go out and come back from the end of radiator. For this reason he can wrote: "the idea of point radiation which leads to efficient small volume antennas.
And following these edicts I have been able to make radiators of a smnaller volume that is known in the present state of the art."

When electrons oscillate in a transmitter the voltage at the end of a radiator is doubled and the strong Gauss electric field is produced. Such waves are longitudinal.

>Exactly which particles are you saying are responsible for this?.

Here are many hypothesis. One of them is the Diracs electron see. So the electrons in the conductor kick the electrons in the space. But it is not important. Radio people should know which part of the radiator radiate and what the waves are: normal pressure waves or artifical TEM waves.
S*

3472. Re: need co-ax adapters

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-08 15:19:20 UTC
From: Spamm Trappe <bit-bucket@config.com>
Message-ID: <slrnhhsrk6.g8g.bit-bucket@shell.config.com>
Source record: 11684

On Mon, 7 Dec 2009 11:07:40 -0800 (PST), pdrahn@coinet.com wrote:
> On Dec 7, 10:29ï¿½am, gwatts <gwa...@frontnet.net> wrote:
>> pdr...@coinet.com wrote:
>> > On Dec 7, 7:40 am, MTV <volzte...@comcast.net> wrote:
>> >> pdr...@coinet.com wrote:
>> >>> On Dec 6, 12:01 pm, walt <wbels...@juno.com> wrote:
>> >>>> i need 2 co-ax adapters (actually 3)
>> >>>> 2 ï¿½ double male (pl-259)
>> >>>> 1 ï¿½ elbow (90 degrees)
>> >>>> for picture go towww.waltbelsito.4t.com
>> >>>> go to page 7 ï¿½ click ï¿½misc. stuff
>> >>>> thanks ï¿½ ï¿½WALT ï¿½, ï¿½waterbury , ct .
>> >>> Web link doesn't work, either.
>> >>> KD7HB
>> >> Works for me.
>> >> MTV
>>
>> > That's very interesting! I am using Firefox 3.55 as browser and Google
>> > as home page. Google says his web site doesn't exist. Wonder what
>> > Google is having a problem with?
>>
>> I just tried it (www.waltbelsito.4t.com) again and it worked just fine,
>> my browser (FF 3.5.2) lists the full URL ashttp://www.waltbelsito.4t.com/
>>
>> - W8LNA
>
> The problem is with Google. When I went to Yahoo and pasted in the
> URL, it went immediately to the web site.

The problem is with you -- using Google and Yahoo, et.al. to ride around
on the Whirled Wide Web. Use your browser's freakin' Location Bar to
paste URLs into. *THAT's what it's for.*

Of course, we could go back and reflect on the OP's punctuation and
grammar...

> Isn't the internet wonderful and at the same time gives you pause.

I'm given pause minute by minute out here.

3473. Re: Fractal Antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-08 17:08:04 UTC
From: Jeff Liebermann <jeffl@cruzio.com>
Message-ID: <i81th5p1h90nqo4rftaveqr2o1001ddu00@4ax.com>
Source record: 11685

On Sun, 6 Dec 2009 18:20:17 -0800 (PST), Art Unwin
<arthurunwin@gmail.com> wrote:

>He wasn't the last antenna expert to leave the insults from this
>group,

Ever consider what motivates the real experts to spend their time answering questions? I'm certainly no expert, but I do try to answer what little I can. For me it's learning something new and a karma boost in helping others learn and understand. Passing on my experiences and knowledge and all that.

Now, contrast that with the signal to noise ratio of this group. There isn't any question or discussion that doesn't get derailed into politics, philosophy, and some really off the wall physics. The dedicated experts will try to untangle the mess, and inject some reality into the discussion, with little results. All the time and effort spent in honestly answering on topic questions gets lost and wasted in the apparently endless and useless pseudo science discussions, none of which have any obvious applications to antennas. Little wonder the experts get tired of wasting their time, and go elsewhere.

I have some ideas on how to solve the problem, but since I'm sometimes part of the problem, I'll leave my foot in my mouth where it belongs. I suggest you also reflect on whether you're part of the solution or part of the problem.

--
Jeff Liebermann jeffl@cruzio.com
150 Felker St #D http://www.LearnByDestroying.com
Santa Cruz CA 95060 http://802.11junk.com
Skype: JeffLiebermann AE6KS 831-336-2558

3474. Re: Fractal Antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-08 17:19:04 UTC
From: "Geoffrey S. Mendelson" <gsm@cable.mendelson.com>
Message-ID: <slrnhht2ht.4n6.gsm@cable.mendelson.com>
Source record: 11686

Jeff Liebermann wrote:
> I have some ideas on how to solve the problem, but since I'm sometimes
> part of the problem, I'll leave my foot in my mouth where it belongs.
> I suggest you also reflect on whether you're part of the solution or
> part of the problem.

Or to inject some more meaningless physics, part of the precipitate?

:-)

Geoff.

--
Geoffrey S. Mendelson, Jerusalem, Israel gsm@mendelson.com N3OWJ/4X1GM

3475. Re: Fractal Antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-08 17:33:44 UTC
From: Jeff Liebermann <jeffl@cruzio.com>
Message-ID: <423th5hb9k1p2g48rjtb0es0750bthitci@4ax.com>
Source record: 11687

On Tue, 8 Dec 2009 17:19:04 +0000 (UTC), "Geoffrey S. Mendelson"
<gsm@cable.mendelson.com> wrote:

>Jeff Liebermann wrote:
>> I have some ideas on how to solve the problem, but since I'm sometimes
>> part of the problem, I'll leave my foot in my mouth where it belongs.
>> I suggest you also reflect on whether you're part of the solution or
>> part of the problem.
>
>Or to inject some more meaningless physics, part of the precipitate?
>Geoff.

More like natural philosophy or possibly fizzix. It's also more like
flocculation than precipitation. With a precipitate, all the rot just
settles to other bottom, where it's easy to separate and identify.
With flocculation, the rubbish seems to appear out of nowhere and turn
into flakes, while the topic of discussion remains suspended in
solution.
<http://en.wikipedia.org/wiki/Flocculation>

Let he who is free of off-topic, irrelevant, pseudo-science, and
useless comments, cast the first follow up.

--
Jeff Liebermann jeffl@cruzio.com
150 Felker St #D http://www.LearnByDestroying.com
Santa Cruz CA 95060 http://802.11junk.com
Skype: JeffLiebermann AE6KS 831-336-2558

3476. Re: an ontopic post about code

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-08 20:43:04 UTC
From: kb9rqz@yahoooo.com
Message-ID: <kieth5lrpak07kjid6dmip9gapr0j5cjaf@4ax.com>
Source record: 11688
Cross-posted to: alt.ham-radio.vhf-uhf,rec.radio.amateur.policy,rec.radio.amateur.antenna

On Fri, 01 Dec 2006 09:36:47 -0800, John Smith
<assemblywizard@gmail.com> wrote:

>K4YZ wrote:
>> Nope.
>>
>> The IP Address and servers are complete proof that I do NOT share
>> any annonymous character's "address".
>>
>> Sounds like Lennie, to me....
>>
>> Steve, K4YZ
>>
>
>To anyone with even an elementary understanding of anonymous proxies,
>anonymous remailers, zombie backdoors, etc., the ability to change ones
>IP address and header details is simplistic, indeed, with little time
>spent anyone can appear to be "coming" from anywhere in the world.
>
>You waste my time. Worse, you think us all idiots here. You remind me
>of the "street smart" prosecutors and defense attorneys who stack jurys
>with members of little or no technical knowledge and then call in
>"expert witnesses" and propose arguments of technical details to boggle
>their minds.
>
>You have only proven that you, yourself are either ignorant to such
>technical details, or else you are indeed street smart, I favor the
>latter in this case (however, if you in the dark about such things, 15
>minutes on google will enlighten you.)
>
>JS

"one useless man is disgrace 2 become a law firm 3 or more become a congress"
adams

woger you are a Congress all in your own head
"http://www.3ix.org/sys/aff.php?aff=7439" target="_blank"

altopia is never used by KB9RQZ
http://kb9rqz.cc.cc
http://kd8ctl.com
nor is Konstans@hotmail.com ever
btw i can be found at
17366 N River Rd

Chassel Mi

but the cowards asking lack the gut to act

3477. Re: Faraday shields and radiation and misinterpretations

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-08 22:46:45 UTC
From: Dave <k1ttt@arrl.net>
Message-ID: <50a7bf85-7986-4468-ad50-58baf624c894@d20g2000yqh.googlegroups.com>
Source record: 11689

On Dec 8, 1:34 am, Art Unwin <arthurun...@gmail.com> wrote:
> On Dec 7, 5:20 pm, Dave <k1...@arrl.net> wrote:
>
> > i don't care if this guy is a troll or an idiot... keep him going, its
> > great stuff.
>
> > still rotflmao
>
> If one would just read in succession the posts above one might get the
> impression that I sat at a desk while in deep thought until I
> connected the dots which provided a exp-lanation of radiation where
> the books stated that radiation in itself was not fully understood.
> That is so far from the truth. Going to the physics books one can see
> examples where the maxwell equations was proven in many ways by the
> use of contributingequations. One proof that you don't see is the
> gaussian static field as a proof possibly because we had a conflict in
> metrics ie cgs and MKS
> which possibly authors did not want to use for fear of muddying the
> water. From my point of view I saw it as a transition from a static
> field to a dynamic field which in itself was swhat Maxwell equations
> were showing. Sharing this observation on this group and other places
> drew nothing but cat calls because of the sillines of connecting
> statics with electricity as presently known. Pursuit via computer
> programs and other thoughts regarding equilibrium allowed me to
> formulate an array
> where equilibrrium was in existance and all elements were resonant in
> the form of a full wave. Thus my work on unwinantennas .com began
> because I had destroyed some old wives tales. Then the second patent
> came where again I focussed on FW antennas to obsolete the idea of
> ground planes which I did by folding the FW dipole into an end fed
> form but with the question remaining regarding my thoughts on the
> standard model. Needless to say it showed that a verticle must be
> tipped with respect to ground via the very nature of these two fectors
> representing gravity and rotation. Going back to the end fed folded
> full wave it can be seen that one could section the FW in calculus
> form
> in the form of many square circuits. In fact it could be expanded more
> into mesh form where a transmitted circuit could be one of many in
> parallel and where I was able to measure a resonant point on a small
> piece of mesh. Thus the second patent started to grow when I changed a
> std helix to where the lumped load was cancelled and introducing the
> mesh radiator to a ground mounted form for top band
> instead of the requirement for height. Thus multi frequency small
> antennas were formed the holy grail of radio.

> So that is a rough explanation as to how I got to understand radiation
> in a different way from the books where as an engineer I started with
> Gauss and Maxwell while placing all written theories to the side lines
> and working from first principles as I now saw it. Of course looking
> at my home page I made many samples and experiments along the way
> where I now have a large Faraday cage radiator on the ground and
> making a small loop mesh radiator to insert into the Faraday cage to
> emulate velocity increase of a beam as with a fire nozzle and
> Bernollis theorems where I can reduce the area of resting for
> particles
> where the number of particles remains a constant where equilibrium
> requires a increase in velocity and a tighter beam.
> Regards
> Art Unwin...KB89MZ...xg (uk)

ah, so now you are going to shoot particles from a fire hose faster
than light... that should be an interesting antenna. send me a
picture of it yesterday so i can comment on it the day before and we
could set up a whole backwards in time thread.

3478. Re: Faraday shields and radiation and misinterpretations

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-08 22:48:48 UTC
From: Dave <k1ttt@arrl.net>
Message-ID: <10d8c82a-9bfa-40ad-8475-04c993c7214e@m3g2000yqf.googlegroups.com>
Source record: 11690

On Dec 8, 8:51 am, "Szczepan Bialek" <sz.bia...@wp.pl> wrote:
> "JIMMIE" <JIMMIEDEE...@YAHOO.COM>
wrotenews:a7690566-0408-4bde-a52b-30f981495743@s20g2000yqd.googlegroups.com...
> On Dec 7, 3:03 pm, Art Unwin <arthurun...@gmail.com> wrote:
>
>
>
> > > > - Show quoted text -
>
> > > Lets make sure I follow, You are saying that radio communication
> > > occurs because and antenna emits statically charged particle that then
> > > imparts their charge to the receiving antenna when they strike the
> > > antenna. Is this what you are saying.
>
> Yes. But in form of longitudinal waves. Electrons go out and come back from
> the end of radiator. For this reason he can wrote: "the idea of point
> radiation which leads to efficient small volume antennas.
> And following these edicts I have been able to make radiators of a
> smnaller volume that is known in the present state of the art."
>
> When electrons oscillate in a transmitter the voltage at the end of a
> radiator is doubled and the strong Gauss electric field is produced. Such
> waves are longitudinal.
>
> >Exactly which particles are you saying are responsible for this?.
>
> Here are many hypothesis. One of them is the Diracs electron see. So the
> electrons in the conductor kick the electrons in the space. But it is not
> important. Radio people should know which part of the radiator radiate and
> what the waves are: normal pressure waves or artifical TEM waves.
> S*

so how do antennas encased in insulators work at all?

3479. Re: need co-ax adapters

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-09 02:40:39 UTC
From: Bob <rmiller47@satx.rr.com>
Message-ID: <rd3uh5ppsii4lboqkl4f0820tpll50tpa3@4ax.com>
Source record: 11691

On Sun, 6 Dec 2009 12:01:57 -0800 (PST), walt <wbelsito@juno.com>
wrote:

>i need 2 co-ax adapters (actually 3)
>
>2 double male (pl-259)
>
>1 elbow (90 degrees)
>
>for picture go to www.waltbelsito.4t.com
>
>go to page 7 click misc. stuff
>
>thanks WALT , waterbury , ct .

The Wireman (website) has every coax connector variation known to
humankind.

bob
k5qwg

3480. Don't Forget To Vote....Mark Morgan, KB9RQZ, Nim's Cocksucker of the Year

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-09 06:29:41 UTC
From: Marqueer Morgan <marqueer.morgan@gmail.com>
Message-ID: <20773ab2-cb1f-4b45-acf4-7d61b24b61b8@d10g2000yqh.googlegroups.com>
Source record: 11692
Cross-posted to: rec.radio.amateur.misc,rec.radio.amateur.policy,alt.usenet.kooks,rec.radio.cb,rec.radio.amateur.antenna

http://nimbusters.org/forum/poll/index.php?board=8
Let's make it two years in a row!

REMEMBER:
Mark, cocksucker again in 2010 !

3481. Re: Faraday shields and radiation and misinterpretations

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-09 08:30:08 UTC
From: Szczepan Bialek <sz.bialek@wp.pl>
Message-ID: <hfnm35jpi1@node1.news.atman.pl>
Source record: 11695

"Dave" <k1ttt@arrl.net> wrote
news:10d8c82a-9bfa-40ad-8475-04c993c7214e@m3g2000yqf.googlegroups.com...
On Dec 8, 8:51 am, "Szczepan Bialek" <sz.bia...@wp.pl> wrote:
> "JIMMIE" <JIMMIEDEE...@YAHOO.COM>
> wrotenews:a7690566-0408-4bde-a52b-30f981495743@s20g2000yqd.googlegroups.com...
> On Dec 7, 3:03 pm, Art Unwin <arthurun...@gmail.com> wrote:
>
>
>
> > > > - Show quoted text -
>
>> > > Lets make sure I follow, You are saying that radio communication
> > > occurs because and antenna emits statically charged particle that then
> > > imparts their charge to the receiving antenna when they strike the
> > > antenna. Is this what you are saying.
>
>> Yes. But in form of longitudinal waves. Electrons go out and come back
>> from
> the end of radiator. For this reason he can wrote: "the idea of point
> radiation which leads to efficient small volume antennas.
> And following these edicts I have been able to make radiators of a
> smnaller volume that is known in the present state of the art."
>
>> When electrons oscillate in a transmitter the voltage at the end of a
> radiator is doubled and the strong Gauss electric field is produced. Such
> waves are longitudinal.
>
>> >Exactly which particles are you saying are responsible for this?.
>
>> Here are many hypothesis. One of them is the Diracs electron see. So the
> electrons in the conductor kick the electrons in the space. But it is not
> important. Radio people should know which part of the radiator radiate and
> what the waves are: normal pressure waves or artifical TEM waves.
> S*

>so how do antennas encased in insulators work at all?

For this Maxwell invented the displacement current. It is oscillating
current in insulators. In insulators are charges which can not flow bat only
can oscillate. They can oscillate to and fro and/or rotate about some angle.

For the transverse wave they rotate.
For longitudinal to and fro.

But such seperate waves are only in the math. Real waves have always the two components. Always dominate the longitudinal.
S*

3482. Re: Fractal Antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-09 16:03:46 UTC
From: Michael Coslo <mjc5@psu.edu>
Message-ID: <hfohp2$9k40$1@tr22n12.aset.psu.edu>
Source record: 11693

Art Unwin wrote:
> On Dec 7, 1:27 pm, JIMMIE <JIMMIEDEE...@YAHOO.COM> wrote:
>> On Dec 6, 5:44 am, EI5DD <EI5DD.5614...@radiobanter.com> wrote:
>>
>>> Would anyone have a copy of an article from either 73 or CQ magazine
>>> somewhere around the 90's which contained an article on how to
>>> construct a Fractal Quad antenna for 10 metres. The design was based on
>>> work done by Nathan Coen N1IR.
>>> Steve (EI5DD)
>>> --
>>> EI5DD
>> Folding wire in a fractal pattern to shorten an antenna is probably as
>> good as any other way of folding wire. Maybe better than some.
>>
>> JImmie
>
> Correct, Maxwell's laws referes only to the distributed loads which
> remain in place no matter what you do to the wire. For way to long the
> notion of straight radiators have been staked into the folk lore of
> radio
> by those who oppose change. Actually it was present members of this
> particular group who attacked his ideas as a false technology without
> presenting proof, only derision. A line eagerly joined by the pseudo
> experts from the CB era, some of which remain today.

So does this fractal antenna perform better than any other antenna? They seem like a solution so a specific problem, not as the sort of thing you would use if say you wanted high performance or had space to put a more conventional antenna into service.

- 73 de Mike N3LI -

3483. Re: Fractal Antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-09 16:08:29 UTC
From: Michael Coslo <mjc5@psu.edu>
Message-ID: <hfoi22$9k42$1@tr22n12.aset.psu.edu>
Source record: 11694

Art Unwin wrote:
> On Dec 7, 12:14 pm, Bill <k4...@arrl.net> wrote:
>> On Dec 6, 9:20 pm, Art Unwin <arthurun...@gmail.com> wrote:
>>
>>
>>
>>> On Dec 6, 7:47 pm, "amdx" <a...@knology.net> wrote:
>>>> "danl" <daninxpa...@gmail.com> wrote in message
>>>> news:2ainh510c1eviue0daktv5j4epdqsv2doo@4ax.com...> On Sun, 6 Dec 2009 10:44:30
+0000, EI5DD
>>>>> <EI5DD.5614...@radiobanter.com> wrote:
>>>>>> Would anyone have a copy of an article from either 73 or CQ magazine
>>>>>> somewhere around the 90's which contained an article on how to
>>>>>> construct a Fractal Quad antenna for 10 metres. The design was based on
>>>>>> work done by Nathan Coen N1IR.
>>>>>> Steve (EI5DD)
>>>>> Popcorn! GET YER HOT BUTTERD POPCORN HERE! Popcorn!
>>>>> N9JBF
>>>>>> Whisper< Does the Buffoon still come around?
>>>> I don't think he is buffoon, he had an idea that was novel and looks like
>>>> he is selling a bunch of them.
>>>> Mike
>>> No he isn't a buffoon, he had a Doctorate!
>> A non sequitur. Look at posts by fracte...@aol.com and decide about
>> buffoonery. Cohen loved to threaten people.http://opsyhopsy.com/MiscJunk/who_is_nc.htm
>
> He stood up for himself, nothing wrong with that

What I'm curious about is what exactly does he own? Does he own the
fractal patterns? the formula to derive the fractal patters. Just what?
The Madelbort and Julia sets? If it the above, I'm outta here to go get
a patent on Pi and all it's applications.

- 73 de Mike N3LI -

3484. Re: Fractal Antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-09 16:29:51 UTC
From: Michael Coslo <mjc5@psu.edu>
Message-ID: <hfoj9v$741u$1@tr22n12.aset.psu.edu>
Source record: 11697

JIMMIE wrote:
> On Dec 7, 3:18 pm, Art Unwin <arthurun...@gmail.com> wrote:
>> On Dec 7, 1:27 pm, JIMMIE <JIMMIEDEE...@YAHOO.COM> wrote:
>>
>>
>>
>>
>>
>>> On Dec 6, 5:44 am, EI5DD <EI5DD.5614...@radiobanter.com> wrote:
>>>> Would anyone have a copy of an article from either 73 or CQ magazine
>>>> somewhere around the 90's which contained an article on how to
>>>> construct a Fractal Quad antenna for 10 metres. The design was based on
>>>> work done by Nathan Coen N1IR.
>>>> Steve (EI5DD)
>>>> --
>>>> EI5DD
>>> Folding wire in a fractal pattern to shorten an antenna is probably as
>>> good as any other way of folding wire. Maybe better than some.
>>> JImmie
>> Correct, Maxwell's laws referes only to the distributed loads which
>> remain in place no matter what you do to the wire. For way to long the
>> notion of straight radiators have been staked into the folk lore of
>> radio
>> by those who oppose change. Actually it was present members of this
>> particular group who attacked his ideas as a false technology without
>> presenting proof, only derision. A line eagerly joined by the pseudo
>> experts from the CB era, some of which remain today.- Hide quoted text -
>>
>> - Show quoted text -
>
> Antenna physically shortened by bending the wires is certainly not new
> to amateur radio as any ham with a small yard will atest. To say that
> these antennas will work without degradation when compared to their
> unaltered counterparts is just wrong.

That's the point I don't get, Jimmie. I don't know that anyone is
saying these antennas don't work. I think its a matter of just how well
they work. The answer is often "not very".

Yes, we can get a lot of things to radiate. Wires folded in a fractal
pattern will radiate, so will wires folded in a random pattern. Woe is
the day someone gets a patent on "random".

Antennas that are a tuned circuit on top of a length of coax will
radiate - at least the coax will.

So what? When I was a kid I made a little model of a radio telescope antenna out of copper wire and Aluminum foil. It was about 12 inches in diameter. Took a wire and attached it to an old radio. It worked better than no wire attached. Not that I'm going to promote it as a good antenna though.

- 73 de Mike N3LI -

3485. get kelp

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-09 16:32:00 UTC
From: kb9rqz@yahoooo.com
Message-ID: <d7kvh55b7n40g8hjh9rmv403bk5nq4mdnf@4ax.com>
Source record: 11696
Cross-posted to: rec.radio.amateur.misc,rec.radio.amateur.policy,alt.usenet.kooks,rec.radio.amateur.antenna

On Tue, 8 Dec 2009 22:29:41 -0800 (PST), Marqueer Morgan
<marqueer.morgan@gmail.com> wrote:

>
>http://nimbusters.org/forum/poll/index.php?board=8
>Let's make it two years in a row!
>
>REMEMBER:
>Mark, cocksucker again in 2010 !

"one useless man is disgrace 2 become a law firm 3 or more become a congress"
adams

woger you are a Congress all in your own head
"http://www.3ix.org/sys/aff.php?aff=7439" target="_blank"

altopia is never used by KB9RQZ
http://kb9rqz.cc.cc
http://kd8ctl.com
nor is Konstans@hotmail.com ever
btw i can be found at
17366 N River Rd
Chassel Mi

but the cowards asking lack the gut to act

3486. Re: Fractal Antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-09 17:10:22 UTC
From: Lostgallifreyan <no-one@nowhere.net>
Message-ID: <Xns9CDCAEAFB5497zoodlewurdle@216.196.109.145>
Source record: 11698

Michael Coslo <mjc5@psu.edu> wrote in
news:hfoj9v$741u$1@tr22n12.aset.psu.edu:

> Woe is
> the day someone gets a patent on "random".

Nope. Celebrate it. If it happens the patent system will lose credibility as a protection, let alone value for money, and people will rely on copyright law instead. Maybe that needs reform but the patent system is irredeemable in my view. The sooner it is terminally discredited the better.

That was off-topic, I know, but I withstood a few temptations already, and I won't get carried away. I don't expect everyone to agree so I won't argue it. if someome makes something work, and can get paid for the actual work, good for them, I don't think anyone should stand in the way of that. If people want to protect ideas, write them down, date them, and copyright them. That way plagiarism is preventable but suppression of anything remotely resembling it is not a legal option. And people won't be able to make claims for garbage while citing patents that shouldn't have been granted anyway, and wouldn't, if those granted could understand what was behind the obfuscating nonsense that some try to pass as a real invention.

/rant.

3487. Re: Fractal Antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-09 19:42:35 UTC
From: Jeff Liebermann <jeffl@cruzio.com>
Message-ID: <e9vvh5pgva4h50356b03h2hpj4iqjkposo@4ax.com>
Source record: 11699

On Wed, 09 Dec 2009 11:29:51 -0500, Michael Coslo <mjc5@psu.edu>
wrote:

>Woe is
>the day someone gets a patent on "random".

Go to:
<http://www.google.com/patents>
and inscribe "random" or "random antenna" into the search box.

--
Jeff Liebermann jeffl@cruzio.com
150 Felker St #D http://www.LearnByDestroying.com
Santa Cruz CA 95060 http://802.11junk.com
Skype: JeffLiebermann AE6KS 831-336-2558

3488. Re: Fractal Antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-09 20:08:34 UTC
From: Michael Coslo <mjc5@psu.edu>
Message-ID: <hfp042$fg44$1@tr22n12.aset.psu.edu>
Source record: 11700

Jeff Liebermann wrote:
> On Wed, 09 Dec 2009 11:29:51 -0500, Michael Coslo <mjc5@psu.edu>
> wrote:
>
>> Woe is
>> the day someone gets a patent on "random".
>
> Go to:
> <http://www.google.com/patents>
> and inscribe "random" or "random antenna" into the search box.

I did google fractal. I can see that the different inventors do seem to be using similar fractals for their antennas. It looks to me as if what is needed for me to design my own without fear of infringement would be to just do some minor change, get my own patent, then there ya go.

Cohen's particular patents seem just fine as far as I can see.

Not specifically involved with fractals, but with the concept of patents in general, it looks as if we are seeing intellectual property rights run rampant. While no one should be denied the fruits of their cleverness, the system has devolved to the point where people are just ginning up patents with minor changes in hopes that someone infringes on them. Then they hit the jackpot, you bet.

The system kind of reminds me of the rednecks who play the disability lottery, hoping to get hurt so they can collect.

- 73 de Mike N3LI -

3489. installing isolator on a transceiver

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-09 21:07:18 UTC
From: Ed <Huckleberries_REMOVE_@q.com>
Message-ID: <Xns9CDC857A2D64AHuckleberryQwest@198.186.192.196>
Source record: 11501

We have 2M packet node transceivers at a new government radio site. The new site owner requires isolators be installed on all transmitters. As you might surmise, it doesn't seem possible to do so on a simplex one RF port radio such an Alinco DR-135.

Anyone out there with some realistic suggestions on how we might manage to do this?

Ed K7AAT

3490. Re: installing isolator on a transceiver

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-09 21:42:11 UTC
From: MTV <volztexas@comcast.net>
Message-ID: <UQUTm.311513$Xw3.12511@en-nntp-04.dc1.easynews.com>
Source record: 11502

Ed wrote:
> We have 2M packet node transceivers at a new government radio site. The
> new site owner requires isolators be installed on all transmitters. As you
> might surmise, it doesn't seem possible to do so on a simplex one RF port
> radio such an Alinco DR-135.
>
> Anyone out there with some realistic suggestions on how we might manage
> to do this?
>
> Ed K7AAT

Maybe just an RF isolator in the AC line?

MTV

3491. Three Element Quad Reconstruction

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-09 21:49:29 UTC
From: Tom Horne <hornetd@gmail.com>
Message-ID: <f69ead4d-74b3-46ad-aa6b-4f200c3bdc2b@d9g2000prh.googlegroups.com>
Source record: 11503

I have to following quad parts that I got from a fella for whom I took a tower down. Three spiders, twelve fiberglass poles, three small copper coils, and a massive boom to mast fitting. I am wondering if it might be worth rehabilitating the original antenna which is a tri band 20, 15, 10 meter three element quad of unknown manufacture. I have two AB-952 masts with extension kits that I use for special event towers. I have a Hy-gain tri-band Yagi-Uda for one antenna but no suitable antenna to top the other tower for field day, SET, and so forth. I'm looking for insight from those who have actually assembled quads. Is it practical, if one is well organized to use a quad as a special event antenna? How long might it take to assemble once it is fully assembled and tested and then carefully dismantled into a well marked kit. I am open to hearing that there is an equal or better performer that would be easier to assemble for a height of only fifty feet. The positions I've read so far indicate a greater gain, a lower take off angle at any given height, as well as a quieter receiving performance for the quad. Naturally I would prefer real world experience to a theoretical discussion partially because I am not yet well educated enough in antenna theory to fully understand the theoretical arguments.

3492. Re: installing isolator on a transceiver

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-09 22:21:41 UTC
From: Wimpie <wimabctel@tetech.nl>
Message-ID: <ade7883f-bee4-48c3-a04f-9f32e5703594@p8g2000yqb.googlegroups.com>
Source record: 11504

On 9 dic, 22:07, Ed <Huckleberries_REMO...@q.com> wrote:
> We have 2M packet node transceivers at a new government radio site. The
> new site owner requires isolators be installed on all transmitters. As you
> might surmise, it doesn't seem possible to do so on a simplex one RF port
> radio such an Alinco DR-135.
>
> Anyone out there with some realistic suggestions on how we might manage
> to do this?
>
> Ed K7AAT

Hello Ed,

Is this because of intermodulation products due to the non-linear
behavior of the PA? If the site owner is technical, you might discuss
a band pass filter as this also reduces undesired mixing of other
signals in your equipment's PA.

Best regards,

Wim
PA3DJS
www.tetech.nl
Don't forget to remove abc in case of PM.

3493. Re: installing isolator on a transceiver

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-09 22:34:19 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <8e90i5dl9mje2llkkkto87j0dagvkeh3ns@4ax.com>
Source record: 11505

On 09 Dec 2009 21:07:18 GMT, Ed <Huckleberries_REMOVE_@q.com> wrote:

>
>
> We have 2M packet node transceivers at a new government radio site. The
>new site owner requires isolators be installed on all transmitters. As you
>might surmise, it doesn't seem possible to do so on a simplex one RF port
>radio such an Alinco DR-135.
>
> Anyone out there with some realistic suggestions on how we might manage
>to do this?
>
> Ed K7AAT

Are you confusing an isolator with a duplexer?

73's
Richard Clark, KB7QHC

3494. Re: installing isolator on a transceiver

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-09 22:35:57 UTC
From: dplatt@radagast.org
Message-ID: <dbl5v6-rb3.ln1@radagast.org>
Source record: 11506

In article <Xns9CDC857A2D64AHuckleberryQwest@198.186.192.196>,
Ed <Huckleberries_REMOVE_@q.com> wrote:

> We have 2M packet node transceivers at a new government radio site. The
>new site owner requires isolators be installed on all transmitters. As you
>might surmise, it doesn't seem possible to do so on a simplex one RF port
>radio such an Alinco DR-135.
>
> Anyone out there with some realistic suggestions on how we might manage
>to do this?

You could probably do this with an isolator, a pair of SPDT coaxial
relays, and some modifications to the PTT circuitry between the rig
and the TNC.

You'd install the SPDT relays between the radio and the antenna.
Between the "normally closed" switchable ports, install a coaxial
number. Between the "normally open" ports, connect the isolator.

Take the PTT signal coming out of the TNC, and feed it to a bit of
circuitry (possibly analog, possibly discrete digital, possibly a
little 8-pin PIC micro). The effect of this circuitry would be detect
PTT from the TNC, drive a signal to the relays to switch them "on",
delay about 10 milliseconds (long enough for the relays to switch, and
stop bouncing), and then feed PTT to the radio. When PTT from the TNC
is deasserted, drop PTT to the radio immediately, wait around 10
milliseconds, and then turn off the relays.

--
Dave Platt <dplatt@radagast.org> AE6EO
Friends of Jade Warrior home page: http://www.radagast.org/jade-warrior
I do _not_ wish to receive unsolicited commercial email, and I will
boycott any company which has the gall to send me such ads!

3495. Re: installing isolator on a transceiver

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-09 22:48:13 UTC
From: Jeff Liebermann <jeffl@cruzio.com>
Message-ID: <4h90i5pinf077mmcplnmv89dlc8mmbchfi@4ax.com>
Source record: 11507

On 09 Dec 2009 21:07:18 GMT, Ed <Huckleberries_REMOVE_@q.com> wrote:

> We have 2M packet node transceivers at a new government radio site. The
>new site owner requires isolators be installed on all transmitters. As you
>might surmise, it doesn't seem possible to do so on a simplex one RF port
>radio such an Alinco DR-135.

The isolator has to go between the PA stage, after the low pass
filter, but before the T/R switch. That will require some surgery
inside the radio to bring out two coax cables to the external
isolator.

I'm rather surprised that a government site would allow a DR-135T
radio. While the DR-135T is perfectly suitable for a stand alone
packet radio application, such radios don't do very well in an high RF
polluted environment.

Has anyone done an intermod calculation for all the radios in the
building?

> Anyone out there with some realistic suggestions on how we might manage
>to do this?
> Ed K7AAT

See above. If the site manager is fairly liberal, you might be able
to convince him that a simple bandpass cavity will suffice. It should
work because your packet box is running simplex. Even if he demands
an isolator, you still should have some manner of cavity BPF in the
line. I don't mean a little tiny soda can size cavity, but rather
something larger, with skirts that are way down. See cavity on the
left:
<http://www.LearnByDestroying.com/k6bj/K6BJ%20Repeater/slides/2m%20rx%20cavity.html>

--
Jeff Liebermann 150 Felker St #D Santa Cruz CA 95060
831-336-2558
http://802.11junk.com jeffl@cruzio.com
http://www.LearnByDestroying.com AE6KS

3496. Re: installing isolator on a transceiver

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-09 22:59:18 UTC
From: dplatt@radagast.org
Message-ID: <6nm5v6-m94.ln1@radagast.org>
Source record: 11508

In article <UQUTm.311513$Xw3.12511@en-nntp-04.dc1.easynews.com>,
MTV <volztexas@comcast.net> wrote:

>Maybe just an RF isolator in the AC line?

That would be solving an entirely different problem.

At many sites, it's necessary to install an isolator/circulator
between each transmitter and antenna. This prevents strong RF signals
from *other* transmitters at the site from coming back down the
feedline into your energized transmitter, intermodulating with your
own signal in the transmitter's finals, and bleeding nasty intermod
products back out up into your antenna.

This is a bit tricky to do if your radio doesn't have separate
"transmit out" and "receive in" ports. If you stick an isolator
between a single-poort transceiver and its antenna, the receiver won't
hear the incoming signal very well at all.. most of the received
signal power will be circulated away into the circulator's dummy load.

You either need to open up the transceiver and separate out the TX and
RX ports, or figure some way to bypass the circulator (e.g. a pair of
relays) when receiving.

--
Dave Platt <dplatt@radagast.org> AE6EO
Friends of Jade Warrior home page: http://www.radagast.org/jade-warrior
I do _not_ wish to receive unsolicited commercial email, and I will
boycott any company which has the gall to send me such ads!

3497. Re: get kelp

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-09 23:55:12 UTC
From: kb9rqz <mark@kb9rqz.com>
Message-ID: <aae0363e-1ed1-4993-86c9-9981d3f91f86@l13g2000yqb.googlegroups.com>
Source record: 11509
Cross-posted to: rec.radio.amateur.misc,rec.radio.amateur.policy,alt.usenet.kooks,rec.radio.amateur.antenna

On Dec 9, 11:32 am, kb9...@yahoooo.com wrote:
> On Tue, 8 Dec 2009 22:29:41 -0800 (PST), Marqueer Morgan
>
> <marqueer.mor...@gmail.com> wrote:
>
> >http://nimbusters.org/forum/poll/index.php?board=8
> >Let's make it two years in a row!
>
> >REMEMBER:
> >Mark, cocksucker again in 2010 !
>
> "one useless man is disgrace 2 become a law firm 3 or more become a congress"
> adams
>
> woger you are a Congress all in your own head
> "http://www.3ix.org/sys/aff.php?aff=7439" target="_blank"
>
> altopia is never used by KB9RQZhttp://kb9rqz.cc.cchttp://kd8ctl.com
> nor is Konst...@hotmail.com ever
> btw i can be found at
> 17366 N River Rd
> Chassel Mi
>
> but the cowards asking lack the gut to act

3498. Re: installing isolator on a transceiver

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-10 00:06:16 UTC
From: Ed <Huckleberries_REMOVE_@q.com>
Message-ID: <Xns9CDCA3D204C76HuckleberryQwest@198.186.192.196>
Source record: 11510

>
> We have 2M packet node transceivers at a new government radio site.
> The
> new site owner requires isolators be installed on all transmitters.
> As you might surmise, it doesn't seem possible to do so on a simplex
> one RF port radio such an Alinco DR-135.
>
> Anyone out there with some realistic suggestions on how we might
> manage
> to do this?
>
> Ed K7AAT
>

Thanks to those who have responded already. I was hoping for some elegant solution I had not thought of, but so far nothing has come to light. Also I was hoping there would be some way to implement this wihthout relays.... but maybe not.

Regarding the comment about breaking out the Rx line to a separate output... that might be possible but its solid state switching and would be somewhat tricky to implement right after this solid state PA module output.

One reason I hate the thought of adding antenna relays to switch the Rx around the isolator is that this is a busy packet node and I don't like the reliability issues a couple of added relays might add to a presently solid state switched radio.. . although I could do this if forced to.

We have operated at this site since before the new vault was built and all present customers simply moved over to it so to answer the question posed, no ... no calculations have been done... but the new owner "requires" isolators. The best solution for this situaion might be to gather a few respected technical persons who this non-technical site owner is familiar with and perhaps convince him this isn't necessary.

OR.. we could easily add a pass cavity of two and hope that this would passify him.

We will see.

I'm still open to another other new or inovative solutions.

Thanks.

Ed K7AAT

3499. Re: installing isolator on a transceiver

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-10 00:18:05 UTC
From: MTV <volztexas@comcast.net>
Message-ID: <27XTm.311566$Xw3.16106@en-nntp-04.dc1.easynews.com>
Source record: 11511

Dave Platt wrote:
> In article <UQUTm.311513$Xw3.12511@en-nntp-04.dc1.easynews.com>,
> MTV <volztexas@comcast.net> wrote:
>
>> Maybe just an RF isolator in the AC line?
>
> That would be solving an entirely different problem.
>
> At many sites, it's necessary to install an isolator/circulator
> between each transmitter and antenna. This prevents strong RF signals
> from *other* transmitters at the site from coming back down the
> feedline into your energized transmitter, intermodulating with your
> own signal in the transmitter's finals, and bleeding nasty intermod
> products back out up into your antenna.
>
> This is a bit tricky to do if your radio doesn't have separate
> "transmit out" and "receive in" ports. If you stick an isolator
> between a single-poort transceiver and its antenna, the receiver won't
> hear the incoming signal very well at all.. most of the received
> signal power will be circulated away into the circulator's dummy load.
>
> You either need to open up the transceiver and separate out the TX and
> RX ports, or figure some way to bypass the circulator (e.g. a pair of
> relays) when receiving.
>

Thanks for the info
MTV

3500. Re: installing isolator on a transceiver

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-10 01:15:59 UTC
From: dplatt@radagast.org
Message-ID: <fnu5v6-9h7.ln1@radagast.org>
Source record: 11518

> Thanks to those who have responded already. I was hoping for some
>elegant solution I had not thought of, but so far nothing has come to
>light. Also I was hoping there would be some way to implement this
>wihthout relays.... but maybe not.
>
> Regarding the comment about breaking out the Rx line to a separate
>output... that might be possible but its solid state switching and would
>be somewhat tricky to implement right after this solid state PA module
>output.
>
> One reason I hate the thought of adding antenna relays to switch the Rx
>around the isolator is that this is a busy packet node and I don't like
>the reliability issues a couple of added relays might add to a presently
>solid state switched radio.. . although I could do this if forced to.

Another option is to buy a second radio, and use it for the receive channel. Your existing transceiver would be used solely as a transmitter, and could thus be hard-wired to an isolator.

You'd need to run the receiver on a different antenna, or have some form of switchable protection circuit to keep it from having its brains blown out by the transmitter.

--
Dave Platt <dplatt@radagast.org> AE6EO
Friends of Jade Warrior home page: http://www.radagast.org/jade-warrior
I do _not_ wish to receive unsolicited commercial email, and I will
boycott any company which has the gall to send me such ads!

3501. Re: installing isolator on a transceiver

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-10 01:23:19 UTC
From: Jeff Liebermann <jeffl@cruzio.com>
Message-ID: <v6h0i5tiafkovep785cab9sd29s3shgdl7@4ax.com>
Source record: 11512

On 10 Dec 2009 00:06:16 GMT, Ed <Huckleberries_REMOVE_@q.com> wrote:

> One reason I hate the thought of adding antenna relays to switch the Rx
>around the isolator is that this is a busy packet node and I don't like
>the reliability issues a couple of added relays might add to a presently
>solid state switched radio.. . although I could do this if forced to.

We have T/R switches using the stock reed relays that come with Mitrek
radios on several 420Mhz links. My guess about 1,000 cycles per day.
The average lifetime for the reeds is about 2 years. I've lost count
how many reeds I've replaced. Fortunately, Digikey has a nice
assortment of reeds. I hear the Mitrek packet boxes are about the
same, although that's not my headache. If you're going to do the
external T/R switch, think solid state.

>no calculations have been done...

Do them. I manage a local site stuffed full of assorted xmitters.
I've prevented disaster more than once with some simple calculations.

<http://www3.telus.net/PassiveRF/>
<http://www.tcstx.com/software/Intermodulation.cfm>

> but the new owner
>"requires" isolators.

That's just the beginning. The site I run is rather loose. Mostly
hams and junk. So far, there's been no need for a major cleanup,
although I'm tempted. From memory, some other sites require:
1. Circulators *AND* cavities on all xmitters.
2. Demonstrate that spurious tx rubbish is -60dB down.
3. Heliax everywhere.
4. No dissimilar metals on the coax connectors and adapters.
5. No nickel plating on anything carrying RF. (no Radio Shack junk)
6. All modems, routers, computers, and must be in a metal box with
RFI/EMI protection.
7. Remote on/off switching (to disable the xmitter if it goes
insane).
8. Posted current licenses (FCC requirement).
9. Lightning protection everywhere.
10. Shielded and grounded data lines (CAT5).

Here's what CDF (Cal Fire) requires to share their vault:
<http://webmain02.fire.ca.gov/pubs/issuance/8000/rvsapp.pdf>
I've seen worse.

Ah, I found one that's worse:
<http://www.elsinorepeak.com/documents.html>
Ummm... don't let the new site owner see these.

Incidentally, I spent several months trying to identify the source of an intermod mix that was wrecking one of the ham repeaters. It would come and go with no obvious pattern, making it difficult to find. I finally got lucky by breaking protocol and unplugging customers equipment while listening for changes. The last desperation act was to unplug the 117VAC to 24VDC battery charger for the diesel generator. That was it. The problem was that it was completely shielded in both the case and the in/out wires. It was also directly below the antenna structure, which is a low radiation location. The moral is "That which is most obvious correct, beyond all need of checking, is usually the problem". Do things the *RIGHT* way.

>The best solution for this situaion might be to
>gather a few respected technical persons who this non-technical site
>owner is familiar with and perhaps convince him this isn't necessary.

Well, intimidation does work. Make sure your respected technical people bring along some muscle. If that doesn't work, try beer or wine.

> OR.. we could easily add a pass cavity of two and hope that this
>would passify him.

The cavity will work well enough if you don't have any other xmitters on nearby frequencies in the building. However, as one of those technical types, my never humble opinion is that the DR-135T is not the best of radios and will need all the protection you can provide.

> I'm still open to another other new or inovative solutions.

Plan A:
Hybrid Ring Duplexer.
<http://www.repeater-builder.com/antenna/hybridring.html>
It should give enough isolation so that you can run the receiver full time without a T/R switch. The problem is that I'm not sure it will work on a single frequency. I gotta do some RTFM first. You'll still need to bring out the receiver input coax, but at least there's no external T/R switch or relays. Also, put something on the receiver input to keep from blowing it up if there's too much VSWR.

Plan B:
Build a clone of the internal DR-135T T/R antenna switch. Bring out the TX and RX coaxes externally. Install a cavity in the antenna line and an isolator in the TX line. Install the T/R switch near the antenna junction.

Plan C: Use 2 radios, one for TX and one for RX.

--
Jeff Liebermann 150 Felker St #D Santa Cruz CA 95060

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# 831-336-2558
# http://802.11junk.com jeffl@cruzio.com
# http://www.LearnByDestroying.com AE6KS
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3502. Re: Three Element Quad Reconstruction

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-10 01:31:37 UTC
From: JIMMIE <JIMMIEDEE123@YAHOO.COM>
Message-ID: <fc1d4b73-e89f-4bba-bf4c-aa8f010baece@k19g2000yqc.googlegroups.com>
Source record: 11513

On Dec 9, 4:49 pm, Tom Horne <horn...@gmail.com> wrote:
> I have to following quad parts that I got from a fella for whom I took
> a tower down. Three spiders, twelve fiberglass poles, three small
> copper coils, and a massive boom to mast fitting. I am wondering if
> it might be worth rehabilitating the original antenna which is a tri
> band 20, 15, 10 meter three element quad of unknown manufacture. I
> have two AB-952 masts with extension kits that I use for special event
> towers. I have a Hy-gain tri-band Yagi-Uda for one antenna but no
> suitable antenna to top the other tower for field day, SET, and so
> forth. I'm looking for insight from those who have actually assembled
> quads. Is it practical, if one is well organized to use a quad as a
> special event antenna? How long might it take to assemble once it is
> fully assembled and tested and then carefully dismantled into a well
> marked kit. I am open to hearing that there is an equal or better
> performer that would be easier to assemble for a height of only fifty
> feet. The positions I've read so far indicate a greater gain, a lower
> take off angle at any given height, as well as a quieter receiving
> performance for the quad. Naturally I would prefer real world
> experience to a theoretical discussion partially because I am not yet
> well educated enough in antenna theory to fully understand the
> theoretical arguments.

Sounds like the makings of a good antenna . I use a 4 element quads on
10 6 & 2 meters.

3503. Re: Three Element Quad Reconstruction

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-10 01:35:32 UTC
From: JIMMIE <JIMMIEDEE123@YAHOO.COM>
Message-ID: <afbed504-9ab2-49b3-ab2f-2e4e3aa680ba@j24g2000yqa.googlegroups.com>
Source record: 11514

On Dec 9, 8:31 pm, JIMMIE <JIMMIEDEE...@YAHOO.COM> wrote:
> On Dec 9, 4:49 pm, Tom Horne <horn...@gmail.com> wrote:
>
>
>
>
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> > experience to a theoretical discussion partially because I am not yet
> > well educated enough in antenna theory to fully understand the
> > theoretical arguments.
>
> Sounds like the makings of a good antenna . I use a 4 element quads on
> 10 6 & 2 meters.- Hide quoted text -
>
> - Show quoted text -

ooops 10 M is 2 eleement

Jimmie

3504. Re: Faraday shields and radiation and misinterpretations

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-10 01:43:27 UTC
From: Dave <k1ttt@arrl.net>
Message-ID: <e734641c-0354-49ba-9f77-61c5ac492b48@k17g2000yqh.googlegroups.com>
Source record: 11515

On Dec 9, 8:30 am, "Szczepan Bialek" <sz.bia...@wp.pl> wrote:
> "Dave" <k1...@arrl.net>
wrotenews:10d8c82a-9bfa-40ad-8475-04c993c7214e@m3g2000yqf.googlegroups.com...
> On Dec 8, 8:51 am, "Szczepan Bialek" <sz.bia...@wp.pl> wrote:
>
>
>
>
>
> > "JIMMIE" <JIMMIEDEE...@YAHOO.COM>
> > wrotenews:a7690566-0408-4bde-a52b-30f981495743@s20g2000yqd.googlegroups.com...
> > On Dec 7, 3:03 pm, Art Unwin <arthurun...@gmail.com> wrote:
>
> > > > > > - Show quoted text -
>
> >> > > Lets make sure I follow, You are saying that radio communication
> > > > occurs because and antenna emits statically charged particle that then
> > > > imparts their charge to the receiving antenna when they strike the
> > > > antenna. Is this what you are saying.
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> >> Yes. But in form of longitudinal waves. Electrons go out and come back
> >> from
> > the end of radiator. For this reason he can wrote: "the idea of point
> > radiation which leads to efficient small volume antennas.
> > And following these edicts I have been able to make radiators of a
> > smnaller volume that is known in the present state of the art."
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> >> When electrons oscillate in a transmitter the voltage at the end of a
> > radiator is doubled and the strong Gauss electric field is produced. Such
> > waves are longitudinal.
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> >> >Exactly which particles are you saying are responsible for this?.
>
> >> Here are many hypothesis. One of them is the Diracs electron see. So the
> > electrons in the conductor kick the electrons in the space. But it is not
> > important. Radio people should know which part of the radiator radiate and
> > what the waves are: normal pressure waves or artifical TEM waves.
> > S*
> >so how do antennas encased in insulators work at all?
>
> For this Maxwell invented the displacement current. It is oscillating
> current in insulators. In insulators are charges which can not flow bat only
> can oscillate. They can oscillate to and fro and/or rotate about some angle.
>

> For the transverse wave they rotate.
> For longitudinal to and fro.
>
> But such seperate waves are only in the math. Real waves have always the two
> components. Always dominate the longitudinal.
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> - Show quoted text -

but you said that "conductor kick the electrons in the space", now its
not electrons? So which is it? do you believe in art and his
particles that get kicked off the diamagnetic elements, or in the
maxwell displacement current that requires no particles?

maxwell's math only describes the real waves and they are always
transverse. the only fictional mathematical waves are standing
waves... they aren't real waves, just figments of someone's bad math
meant to confuse poor amateurs.

3505. Re: Three Element Quad Reconstruction

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-10 01:57:47 UTC
From: nm5k@wt.net
Message-ID: <1d4978bc-4491-4fe9-bcbf-25346b7fdee1@y24g2000yqb.googlegroups.com>
Source record: 11516

On Dec 9, 3:49 pm, Tom Horne <horn...@gmail.com> wrote:
> How long might it take to assemble once it is
> fully assembled and tested and then carefully dismantled into a well
> marked kit. I am open to hearing that there is an equal or better
> performer that would be easier to assemble for a height of only fifty
> feet. The positions I've read so far indicate a greater gain, a lower
> take off angle at any given height, as well as a quieter receiving
> performance for the quad. Naturally I would prefer real world
> experience to a theoretical discussion partially because I am not yet
> well educated enough in antenna theory to fully understand the
> theoretical arguments.

Greater gain per element? The way I see it is the 3 el quad would
have slightly more gain only due to the slight extra gain of it's loop
driven element, vs a dipole driven element on a 3 el yagi.
Is the extra gain worth the extra trouble? Not to me, but mpg will
vary to the user..
Lower angles per a given height above ground? I'd have to model them
to compare, but I don't think it would be enough to worry about.
Lower noise levels? This one I don't agree with unless you are in
an area such as high altitudes where corona discharge might be an
issue.
For most normal uses, I don't believe the loop has any lower noise
than a dipole. Noise is RF just like any other signal. If a certain
antenna receives less noise than another, it would also receive
a lower level from desired signals if they were from the same
direction and angle. For the most part, I think the claims of lower
noise reception from loops vs dipoles are pretty much hooey, and
not worth worrying about.

By "special event" antenna, I assume you mean one which can
be hauled and erected at most any location. IE: much the same
as a "field day" antenna..
It's up to you, and the amount of work you want to deal with.
Would I use a 3 el quad for a special events or field day array?
Nope.. Too much work and maintenance for my blood. :(
For a portable beam that can be planted about anywhere I use
a short tiltover-crankup tower with a A4S planted on it.
http://home.comcast.net/~nm5k/fd01-1.jpg
The tower can fit in the back of my trucks, but I now have a
motorcycle trailer that can haul it all.
http://home.comcast.net/~nm5k/fd2.jpg
And even that setup is a bit of work, and requires more than
one person to erect. But it can be slapped together and cranked
into the air fairly fast if I have a few extra hands standing around.

The performance while not earthshaking is pretty good.
They won 10m phone with it the first year I tried it. And 20
and 15 are good on it too, being as it's pretty much full size
on all bands. IE: the 20/15m reflector is 32 feet.. And 10m
has it's own reflector which is at a better spacing than if it
were using the larger reflector for all three bands.
BTW, my rig doesn't go to 50 feet. Only about 31 feet..
But that's usually plenty high enough for gov work on the
higher bands.

3506. Re: Faraday shields and radiation and misinterpretations

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-10 02:03:38 UTC
From: JIMMIE <JIMMIEDEE123@YAHOO.COM>
Message-ID: <f6bad95a-66db-41a3-9582-a8ac56ae893f@m25g2000yqc.googlegroups.com>
Source record: 11517

On Dec 9, 8:43 pm, Dave <k1...@arrl.net> wrote:
> On Dec 9, 8:30 am, "Szczepan Bialek" <sz.bia...@wp.pl> wrote:
>
>
>
>
>
> > "Dave" <k1...@arrl.net>
wrotenews:10d8c82a-9bfa-40ad-8475-04c993c7214e@m3g2000yqf.googlegroups.com...
> > On Dec 8, 8:51 am, "Szczepan Bialek" <sz.bia...@wp.pl> wrote:
>
> > > "JIMMIE" <JIMMIEDEE...@YAHOO.COM>
> > > wrotenews:a7690566-0408-4bde-a52b-30f981495743@s20g2000yqd.googlegroups.com...
> > > On Dec 7, 3:03 pm, Art Unwin <arthurun...@gmail.com> wrote:
>
> > > > > > > - Show quoted text -
>
> > >> > > Lets make sure I follow, You are saying that radio communication
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> transverse. the only fictional mathematical waves are standing
> waves... they aren't real waves, just figments of someone's bad math
> meant to confuse poor amateurs.- Hide quoted text -
>
> - Show quoted text -

Art fails to recongnize that if he were right all present day antenna
designs would be wrong an could not possibly work. Unfortunately for
Art we have been able to succesfully design antennas using mathmatics
with accurate preditable outcome for 100 years.

Jimmie

3507. Re: installing isolator on a transceiver

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-10 02:40:41 UTC
From: Ed <Huckleberries_REMOVE_@q.com>
Message-ID: <Xns9CDCBE0055302HuckleberryQwest@198.186.192.196>
Source record: 11519

>
> Another option is to buy a second radio, and use it for the receive
> channel. Your existing transceiver would be used solely as a
> transmitter, and could thus be hard-wired to an isolator.
>
> You'd need to run the receiver on a different antenna, or have some
> form of switchable protection circuit to keep it from having its
> brains blown out by the transmitter.
>

Of all the possibilites, I like this one the best... for reliability
and simplicity. We actually are antenna rich at this site. We also have a
small surplus of 2M transceivers, of which the receivers would probably
work just fine for packet.

If we can not negotiate an exemption from the management, I think this
is my first choice.

Thanks to all.

Ed

.

3508. Re: installing isolator on a transceiver

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-10 03:09:35 UTC
From: Jeff Liebermann <jeffl@cruzio.com>
Message-ID: <98p0i5ht8ue5kandl7h0jrhppnsubtj71g@4ax.com>
Source record: 11520

On Wed, 09 Dec 2009 17:23:19 -0800, Jeff Liebermann <jeffl@cruzio.com>
wrote:

>Here's what CDF (Cal Fire) requires to share their vault:
><http://webmain02.fire.ca.gov/pubs/issuance/8000/rvsapp.pdf>
>I've seen worse.
>
>Ah, I found one that's worse:
><http://www.elsinorepeak.com/documents.html>
>Ummm... don't let the new site owner see these.

More:
<http://www.repeater-builder.com/antenna/site-stuff/radiositerules.html>
ALL LMR and PAGING TRANSMITTERS not equipped with a Pass-Notch
duplexer, will have an additional pass cavity installed to prevent
spurious emissions and minimize ambient RF noise to the other
equipment installed at this, and adjacent sites. An isolator
is also required between the transmitter and the cavity.
There are to be no PA decks, isolators or circulators looking
directly into an antenna, even a temporarily unused one.

I forgot to mention my pet peeve. Please label everything. Extra
credit for a block diagram showing where the wires and cables are
suppose to go. Here's mine:
<http://www.LearnByDestroying.com/k6bj/K6BJ%20Repeater/slides/Documentation.html>
Ummm... Bad example. Do like I say, not like I do.

--
Jeff Liebermann 150 Felker St #D Santa Cruz CA 95060
831-336-2558
http://802.11junk.com jeffl@cruzio.com
http://www.LearnByDestroying.com AE6KS

3509. Re: Faraday shields and radiation and misinterpretations

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-10 03:24:57 UTC
From: Art Unwin <arthurunwin@gmail.com>
Message-ID: <9025351c-cec1-41be-882d-df3cd18f0962@k19g2000yqc.googlegroups.com>
Source record: 11521

On Dec 9, 7:43 pm, Dave <k1...@arrl.net> wrote:
> On Dec 9, 8:30 am, "Szczepan Bialek" <sz.bia...@wp.pl> wrote:
>
>
>
> > "Dave" <k1...@arrl.net>
wrotenews:10d8c82a-9bfa-40ad-8475-04c993c7214e@m3g2000yqf.googlegroups.com...
> > On Dec 8, 8:51 am, "Szczepan Bialek" <sz.bia...@wp.pl> wrote:
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> > > "JIMMIE" <JIMMIEDEE...@YAHOO.COM>
> > > wrotenews:a7690566-0408-4bde-a52b-30f981495743@s20g2000yqd.googlegroups.com...
> > > On Dec 7, 3:03 pm, Art Unwin <arthurun...@gmail.com> wrote:
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> > >> > > Lets make sure I follow, You are saying that radio communication
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> > > > > antenna. Is this what you are saying.
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> > > the end of radiator. For this reason he can wrote: "the idea of point
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> > > And following these edicts I have been able to make radiators of a
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> > >> When electrons oscillate in a transmitter the voltage at the end of a
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> > > S*
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Hold it now! The present aproach involving waves is correct but the waves themselves are a closed circuits without mass. The change from potential energy to kinetic energy is an accellerating term that is limited in a closed circuit by a decelleration of change or transformation of energy. For energy to be transported outside the boundary then mass is a requirement.

The same interaction goes on inside a cathode ray tube where it is mass or a particle that hits or impacts the inside of the screen. It is the same action that levitates an aluminum can(mass) and lofts it thru the air into a bin. In other words it is similar to the time taken for energy to change from a kinetic to a potential energy within mass.

An analogy is the amount of energy and time taken for heated water to change into steam.Gauss shows that to change from a static form to a dynamic form both time and mass are the metrics that are used. And that is true for both classical and particle physics where true analysis of the universe must be the same regardless of the methods used.

This does not mean that present radiators do not radiate, it means that present day antennas do not radiate efficiently as they only account for approx 90% of that which creates radiation. I state again, that when transporting energy there is an absolute necessity for mass, and it is mass that escapes from a energy field where the energy field is in the form of a closed circuit.

If you so desire you can fall in line with present day thinking that a particle is sometimes a wave but the same source clearly states that radiation is not fully understood, so the choice is yours tho it is acknoweledged as not fully explainable.

3510. Re: Faraday shields and radiation and misinterpretations

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-10 05:37:47 UTC
From: K7ITM <k7itm@msn.com>
Message-ID: <e3382e34-3b41-42de-b8a1-4017ffa8c5cd@s21g2000prm.googlegroups.com>
Source record: 11522

On Dec 9, 12:30 am, "Szczepan Bialek" <sz.bia...@wp.pl> wrote:
> "Dave" <k1...@arrl.net>
wrotenews:10d8c82a-9bfa-40ad-8475-04c993c7214e@m3g2000yqf.googlegroups.com...
> On Dec 8, 8:51 am, "Szczepan Bialek" <sz.bia...@wp.pl> wrote:
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> > "JIMMIE" <JIMMIEDEE...@YAHOO.COM>
> > wrotenews:a7690566-0408-4bde-a52b-30f981495743@s20g2000yqd.googlegroups.com...
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> can oscillate. They can oscillate to and fro and/or rotate about some angle.
...
Hmmm. Are you suggesting that there is no displacement current in a
capacitance that uses a vacuum for dielectric?

Sigh. I'm glad I didn't have to learn E&M from reading r.r.a.a.

Cheers,
Tom

3511. Re: Faraday shields and radiation and misinterpretations

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-10 05:54:00 UTC
From: Frank <frank@spamfree.telus.net>
Message-ID: <Y10Um.56854$PH1.18772@edtnps82>
Source record: 11523

>Hmmm. Are you suggesting that there is no displacement current in a
>capacitance that uses a vacuum for dielectric?

>Sigh. I'm glad I didn't have to learn E&M from reading r.r.a.a.

And from people who cannot begin to understand even the most
elementary math.

Frank (VE6CB)

3512. Re: Faraday shields and radiation and misinterpretations

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-10 10:16:24 UTC
From: Szczepan Bialek <sz.bialek@wp.pl>
Message-ID: <hfqglp$38n$1@node1.news.atman.pl>
Source record: 11524

"Dave" <k1ttt@arrl.net> wrote
news:e734641c-0354-49ba-9f77-61c5ac492b48@k17g2000yqh.googlegroups.com...
On Dec 9, 8:30 am, "Szczepan Bialek" <sz.bia...@wp.pl> wrote:
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> > S*
> >so how do antennas encased in insulators work at all?
>
>> For this Maxwell invented the displacement current. It is oscillating

> current in insulators. In insulators are charges which can not flow bat
> only
> can oscillate. They can oscillate to and fro and/or rotate about some
> angle.
>
>> For the transverse wave they rotate.
> For longitudinal to and fro.
>
>> But such seperate waves are only in the math. Real waves have always the
>> two
> components. Always dominate the longitudinal.
> S*- Hide quoted text -
>
> - Show quoted text -

>but you said that "conductor kick the electrons in the space", now its
not electrons? So which is it? do you believe in art and his
particles that get kicked off the diamagnetic elements, or in the
maxwell displacement current that requires no particles?

In Maxwell times no electrons but only electricity. DC current flows only in
the closed circuit. AC current oscillate to and fro in the open circuit
because in insulator are also charges (electricity). The same electricity
was in the space. Maxwell did the description of such aether. Now no aether
but the Maxwell's math was modiffed by Heaviside.

>maxwell's math only describes the real waves and they are always
transverse.

Maxwell proposed the aether model with the transverse waves. There were the
vortex see and the idle gear.

> the only fictional mathematical waves are standing
waves... they aren't real waves, just figments of someone's bad math
meant to confuse poor amateurs.

When a wave reflects the amplitude is doubling. This doubling is real in the
acustics and in antennas.
The doubling is possible only in the compressible medium (air or electron
gas). The elecreicity in Maxwell's model and in the Heaviside math is
incompressible.
S*

3513. Re: Faraday shields and radiation and misinterpretations

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-10 10:33:22 UTC
From: Szczepan Bialek <sz.bialek@wp.pl>
Message-ID: <hfqhlm$3eb$1@node1.news.atman.pl>
Source record: 11525

"K7ITM" <k7itm@msn.com>wrote
news:e3382e34-3b41-42de-b8a1-4017ffa8c5cd@s21g2000prm.googlegroups.com...
On Dec 9, 12:30 am, "Szczepan Bialek" <sz.bia...@wp.pl> wrote:
> "Dave" <k1...@arrl.net>
> wrotenews:10d8c82a-9bfa-40ad-8475-04c993c7214e@m3g2000yqf.googlegroups.com...
> On Dec 8, 8:51 am, "Szczepan Bialek" <sz.bia...@wp.pl> wrote:
>
>
>
> > "JIMMIE" <JIMMIEDEE...@YAHOO.COM>
> > wrotenews:a7690566-0408-4bde-a52b-30f981495743@s20g2000yqd.googlegroups.com...
> > On Dec 7, 3:03 pm, Art Unwin <arthurun...@gmail.com> wrote:
>
> > > > > > - Show quoted text -
>
> >> > > Lets make sure I follow, You are saying that radio communication
> > > > occurs because and antenna emits statically charged particle that
> > > > then
> > > > imparts their charge to the receiving antenna when they strike the
> > > > antenna. Is this what you are saying.
>
> >> Yes. But in form of longitudinal waves. Electrons go out and come back
> >> from
> > the end of radiator. For this reason he can wrote: "the idea of point
> > radiation which leads to efficient small volume antennas.
> > And following these edicts I have been able to make radiators of a
> > smnaller volume that is known in the present state of the art."
>
> >> When electrons oscillate in a transmitter the voltage at the end of a
> > radiator is doubled and the strong Gauss electric field is produced.
> > Such
> > waves are longitudinal.
>
> >> >Exactly which particles are you saying are responsible for this?.
>
> >> Here are many hypothesis. One of them is the Diracs electron see. So
> >> the
> > electrons in the conductor kick the electrons in the space. But it is
> > not
> > important. Radio people should know which part of the radiator radiate
> > and
> > what the waves are: normal pressure waves or artifical TEM waves.
> > S*
> >so how do antennas encased in insulators work at all?

>
> For this Maxwell invented the displacement current. It is oscillating
> current in insulators. In insulators are charges which can not flow bat
> only
> can oscillate. They can oscillate to and fro and/or rotate about some
> angle.
...
>Hmmm. Are you suggesting that there is no displacement current in a
capacitance that uses a vacuum for dielectric?

Yes. But it is not suggestion. The displacement current is necessary for the
incompressible electricity.
Now we know that the voltage is doubled (Marx high voltage generator) and
that means that the electron gas is compressible.
The dielectric between capacitor plates undergos the electrostriction.

>Sigh. I'm glad I didn't have to learn E&M from reading r.r.a.a.

But it is interesting to look at Maxwell's drawings to his model of the
vortex see with the idle gear.
S*

Cheers,
Tom

3514. Re: Faraday shields and radiation and misinterpretations

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-10 13:47:34 UTC
From: Dave <k1ttt@arrl.net>
Message-ID: <0a69a18f-527d-4daa-8a50-569d424aba59@y24g2000yqb.googlegroups.com>
Source record: 11526

On Dec 10, 3:24 am, Art Unwin <arthurun...@gmail.com> wrote:
> On Dec 9, 7:43 pm, Dave <k1...@arrl.net> wrote:
>
>
>
> > On Dec 9, 8:30 am, "Szczepan Bialek" <sz.bia...@wp.pl> wrote:
>
> > > "Dave" <k1...@arrl.net>
wrotenews:10d8c82a-9bfa-40ad-8475-04c993c7214e@m3g2000yqf.googlegroups.com...
> > > On Dec 8, 8:51 am, "Szczepan Bialek" <sz.bia...@wp.pl> wrote:
>
> > > > "JIMMIE" <JIMMIEDEE...@YAHOO.COM>
> > > > wrotenews:a7690566-0408-4bde-a52b-30f981495743@s20g2000yqd.googlegroups.com...
> > > > On Dec 7, 3:03 pm, Art Unwin <arthurun...@gmail.com> wrote:
>
> > > > > > > > - Show quoted text -
>
> > > >> > > Lets make sure I follow, You are saying that radio communication
> > > > > > occurs because and antenna emits statically charged particle that then
> > > > > > imparts their charge to the receiving antenna when they strike the
> > > > > > antenna. Is this what you are saying.
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> > > >> Yes. But in form of longitudinal waves. Electrons go out and come back
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> > > > the end of radiator. For this reason he can wrote: "the idea of point
> > > > radiation which leads to efficient small volume antennas.
> > > > And following these edicts I have been able to make radiators of a
> > > > smnaller volume that is known in the present state of the art."
>
> > > >> When electrons oscillate in a transmitter the voltage at the end of a
> > > > radiator is doubled and the strong Gauss electric field is produced. Such
> > > > waves are longitudinal.
>
> > > >> >Exactly which particles are you saying are responsible for this?.
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> > > >> Here are many hypothesis. One of them is the Diracs electron see. So the
> > > > electrons in the conductor kick the electrons in the space. But it is not
> > > > important. Radio people should know which part of the radiator radiate and
> > > > what the waves are: normal pressure waves or artifical TEM waves.
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> > > >so how do antennas encased in insulators work at all?
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> > > current in insulators. In insulators are charges which can not flow bat only

> > > can oscillate. They can oscillate to and fro and/or rotate about some angle.
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> > > For the transverse wave they rotate.
> > > For longitudinal to and fro.
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> > > But such seperate waves are only in the math. Real waves have always the two
> > > components. Always dominate the longitudinal.
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>
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> > but you said that "conductor kick the electrons in the space", now its
> > not electrons? So which is it? do you believe in art and his
> > particles that get kicked off the diamagnetic elements, or in the
> > maxwell displacement current that requires no particles?
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> > maxwell's math only describes the real waves and they are always
> > transverse. the only fictional mathematical waves are standing
> > waves... they aren't real waves, just figments of someone's bad math
> > meant to confuse poor amateurs.
>
> Hold it now! The present aproach involving waves is correct but the
> waves themselves are a closed circuits without mass. The change from
> potential energy to kinetic energy is an accellerating term that is
> limited in a closed circuit by a decelleration of change or
> transformation of energy. For energy to be transported outside the
> boundary then mass is a requirement.

sorry, but no. mass is not a requirement for transporting energy.

> The same interaction goes on inside a cathode ray tube where it is
> mass or a particle that hits or impacts the inside of the screen.
> It is the same action that levitates an aluminum can(mass) and lofts
> it thru the air into a bin. In other words it is similar to the time
> taken for energy to change from a kinetic to a potential energy within
> mass.
> An analogy is the amount of energy and time taken for heated water to
> change into steam.Gauss shows that to change from a static form
> to a dynamic form both time and mass are the metrics that are used.
> And that is true for both classical and particle physics where true
> analysis of the universe must be the same regardless of the methods
> used.
> This does not mean that present radiators do not radiate, it means
> that present day antennas do not radiate efficiently as they only
> account for approx 90% of that which creates radiation. I state again,
> that when transporting energy there is an absolute necessity for mass,
> and it is mass that escapes from a energy field where the energy
> field is in the form of a closed circuit.
> If you so desire you can fall in line with present day thinking that
> a particle is sometimes a wave but the same source clearly states that
> radiation is not fully understood, so the choice is yours tho it is

> acknoweledged as not fully explainable.- Hide quoted text -
>
> - Show quoted text -

particles are particles and waves are waves unless you start talking quantum mechanics when all bets are off... fortunately quantum mechanics is not needed to discuss electromagnetic phenomena. if there were 10% missing energy in the maxwell equations i am quite sure it would have been found by now, we can measure waves much more accurately than that and have been able to for many years. the verifications of accuracy of nec and other programs based on maxwell's equations shows that quite well. if you don't believe it, find the missing terms and publish them in a peer reviewed journal so they can be shot full of holes.

3515. Re: Faraday shields and radiation and misinterpretations

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-10 16:44:04 UTC
From: Art Unwin <arthurunwin@gmail.com>
Message-ID: <e4569b84-8999-4ff1-8d6f-f472b9a68207@s31g2000yqs.googlegroups.com>
Source record: 11527

On Dec 10, 7:47 am, Dave <k1...@arrl.net> wrote:
> On Dec 10, 3:24 am, Art Unwin <arthurun...@gmail.com> wrote:
>
>
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> > On Dec 9, 7:43 pm, Dave <k1...@arrl.net> wrote:
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> > > On Dec 9, 8:30 am, "Szczepan Bialek" <sz.bia...@wp.pl> wrote:
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> > > > "Dave" <k1...@arrl.net>
wrotenews:10d8c82a-9bfa-40ad-8475-04c993c7214e@m3g2000yqf.googlegroups.com...
> > > > On Dec 8, 8:51 am, "Szczepan Bialek" <sz.bia...@wp.pl> wrote:
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> > > > > "JIMMIE" <JIMMIEDEE...@YAHOO.COM>
> > > > > wrotenews:a7690566-0408-4bde-a52b-30f981495743@s20g2000yqd.googlegroups.com...
> > > > > On Dec 7, 3:03 pm, Art Unwin <arthurun...@gmail.com> wrote:
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> > > > > - Show quoted text -
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> > > > >> > Lets make sure I follow, You are saying that radio communication
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> > > > > imparts their charge to the receiving antenna when they strike the
> > > > > antenna. Is this what you are saying.
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> > > > >> Yes. But in form of longitudinal waves. Electrons go out and come back
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> > > > > the end of radiator. For this reason he can wrote: "the idea of point
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> > > > > And following these edicts I have been able to make radiators of a
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> > > > >> When electrons oscillate in a transmitter the voltage at the end of a
> > > > > radiator is doubled and the strong Gauss electric field is produced. Such
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> > > > > S*
> > > > >so how do antennas encased in insulators work at all?
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> > > > For this Maxwell invented the displacement current. It is oscillating
> > > > current in insulators. In insulators are charges which can not flow bat only
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> > > > For the transverse wave they rotate.
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> > > > But such seperate waves are only in the math. Real waves have always the two
> > > > components. Always dominate the longitudinal.
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> > > but you said that "conductor kick the electrons in the space", now its
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> > waves themselves are a closed circuits without mass. The change from
> > potential energy to kinetic energy is an accellerating term that is
> > limited in a closed circuit by a decelleration of change or
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> > boundary then mass is a requirement.
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> sorry, but no. mass is not a requirement for transporting energy>
>
I am willing to learn! What is the carrier for energy and how?

>
> > The same interaction goes on inside a cathode ray tube where it is
> > mass or a particle that hits or impacts the inside of the screen.
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> > to a dynamic form both time and mass are the metrics that are used.
> > And that is true for both classical and particle physics where true
> > analysis of the universe must be the same regardless of the methods
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> > This does not mean that present radiators do not radiate, it means
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> > account for approx 90% of that which creates radiation. I state again,

> > that when transporting energy there is an absolute necessity for mass,
> > and it is mass that escapes from a energy field where the energy
> > field is in the form of a closed circuit.
> > If you so desire you can fall in line with present day thinking that
> > a particle is sometimes a wave but the same source clearly states that
> > radiation is not fully understood, so the choice is yours tho it is
> > acknoweledged as not fully explainable.- Hide quoted text -
>
> > - Show quoted text -
>
> particles are particles and waves are waves

Quite correct, one is an adjective and the other is a noun.
You can put a particle into a container, a wave you cannot

unless you start talking
> quantum mechanics when all bets are off...

An answer in science is acceptable if it matches well known facts
So here we have two sciences that squable about who is right and who
is wrong in describing the same phenomina

fortunately quantum
> mechanics is not needed to discuss electromagnetic phenomena. if
> there were 10% missing energy in the maxwell equations i am quite sure
> it would have been found by now,

A planar design of radiator does not conform with Maxwell's equations.
Following Maxwell's equations provides accountability of all forces
and NEC programs are very capable of showing this by divulging that
same 10% of missing energy.

we can measure waves much more
> accurately than that and have been able to for many years. the
> verifications of accuracy of nec and other programs based on maxwell's
> equations shows that quite well. if you don't believe it, find the
> missing terms and publish them in a peer reviewed journal so they

can
> be shot full of holes.

The relevent term was added in the Maxwell corrections of his
equations. See the sample on my page.

How about supplying some facts to back up your claims so they can be
discussed?

3516. Re: Faraday shields and radiation and misinterpretations

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-10 17:08:13 UTC
From: Dave <k1ttt@arrl.net>
Message-ID: <5fda043c-bf33-47c5-b637-1a571a222a5e@k19g2000yqc.googlegroups.com>
Source record: 11528

On Dec 10, 4:44 pm, Art Unwin <arthurun...@gmail.com> wrote:
> On Dec 10, 7:47 am, Dave <k1...@arrl.net> wrote:
>
>
>
> > On Dec 10, 3:24 am, Art Unwin <arthurun...@gmail.com> wrote:
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> > > On Dec 9, 7:43 pm, Dave <k1...@arrl.net> wrote:
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> > > > > "Dave" <k1...@arrl.net>
wrotenews:10d8c82a-9bfa-40ad-8475-04c993c7214e@m3g2000yqf.googlegroups.com...
> > > > > On Dec 8, 8:51 am, "Szczepan Bialek" <sz.bia...@wp.pl> wrote:
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> > > > > > "JIMMIE" <JIMMIEDEE...@YAHOO.COM>
> > > > > > wrotenews:a7690566-0408-4bde-a52b-30f981495743@s20g2000yqd.googlegroups.com...
> > > > > > On Dec 7, 3:03 pm, Art Unwin <arthurun...@gmail.com> wrote:
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> > > > > > - Show quoted text -
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> > > > > > And following these edicts I have been able to make radiators of a
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> > > > > >> When electrons oscillate in a transmitter the voltage at the end of a
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> > > > > > waves are longitudinal.
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> > > > > >> >Exactly which particles are you saying are responsible for this?.
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> > > > > > what the waves are: normal pressure waves or artifical TEM waves.
> > > > > > S*

> > > > > >so how do antennas encased in insulators work at all?
>
> > > > > For this Maxwell invented the displacement current. It is oscillating
> > > > > current in insulators. In insulators are charges which can not flow bat only
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> > > boundary then mass is a requirement.
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> > sorry, but no. mass is not a requirement for transporting energy>
>
> I am willing to learn! What is the carrier for energy and how?
>
>

photons are one thing that can carry energy but have no mass.
electric field interactions between electrons transfer energy with no
mass.

>
>
>
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> > > The same interaction goes on inside a cathode ray tube where it is
> > > mass or a particle that hits or impacts the inside of the screen.
> > > It is the same action that levitates an aluminum can(mass) and lofts
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> > > If you so desire you can fall in line with present day thinking that
> > > a particle is sometimes a wave but the same source clearly states that
> > > radiation is not fully understood, so the choice is yours tho it is
> > > acknoweledged as not fully explainable.- Hide quoted text -
>
> > > - Show quoted text -
>
> > particles are particles and waves are waves
>
> Quite correct, one is an adjective and the other is a noun.
> You can put a particle into a container, a wave you cannot

waves reside just fine in containers. take a look at cavity
resonators some day. in my dictionary 'wave' is a perfectly good noun
or verb, i see no use of it as an adjective... maybe you need a new
dictionary.

>
> unless you start talking
>
> > quantum mechanics when all bets are off...
>
> An answer in science is acceptable if it matches well known facts
> So here we have two sciences that squable about who is right and who
> is wrong in describing the same phenomina
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> fortunately quantum
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> > mechanics is not needed to discuss electromagnetic phenomena. if
> > there were 10% missing energy in the maxwell equations i am quite sure
> > it would have been found by now,
>
> A planar design of radiator does not conform with Maxwell's equations.
> Following Maxwell's equations provides accountability of all forces
> and NEC programs are very capable of showing this by divulging that
> same 10% of missing energy.

of course it does, maxwell's equations make no reference to the
geometry of conductors.

>
> we can measure waves much more
>
> > accurately than that and have been able to for many years. the
> > verifications of accuracy of nec and other programs based on maxwell's
> > equations shows that quite well. if you don't believe it, find the
> > missing terms and publish them in a peer reviewed journal so they
>
> can
>
> > be shot full of holes.
>
> The relevent term was added in the Maxwell corrections of his
> equations. See the sample on my page.
>
> How about supplying some facts to back up your claims so they can be
> discussed?- Hide quoted text -

i make no claims, i am providing well know facts that easily disprove
your claims... it is therefore your obligation as the proponent of
this new theory to explain how your theory properly explains these
facts. and to get your theory accepted it is up to you to show how
your theory explains it BETTER than existing theories. THAT is how
the scientific method works, i should know because my employer decided
that part of my title is now 'Scientist'. I objected, insisting that
i wanted to put 'Mad' in front of it, but they wouldn't buy that this
time.

3517. Re: Faraday shields and radiation and misinterpretations

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-10 17:49:30 UTC
From: Szczepan Bialek <sz.bialek@wp.pl>
Message-ID: <hfrb76$8up$1@node1.news.atman.pl>
Source record: 11529

"Dave" <k1ttt@arrl.net> wrote
news:5fda043c-bf33-47c5-b637-1a571a222a5e@k19g2000yqc.googlegroups.com...
On Dec 10, 4:44 pm, Art Unwin <arthurun...@gmail.com> wrote:
>>
>> > sorry, but no. mass is not a requirement for transporting energy>
>
>> I am willing to learn! What is the carrier for energy and how?
>
>

>photons are one thing that can carry energy but have no mass.
electric field interactions between electrons transfer energy with no
mass.

The photons and the fields are the math. In math are assumptions and
simplifications. Math is a piece to teach for students,
S*

3518. Re: Faraday shields and radiation and misinterpretations

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-10 19:01:31 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <70f2i59ob0ksggjbsjsn8r9u70k1p63r1j@4ax.com>
Source record: 11530

On Thu, 10 Dec 2009 some gomer wrote:

>> Following Maxwell's equations provides accountability of all forces
>> and NEC programs are very capable of showing this by divulging that
>> same 10% of missing energy.
By the addition of considerable textual chaff (not included here),
this last demand is saved from being embarrassingly close to:
>> How about supplying some facts to back up your claims so they can be
>> discussed?

Any NEC program (expressly allowed in the first statement's premise)
will show that a dipole:
1. In free space;
2. x coordinate -0.245714 wavelength;
3. x coordinate 0.245714 wavelength;
4. 11 segments;
5. 1mm diameter copper wire;
6. excited at first resonance

Result: 97.5%

So, clearly the first claim of 10% missing energy is a product of
misinformation and is easily accounted by the allowable method (NEC)
contained within the erroneous statement.

However, let's examine the source of that 2.5% loss. If I were to
simply use NEC's capacity to render the copper into perfect wire (no
other changes made to the parts 1. through 6 above); then

Result: 99.7%

Whoops!!!!! no copper, and still not perfect?

This, too, is accountable within NEC as accumulated math error of too
few samples (segments). So, we simple amend part 4. above to increase
the number of segments to 111; then

Result: 100.00%

****

I can fully expect the wheeze that the antenna is not in equilibrium
(sic). Without pointing out that what is already 100.00% efficiency
could not possibly be improved upon, I will instead increase the
frequency of excitation to put that structure into equilibrium (sic);
then

Result: 100.00%
or 0 improvement.

Having indulged the fantasies of equilibrium (sic), it is time to press in the opposite direction, let's say to 1/10th equilibrium (sic); then

Result: 100.00%
Howsaboutthat!?

****

So, using the allowable tools to investigate the claim of a missing 10% efficiency, it has been shown that this claim is wholly without merit and lacks any demonstrable basis.

I don't expect any counter proof that will be expressed with the same professional level of specification offered here, nor performable within the 3 minutes it took me to do this (barring the time to type this all out).

73's
Richard Clark, KB7QHC

3519. Re: Faraday shields and radiation and misinterpretations

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-10 19:22:07 UTC
From: Dave <k1ttt@arrl.net>
Message-ID: <59a8e481-a542-4775-9e4a-263b4f23c03b@a32g2000yqm.googlegroups.com>
Source record: 11531

On Dec 10, 5:49 pm, "Szczepan Bialek" <sz.bia...@wp.pl> wrote:
> "Dave" <k1...@arrl.net>
wrotenews:5fda043c-bf33-47c5-b637-1a571a222a5e@k19g2000yqc.googlegroups.com...
> On Dec 10, 4:44 pm, Art Unwin <arthurun...@gmail.com> wrote:
>
>
>
> >> > sorry, but no. mass is not a requirement for transporting energy>
>
> >> I am willing to learn! What is the carrier for energy and how?
>
> >photons are one thing that can carry energy but have no mass.
>
> electric field interactions between electrons transfer energy with no
> mass.
>
> The photons and the fields are the math. In math are assumptions and
> simplifications. Math is a piece to teach for students,
> S*

photons and fields are measurable things. equations describe the
observations.

3520. Re: Faraday shields and radiation and misinterpretations

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-11 01:11:28 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <qr63i5dpfa28e56mbpnlasa81u4n01c475@4ax.com>
Source record: 11532

On Thu, 10 Dec 2009 some gomer wrote:

>>> How about supplying some facts to back up your claims so they can be
>>> discussed?

Later on Thu, 10 Dec 2009 another gomer replied:

>So, using the allowable tools to investigate the claim of a missing
>10% efficiency, it has been shown that this claim is wholly without
>merit and lacks any demonstrable basis.

Nothing like hard data to kill a thread's superstition momentum. ;-)

3521. Re: GET KELP,sick little Markie !

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-11 03:38:06 UTC
From: Markie Morganbloom <markie.morganbloom@gmail.com>
Message-ID: <031167f9-40bf-4a87-8a0c-8b9bb32affe9@v25g2000yqk.googlegroups.com>
Source record: 11533
Cross-posted to:
alt.ham-radio.vhf-uhf,alt.usenet.kooks,rec.radio.amateur.policy,rec.radio.amateur.antenna,alt.dads-rights.unmoderated

On Dec 6, 4:20 pm, Roger RealHam <mark@kb9rqz.com> wrote:
> On Dec 3, 12:25 pm, kb9rqz <kb9rqz@yahoo.com> wrote:
>
>
>
> > On Dec 1, 4:50 pm, kb9rqz@yahoo.com wrote:
>
> > > On Fri, 01 Dec 2006 09:36:47 -0800, John Smith
>
> > > <kb9rqz@amsat.com> wrote:
> > > >K4YZ wrote:
> > > >> Nope.
>
> > > >> The IP Address and servers are complete proof that I do NOT share
> > > >> any annonymous character's "address".
>
> > > >> Sounds like Lennie, to me....
>
> > > >> Steve, K4YZ
>
> > > >To anyone with even an elementary understanding of anonymous proxies,
> > > >anonymous remailers, zombie backdoors, etc., the ability to change ones
> > > >IP address and header details is simplistic, indeed, with little time
> > > >spent anyone can appear to be "coming" from anywhere in the world.
>
> > > >You waste my time. Worse, you think us all idiots here. You remind me
> > > >of the "street smart" prosecutors and defense attorneys who stack jurys
> > > >with members of little or no technical knowledge and then call in
> > > >"expert witnesses" and propose arguments of technical details to boggle
> > > >their minds.
>
> > > >You have only proven that you, yourself are either ignorant to such
> > > >technical details, or else you are indeed street smart, I favor the
> > > >latter in this case (however, if you in the dark about such things, 15
> > > >minutes on google will enlighten you.)
>
> > > >JS
>
> > > "one useless man is disgrace 2 become a law firm 3 or more become a congress"
> > > adams
>

> > > woger you are a Congress all in your own head
> > > "http://www.3ix.org/sys/aff.php?aff=7439" target="_blank"
>
> > > altopia is never used by KB9RQZhttp://kb9rqz.cc.cchttp://kd8ctl.com
> > > nor is Konst...@hotmail.com ever
> > > btw i can be found at
> > > 17366 N River Rd
> > > Chassel Mi
>
> > > but the cowards asking lack the gut to act- Hide quoted text -
>
> > > - Show quoted text -- Hide quoted text -
>
> TEH PUNCE PUNCED HIM TO TEH LOONEY BIN.....INDEED !
>
>

3522. Re: need co-ax adapters

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-11 04:20:31 UTC
From: techie@tantivy.tantivy.net
Message-ID: <hfshaf$4gl$1@usenet.stanford.edu>
Source record: 11534

In article <rd3uh5ppsii4lboqkl4f0820tpll50tpa3@4ax.com>,
Bob <rmiller47@satx.rr.com> wrote:
>
>The Wireman (website) has every coax connector variation known to
>humankind.
>
>bob
>k5qwg

They have a reasonable selection of the more common types, but the
selection is by no means a complete list of all known types.

--
-- Welcome My Son, Welcome To The Machine --
Bob Vaughan | techie @ tantivy.net |
| P.O. Box 19792, Stanford, Ca 94309 |
-- I am Me, I am only Me, And no one else is Me, What could be simpler? --

3523. Re: Faraday shields and radiation and misinterpretations

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-11 08:36:06 UTC
From: Lostgallifreyan <no-one@nowhere.net>
Message-ID: <Xns9CDE577B75705zoodlewurdle@216.196.109.145>
Source record: 11535

Richard Clark <kb7qhc@comcast.net> wrote in
news:qr63i5dpfa28e56mbpnlasa81u4n01c475@4ax.com:

> On Thu, 10 Dec 2009 some gomer wrote:
>
>>>> How about supplying some facts to back up your claims so they can be
>>>> discussed?
>
> Later on Thu, 10 Dec 2009 another gomer replied:
>
>>So, using the allowable tools to investigate the claim of a missing
>>10% efficiency, it has been shown that this claim is wholly without
>>merit and lacks any demonstrable basis.
>
> Nothing like hard data to kill a thread's superstition momentum. ;-)
>

I wonder if precise knowledge of superstition and momentum is mutually
exclusive. >:)

3524. Re: an ontopic post about code

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-11 16:27:04 UTC
From: kb9rqz@yahoooo.com
Message-ID: <mms4i595nmomg2mjv601672ulbi3pcdos3@4ax.com>
Source record: 11536
Cross-posted to: alt.ham-radio.vhf-uhf,rec.radio.amateur.policy,rec.radio.amateur.antenna

On Fri, 01 Dec 2006 09:36:47 -0800, John Smith
<assemblywizard@gmail.com> wrote:

>K4YZ wrote:
>> Nope.
>>
>> The IP Address and servers are complete proof that I do NOT share
>> any annonymous character's "address".
>>
>> Sounds like Lennie, to me....
>>
>> Steve, K4YZ
>>
>
>To anyone with even an elementary understanding of anonymous proxies,
>anonymous remailers, zombie backdoors, etc., the ability to change ones
>IP address and header details is simplistic, indeed, with little time
>spent anyone can appear to be "coming" from anywhere in the world.
>
>You waste my time. Worse, you think us all idiots here. You remind me
>of the "street smart" prosecutors and defense attorneys who stack jurys
>with members of little or no technical knowledge and then call in
>"expert witnesses" and propose arguments of technical details to boggle
>their minds.
>
>You have only proven that you, yourself are either ignorant to such
>technical details, or else you are indeed street smart, I favor the
>latter in this case (however, if you in the dark about such things, 15
>minutes on google will enlighten you.)
>
>JS

"one useless man is disgrace 2 become a law firm 3 or more become a congress"
adams

woger you are a Congress all in your own head
"http://www.3ix.org/sys/aff.php?aff=7439" target="_blank"

altopia is never used by KB9RQZ
http://kb9rqz.cc.cc
http://kd8ctl.com
nor is Konstans@hotmail.com ever
btw i can be found at
17366 N River Rd

Chassel Mi

but the cowards asking lack the gut to act

3525. Re: get kelp

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-11 17:56:22 UTC
From: The NEWS Man <belzybub@blog.net>
Message-ID: <hfu14j$74n$1@news.netins.net>
Source record: 11537
Cross-posted to: rec.radio.amateur.misc,rec.radio.amateur.policy,alt.usenet.kooks,rec.radio.amateur.antenna

What does that mean?

On 12/9/2009 5:55 PM, kb9rqz wrote:
> On Dec 9, 11:32 am, kb9...@yahoooo.com wrote:
>> On Tue, 8 Dec 2009 22:29:41 -0800 (PST), Marqueer Morgan
>>
>> <marqueer.mor...@gmail.com> wrote:
>>
>>> http://nimbusters.org/forum/poll/index.php?board=8
>>> Let's make it two years in a row!
>>
>>> REMEMBER:
>>> Mark, cocksucker again in 2010 !
>>
>> "one useless man is disgrace 2 become a law firm 3 or more become a congress"
>> adams
>>
>> woger you are a Congress all in your own head
>> "http://www.3ix.org/sys/aff.php?aff=7439" target="_blank"
>>
>> altopia is never used by KB9RQZhttp://kb9rqz.cc.cchttp://kd8ctl.com
>> nor is Konst...@hotmail.com ever
>> btw i can be found at
>> 17366 N River Rd
>> Chassel Mi
>>
>> but the cowards asking lack the gut to act
>

3526. Re: get kelp

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-11 23:41:18 UTC
From: kb9rqz <mark@kb9rqz.com>
Message-ID: <f11e0857-c4e3-429e-b704-220bf9d7e17e@m26g2000yqb.googlegroups.com>
Source record: 11538
Cross-posted to: rec.radio.amateur.misc,rec.radio.amateur.policy,alt.usenet.kooks,rec.radio.amateur.antenna

On Dec 9, 6:55 pm, kb9rqz <m...@kb9rqz.com> wrote:
> On Dec 9, 11:32 am, kb9...@yahoooo.com wrote:
>
>
>
> > On Tue, 8 Dec 2009 22:29:41 -0800 (PST), Marqueer Morgan
>
> > <marqueer.mor...@gmail.com> wrote:
>
> > >http://nimbusters.org/forum/poll/index.php?board=8
> > >Let's make it two years in a row!
>
> > >REMEMBER:
> > >Mark, cocksucker again in 2010 !
>
> > "one useless man is disgrace 2 become a law firm 3 or more become a congress"
> > adams
>
> > woger you are a Congress all in your own head
> > "http://www.3ix.org/sys/aff.php?aff=7439" target="_blank"
>
> > altopia is never used by KB9RQZhttp://kb9rqz.cc.cchttp://kd8ctl.com
> > nor is Konst...@hotmail.com ever
> > btw i can be found at
> > 17366 N River Rd
> > Chassel Mi
>
> > but the cowards asking lack the gut to act- Hide quoted text -
>
> - Show quoted text -

3527. Re: MFJ-1800 2.4GHz 15dBi Yagi, again.

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-11 23:51:04 UTC
From: Jeff Liebermann <jeffl@cruzio.com>
Message-ID: <vdm5i59rc389o0g6r94puldfqsrumoige0@4ax.com>
Source record: 11539
Cross-posted to: rec.radio.amateur.antenna,alt.internet.wireless

On Sat, 28 Nov 2009 19:02:45 -0800, Jeff Liebermann <jeffl@cruzio.com>
wrote:

>I did some cleanup, error correcting, and tinkering with the model of
>the MFJ-1800 2.4GHz Yagi-Uda antenna. Mostly, I tried to make the
>model as close to the original antenna as possible and recovering the
>macros to make it easier to tweak:
><http://802.11junk.com/jeffl/antennas/mfj1800/>
>The NEC2 file is under the "main" mfj-1800.jpg page. Cut-n-paste
>works.
>
>Data sheet, of sorts:
><http://www.mfjenterprises.com/Product.php?productid=MFJ-1800>

Duz this construction look familiar?
<http://microblog.routed.net/2008/05/31/howto-make-a-simple-and-cheap-yagi-antenna-for-wif
i-applications/>
Note the driven element construction:
<http://microblog.routed.net/wp-content/uploads/2008/05/0531081411.jpg>
10dBi gain without the necessary 4:1 balun. Oh well.

--
Jeff Liebermann 150 Felker St #D Santa Cruz CA 95060
831-336-2558
http://802.11junk.com jeffl@cruzio.com
http://www.LearnByDestroying.com AE6KS

3528. Re: MFJ-1800 2.4GHz 15dBi Yagi, again.

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-12 00:06:24 UTC
From: Jeff Liebermann <jeffl@cruzio.com>
Message-ID: <fbn5i5l4hirbvls50pher0mphv221jbeql@4ax.com>
Source record: 11540
Cross-posted to: rec.radio.amateur.antenna,alt.internet.wireless

On Fri, 11 Dec 2009 15:51:04 -0800, Jeff Liebermann <jeffl@cruzio.com>
wrote:

>On Sat, 28 Nov 2009 19:02:45 -0800, Jeff Liebermann <jeffl@cruzio.com>
>wrote:
>
>>I did some cleanup, error correcting, and tinkering with the model of
>>the MFJ-1800 2.4GHz Yagi-Uda antenna. Mostly, I tried to make the
>>model as close to the original antenna as possible and recovering the
>>macros to make it easier to tweak:
>><http://802.11junk.com/jeffl/antennas/mfj1800/>
>>The NEC2 file is under the "main" mfj-1800.jpg page. Cut-n-paste
>>works.
>>
>>Data sheet, of sorts:
>><http://www.mfjenterprises.com/Product.php?productid=MFJ-1800>
>
>Duz this construction look familiar?
><http://microblog.routed.net/2008/05/31/howto-make-a-simple-and-cheap-yagi-antenna-for-wi
fi-applications/>
>Note the driven element construction:
><http://microblog.routed.net/wp-content/uploads/2008/05/0531081411.jpg>
>10dBi gain without the necessary 4:1 balun. Oh well.

More. The original site mentioned in the above article evaporated in
2008, but the contents are still on the Way Back project site at:
<http://web.archive.org/web/20080611022024rn_1/www.andrewhakman.dhs.org/yagi/>

--
Jeff Liebermann 150 Felker St #D Santa Cruz CA 95060
831-336-2558
http://802.11junk.com jeffl@cruzio.com
http://www.LearnByDestroying.com AE6KS

3529. B & W 500 - A co-ax switch for sale

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-12 01:32:56 UTC
From: walt <wbelsito@juno.com>
Message-ID: <521ba6a6-d9fd-4a4e-baae-42002e6ae301@c34g2000yqn.googlegroups.com>
Source record: 11541

hello ;

i have a B & W 5 position co-ax switch model 500 - A for sale .

for picture go to www.waltbelsito.4t.com page 8

$ 20 or best offer . thanks WALT / ex k1rts

3530. Re: installing isolator on a transceiver

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-12 03:52:24 UTC
From: "Sal M. Onella" <sobars@cox.net>
Message-ID: <09b61506-932b-4366-a867-0c41bf573b8a@y32g2000prd.googlegroups.com>
Source record: 11542

On Dec 9, 1:07 pm, Ed <Huckleberries_REMO...@q.com> wrote:
> We have 2M packet node transceivers at a new government radio site. The
> new site owner requires isolators be installed on all transmitters. As you
> might surmise, it doesn't seem possible to do so on a simplex one RF port
> radio such an Alinco DR-135.
>
> Anyone out there with some realistic suggestions on how we might manage
> to do this?
>
> Ed K7AAT

As described elsewhere, by using RF bypass relays for receive, the
isolator can be installed as designed, with one port terminated.
(This rig still requires bandpass filtering to keep intermod products
from being generated in the front end of your receiver and being re-
radiated. Such EMI can be very nasty.)

Sal

3531. Re: Fractal Antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-12 04:09:20 UTC
From: "Sal M. Onella" <sobars@cox.net>
Message-ID: <c6c5dac1-96ff-433a-8e7e-04614f4e1b1a@a39g2000pre.googlegroups.com>
Source record: 11543

On Dec 8, 9:08 am, Jeff Liebermann <je...@cruzio.com> wrote:
> On Sun, 6 Dec 2009 18:20:17 -0800 (PST), Art Unwin
>
> <arthurun...@gmail.com> wrote:
> >He wasn't the last antenna expert to leave the insults from this
> >group,
>
> Ever consider what motivates the real experts to spend their time
> answering questions? I'm certainly no expert, but I do try to answer
> what little I can. For me it's learning something new and a karma
> boost in helping others learn and understand. Passing on my
> experiences and knowledge and all that.
>
> Now, contrast that with the signal to noise ratio of this group. There
> isn't any question or discussion that doesn't get derailed into
> politics, philosophy, and some really off the wall physics.

< snip >

Remember, I offered a Swell Prize for anybody who produced an
algorithm to predict when a thread was going to turn ugly -- or at
least go goofy. It hasn't been claimed. Art?

Sal

3532. Re: Motorola Connectors?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-12 04:12:30 UTC
From: "Sal M. Onella" <sobars@cox.net>
Message-ID: <8c5ef89f-4842-441b-8599-84a2b2f68b8f@e4g2000prn.googlegroups.com>
Source record: 11544

On Dec 5, 3:45 pm, Dave D <xra...@earthlink.net> wrote:
> I need to install a few of the old style Motorola connectors to use
> with some equipment that uses them. Just wondering if anybody knows
> the proper way to do them. I assume you just solder the center through
> the tip... But I'm not quite sure what the proper thing to do with the
> braid is.
>
> Thanks for any help.

I would just tin the braid and solder it to the outer shell. You can
make it look better with a little heat-shrink tubing.

Sal

3533. Re: installing isolator on a transceiver

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-12 04:21:55 UTC
From: Ed <Huckleberries_REMOVE_@q.com>
Message-ID: <Xns9CDECF2AADB99HuckleberryQwest@198.186.192.196>
Source record: 11545

>
> As described elsewhere, by using RF bypass relays for receive, the
> isolator can be installed as designed, with one port terminated.
> (This rig still requires bandpass filtering to keep intermod products
> from being generated in the front end of your receiver and being re-
> radiated. Such EMI can be very nasty.)
>
> Sal
>

While I hate the thought of such chattering relays and the inherant possiblity of degraded reliability on a busy packet node station, I must admit this is a very logical method. Taken under consideration.
Thanks, Sal.

Ed K7AAT

.

3534. Re: Antenna Launcher

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-12 04:28:27 UTC
From: "Sal M. Onella" <sobars@cox.net>
Message-ID: <0883a6c9-36c2-4e46-84af-bf6bcd4fa2ae@b36g2000prf.googlegroups.com>
Source record: 11546

On Dec 6, 9:42 am, JIMMIE <JIMMIEDEE...@YAHOO.COM> wrote:
> On Nov 27, 12:27 pm, John Ferrell <jferrel...@triad.rr.com> wrote:
>
> > There is an artical by W4SSY in the March 2009 QST Magazine. I am
> > planning to duplicate it for use at my QTH. I am interested in any
> > comments, especially from anyone who may have already built one.
>
> > My available trees may be about 80 feet so that is my minimum
> > expectations!
>
> > There is a lot of Google information available but I am trying to
> > focus on this example.
>
> > John Ferrell W8CCW
>
> I wonder if my spud gun could be used for this. No compressor
> required.
>
> Jimmie

Yes. My one afternoon with a spud gun was conclusive. That sucker will throw a potato hundreds of feet. My host that day insisted that nobody raise the barrel above about 30 degrees because the spuds would go over the woods and onto his neighbor's property, which we could not even see! Propellant is a one-second spritz of hair spray. Not sure what kind of line to insert through the potato, though. Kite-cord? Monofilament?

3535. Re: Antenna Launcher

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-12 04:41:16 UTC
From: JIMMIE <JIMMIEDEE123@YAHOO.COM>
Message-ID: <381cf520-dbb6-4674-a698-69554bc29687@f16g2000yqm.googlegroups.com>
Source record: 11547

On Dec 11, 11:28 pm, "Sal M. Onella" <sob...@cox.net> wrote:
> On Dec 6, 9:42 am, JIMMIE <JIMMIEDEE...@YAHOO.COM> wrote:
>
>
>
>
>
> > On Nov 27, 12:27 pm, John Ferrell <jferrel...@triad.rr.com> wrote:
>
> > > There is an artical by W4SSY in the March 2009 QST Magazine. I am
> > > planning to duplicate it for use at my QTH. I am interested in any
> > > comments, especially from anyone who may have already built one.
>
> > > My available trees may be about 80 feet so that is my minimum
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>
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> > > focus on this example.
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>
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> > Jimmie
>
> Yes. My one afternoon with a spud gun was conclusive. That sucker
> will throw a potato hundreds of feet. My host that day insisted that
> nobody raise the barrel above about 30 degrees because the spuds would
> go over the woods and onto his neighbor's property, which we could not
> even see! Propellant is a one-second spritz of hair spray. Not sure
> what kind of line to insert through the potato, though. Kite-cord?
> Monofilament?- Hide quoted text -
>
> - Show quoted text -

Just clamp the old Zebco on the side.

Jimmie

3536. Re: Antenna Launcher

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-12 04:53:51 UTC
From: JIMMIE <JIMMIEDEE123@YAHOO.COM>
Message-ID: <36c4a120-d738-45fb-9efc-ff9a9e62839d@g7g2000yqa.googlegroups.com>
Source record: 11548

On Dec 11, 11:41 pm, JIMMIE <JIMMIEDEE...@YAHOO.COM> wrote:
> On Dec 11, 11:28 pm, "Sal M. Onella" <sob...@cox.net> wrote:
>
>
>
>
>
> > On Dec 6, 9:42 am, JIMMIE <JIMMIEDEE...@YAHOO.COM> wrote:
>
> > > On Nov 27, 12:27 pm, John Ferrell <jferrel...@triad.rr.com> wrote:
>
> > > > There is an artical by W4SSY in the March 2009 QST Magazine. I am
> > > > planning to duplicate it for use at my QTH. I am interested in any
> > > > comments, especially from anyone who may have already built one.
>
> > > > My available trees may be about 80 feet so that is my minimum
> > > > expectations!
>
> > > > There is a lot of Google information available but I am trying to
> > > > focus on this example.
>
> > > > John Ferrell W8CCW
>
> > > I wonder if my spud gun could be used for this. No compressor
> > > required.
>
> > > Jimmie
>
> > Yes. My one afternoon with a spud gun was conclusive. That sucker
> > will throw a potato hundreds of feet. My host that day insisted that
> > nobody raise the barrel above about 30 degrees because the spuds would
> > go over the woods and onto his neighbor's property, which we could not
> > even see! Propellant is a one-second spritz of hair spray. Not sure
> > what kind of line to insert through the potato, though. Kite-cord?
> > Monofilament?- Hide quoted text -
>
> > - Show quoted text -
>
> Just clamp the old Zebco on the side.
>
> Jimmie- Hide quoted text -
>
> - Show quoted text -

Handle and battery pack from a cordless drill, spark coil off a lawnmower engine. Potato bazooka for your bazooka antenna.

Jimmie

3537. Re: Fractal Antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-12 04:56:52 UTC
From: JIMMIE <JIMMIEDEE123@YAHOO.COM>
Message-ID: <1a16feae-22fe-43a3-931b-2ab33e362d20@v25g2000yqk.googlegroups.com>
Source record: 11549

On Dec 9, 2:42 pm, Jeff Liebermann <je...@cruzio.com> wrote:
> On Wed, 09 Dec 2009 11:29:51 -0500, Michael Coslo <m...@psu.edu>
> wrote:
>
> >Woe is
> >the day someone gets a patent on "random".
>
That should be my wife.

Jimmie

3538. Re: Fractal Antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-12 14:28:15 UTC
From: Dave <k1ttt@arrl.net>
Message-ID: <5283e5c4-7e0d-4944-89af-69f00e940c15@e27g2000yqd.googlegroups.com>
Source record: 11550

On Dec 12, 4:09 am, "Sal M. Onella" <sob...@cox.net> wrote:
> On Dec 8, 9:08 am, Jeff Liebermann <je...@cruzio.com> wrote:
>
> > On Sun, 6 Dec 2009 18:20:17 -0800 (PST), Art Unwin
>
> > <arthurun...@gmail.com> wrote:
> > >He wasn't the last antenna expert to leave the insults from this
> > >group,
>
> > Ever consider what motivates the real experts to spend their time
> > answering questions? I'm certainly no expert, but I do try to answer
> > what little I can. For me it's learning something new and a karma
> > boost in helping others learn and understand. Passing on my
> > experiences and knowledge and all that.
>
> > Now, contrast that with the signal to noise ratio of this group. There
> > isn't any question or discussion that doesn't get derailed into
> > politics, philosophy, and some really off the wall physics.
>
> < snip >
>
> Remember, I offered a Swell Prize for anybody who produced an
> algorithm to predict when a thread was going to turn ugly -- or at
> least go goofy. It hasn't been claimed. Art?
>
> Sal

pick a random number between 0 and 100, somewhere in that number of
postings any thread will turn ugly, change topics, or go completly
crazy.

3539. Re: Slinkey Antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-12 15:05:44 UTC
From: The NEWS Man <belzybub@blog.net>
Message-ID: <hg0bgn$6nq$2@news.netins.net>
Source record: 11601

It's poor grade of Metal has a HIGH-RF Resistance. Unlike COPPER wire,

Those SLINKY Antennas, Get very WARM almost HOT, so you really
know they do work, but very very inefficient.

Like trying to Pump at 200 WATT STEREO into your electric shaver
or light bulb!!!.

If they were pure Copper, you'd have something to talk-About!

Try making a QSO on a Bed Spring VERSUS a Dipole or Loop antenna.

Same analogy........

On 12/2/2009 12:20 AM, Richard Clark wrote:
> On Wed, 2 Dec 2009 04:01:50 +0000, clyde
> <clyde.55bacd8@radiobanter.com> wrote:
>
>>
>> Has anyone used a slinkey antenna? I bought one and hooked it to a tree
>> in my yard about 30 ft up. I have a Grundig Yacht Boy 400 and I clipped
>> it to the telescopic antenna. I dont see much improvement. Live in the
>> Wa. state, is recption real bad here or should I update and get a newer
>> radio? this one I bought new in 91.
>>
>> Thanks,
>>
>> Clyde
>
> Hi Clyde,
>
> That sounds like plenty of antenna for most SWLing - there's just not
> enough sunspots to hook it too. A new radio won't fix that.
>
> To those who are counting those sunspots (the missing ones), they have
> theories about that which also involve the freemasons, ancient
> astronauts, and other influences that will converge on a solution in
> 2012. The short explanation is that "time will tell."
>
> 73's
> Richard Clark, KB7QHC

3540. Re: Fractal Antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-12 16:41:59 UTC
From: Jeff Liebermann <jeffl@cruzio.com>
Message-ID: <96h7i5h2anbdndctejcglb0mso8ge7i8dv@4ax.com>
Source record: 11602

On Fri, 11 Dec 2009 20:09:20 -0800 (PST), "Sal M. Onella"
<sobars@cox.net> wrote:

>Remember, I offered a Swell Prize for anybody who produced an
>algorithm to predict when a thread was going to turn ugly -- or at
>least go goofy. It hasn't been claimed. Art?

Easy. Create a list of the most frequent posters. Include the number
of postings they create per month, and the number of original lines of
text they add each month (don't include quotes and blank lines).
Select the top 3 posters, that have the smallest ratio of postings to
new content. These are the ones that traditionally change the topic
with one or two line inflamatory remarks. When they appear, the
thread is sure to go awry.

Also create a list of first time posters, who do NOT start a thread,
but only comment on it. These are guaranteed topic drift candidates
as long time posters directly attack the new poster, rather than his
comments.

A 3rd class of posters are those that supply pure opinions, without
any substantiation, examples, or anecdotes. Any thread that starts
out this way, will invariably include an example demonstrating that
the original allegations are wrong. It's at this point, that the
thread will go off into the minutae of the example, drifting away from
the original opinions.

Please send my prize to the address below.

--
Jeff Liebermann jeffl@cruzio.com
150 Felker St #D http://www.LearnByDestroying.com
Santa Cruz CA 95060 http://802.11junk.com
Skype: JeffLiebermann AE6KS 831-336-2558

3541. Re: Slinkey Antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-12 17:35:46 UTC
From: Wayne <mygarbagecan@verizon.net>
Message-ID: <hg0k9k$j0n$1@news.eternal-september.org>
Source record: 11603

"The NEWS Man" <belzybub@blog.net> wrote in message
news:hg0bgn$6nq$2@news.netins.net...
> It's poor grade of Metal has a HIGH-RF Resistance. Unlike COPPER wire,
>
> Those SLINKY Antennas, Get very WARM almost HOT, so you really
> know they do work, but very very inefficient.
>
> Like trying to Pump at 200 WATT STEREO into your electric shaver
> or light bulb!!!.
>
> If they were pure Copper, you'd have something to talk-About!
>
> Try making a QSO on a Bed Spring VERSUS a Dipole or Loop antenna.
>
> Same analogy........
>
Except that he wanted to use it for receive only.

3542. Re: Best Antenna books?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-13 00:55:22 UTC
From: Bill Baka <bbaka@comcast.net>
Message-ID: <hg1e1qane1@news.eternal-september.org>
Source record: 11604

Jeff Liebermann wrote:
> On Fri, 04 Dec 2009 11:11:53 -0800, Bill Baka <bbaka@comcast.net>
> wrote:
>
>>> Many years ago, I used to make the pilgrimage to the Sunnyvale Fry's,
>>> Ham Radio Outlet, various nearby surplus stores, and then Computer
>>> Literacy Bookstore. After spending far too much money on books, I
>>> started to avoid the bookstore. They solved the problem for me by
>>> moving locations and finally closing in 2001.
>> WTF? That was one of my favorite stores to hang out and spend $$$ when I
>> lived down there. What happened? They always seemed to be thriving and
>> had books on other subjects. Fry's simply never had the books to compete.
>
> I found out the hard way. I prepared an expedition to Computer
> Literacy and discovered they were closed. I was seriously bummed as
> Stacy's in SF was too far away to drive.
>
> I don't know exactly why they failed, but I think online shopping for
> books might have killed them off.
>
> This may help:
> <http://en.wikipedia.org/wiki/Computer_Literacy_Bookstore>
>
>> Is there anything in the Sacramento area or even the Silicon Valley area
>> anymore?
>
> Dunno. I've been doing most of my book shopping via Alibris and
> Amazon.
>
Total bummer, since I used to be able to flip through a $110 book and see if it was what I needed. Buying it, shipping it, finding out it was the wrong one or written like a student paper, and then having to return it are all a bit too much bother. I used to buy books on sight, having never even knew the book existed and it was a hot topic to me.

The kinds of super specialized books I buy are in the $200 range and are out of date sometimes before I get them. Science books mainly.

Bill Baka

3543. Re: Don't Forget To Vote....Mark Morgan, KB9RQZ, Nim's Cocksucker of the Year

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-14 05:40:06 UTC
From: Toadie NimMorgan <toadie.nimmorgan@gmail.com>
Message-ID: <411b9056-1a88-46ad-9faf-acc1726fc70b@m26g2000yqb.googlegroups.com>
Source record: 11605
Cross-posted to: rec.radio.amateur.misc,rec.radio.amateur.policy,alt.usenet.kooks,rec.radio.cb,rec.radio.amateur.antenna

On Dec 9, 12:29 am, Marqueer Morgan <marqueer.mor...@gmail.com> wrote:
> http://nimbusters.org/forum/poll/index.php?board=8
> Let's make it two years in a row!
>
> REMEMBER:
> Mark, cocksucker again in 2010 !

I just voted.

3544. FCC Rules

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-14 06:23:44 UTC
From: "Sal M. Onella" <sobars@cox.net>
Message-ID: <c9cc3fba-7ae9-42a9-9326-cd705693d790@y32g2000prd.googlegroups.com>
Source record: 11606

Please pardon the slightly off-topic subject. I'm giving a class at
my grandson's school next month and I'm going to include ham radio,
with some of the kids presumably getting on the air. Of course, an
unlicensed person can operate if a properly licensed control operator
is present. Is there a source of more detailed information? I
keyword searched Part 97 and found no surprises. I think good sense
prevails.

But:
If I set up two HTs to talk simplex across a room, how do I/we ID?
KD6VKW/Alfa and KD6VKW/Bravo, maybe?
Can the kids call CQ?
Do they ID with my callsign or must I provide the ID in my own
voice?
Are there other sticking points?

In the absence of official guidance, your opinions are welcome.
Thanks.

"Sal"
(John, KD6VKW)

3545. Re: FCC Rules

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-14 07:59:26 UTC
From: ecregger <ecregger@bellsouth.net>
Message-ID: <hg4r8vkcv1@adenine.netfront.net>
Source record: 11607

"Sal M. Onella" <sobars@cox.net> wrote in message
news:c9cc3fba-7ae9-42a9-9326-cd705693d790@y32g2000prd.googlegroups.com...
> Please pardon the slightly off-topic subject. I'm giving a class at
> my grandson's school next month and I'm going to include ham radio,
> with some of the kids presumably getting on the air. Of course, an
> unlicensed person can operate if a properly licensed control operator
> is present. Is there a source of more detailed information? I
> keyword searched Part 97 and found no surprises. I think good sense
> prevails.
>
> But:
> If I set up two HTs to talk simplex across a room, how do I/we ID?
> KD6VKW/Alfa and KD6VKW/Bravo, maybe?
> Can the kids call CQ?
> Do they ID with my callsign or must I provide the ID in my own
> voice?
> Are there other sticking points?
>
> In the absence of official guidance, your opinions are welcome.
> Thanks.
>
> "Sal"
> (John, KD6VKW)

Sal, the only kind of people that would like to talk to kids is exactly the kind of people that you want to keep your little kids away from.

Why not go find a couple of el cheapo PRS handi-talkies (Personal Radio Service - 450 plus MHz) and let the kiddies talk to each other that way? Why bring ham radio into it at all?

The FCC rules are available to everyone for free at the FCC website. www.fcc.gov.

Ed Cregger

3546. Re: FCC Rules

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-14 10:13:54 UTC
From: "Helmut Wabnig"
Message-ID: <rq3ci51j8bcr2hsnkir3rfjukccv7anobm@4ax.com>
Source record: 11608

On Sun, 13 Dec 2009 22:23:44 -0800 (PST), "Sal M. Onella"
<sobars@cox.net> wrote:

>Please pardon the slightly off-topic subject. I'm giving a class at
>my grandson's school next month and I'm going to include ham radio,
>with some of the kids presumably getting on the air. Of course, an
>unlicensed person can operate if a properly licensed control operator
>is present. Is there a source of more detailed information? I
>keyword searched Part 97 and found no surprises. I think good sense
>prevails.
>
>But:
>If I set up two HTs to talk simplex across a room, how do I/we ID?
>KD6VKW/Alfa and KD6VKW/Bravo, maybe?
>Can the kids call CQ?
>Do they ID with my callsign or must I provide the ID in my own
>voice?
>Are there other sticking points?
>
>In the absence of official guidance, your opinions are welcome.
>Thanks.
>
>"Sal"
>(John, KD6VKW)

Don't ask too many questions.

Marconi would not have invented radio transmissions
according to FCC rules if he lived today.
We would still live without radio.

w.

3547. Re: FCC Rules

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-14 12:20:52 UTC
From: Tom Horne <hornetd@gmail.com>
Message-ID: <18116399-fadb-4a26-968b-6ec05b9fe5a8@r1g2000vbp.googlegroups.com>
Source record: 11609

On Dec 14, 1:23 am, "Sal M. Onella" <sob...@cox.net> wrote:
> Please pardon the slightly off-topic subject. I'm giving a class at
> my grandson's school next month and I'm going to include ham radio,
> with some of the kids presumably getting on the air.   Of course, an
> unlicensed person can operate if a properly licensed control operator
> is present. Is there a source of more detailed information? I
> keyword searched Part 97 and found no surprises. I think good sense
> prevails.
>
> But:
> If I set up two HTs to talk simplex across a room, how do I/we ID?
> KD6VKW/Alfa and KD6VKW/Bravo, maybe?
> Can the kids call CQ?
> Do they ID with my callsign or must I provide the ID in my own
> voice?
> Are there other sticking points?
>
> In the absence of official guidance, your opinions are welcome.
> Thanks.
>
> "Sal"
> (John, KD6VKW)

John
Yes you have to ID but not in your own voice. Yes the kids can call
CQ under your supervision. If you use the lowest power setting and an
unpopular simplex frequency for the unit to unit calls it is rather
unlikely that anyone except the kids and you will hear it. Check with
your club and find a woman operator to respond to the CQ. Smaller
children will respond better to a woman's voice.
--
Tom Horne

3548. RE:RE:FCC Rules

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-14 13:27:46 UTC
From: Cyclone651 <rollie@iowatelecom.net>
Message-ID: <hg5egjbli1@news.netins.net>
Source record: 11610

Ideally having a second licensed operator (ham) would solve the problem.....

3549. Re:FCC Rules

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-14 13:29:23 UTC
From: Cyclone651 <rollie@iowatelecom.net>
Message-ID: <hg5ejj$dh5$1@news.netins.net>
Source record: 11611

Ideally, get a second licensed ham operator to assist.

3550. Re: B & W 500 - A co-ax switch for sale

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-14 15:00:29 UTC
From: walt <wbelsito@juno.com>
Message-ID: <16bc8aac-5e58-4cd1-ad88-012d468fca66@9g2000yqa.googlegroups.com>
Source record: 11612

On Dec 11, 8:32 pm, walt <wbels...@juno.com> wrote:
> hello ;
>
> i have a B & W 5 position co-ax switch model 500 - A for sale .
>
> for picture go towww.waltbelsito.4t.com page 8
>
> $ 20 or best offer . thanks   WALT / ex k1rts

sold to dick k. WALT

3551. Re: FCC Rules

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-14 17:13:10 UTC
From: Jeff Liebermann <jeffl@cruzio.com>
Message-ID: <rvrci5lk3bb7bottc7fbooqi949sf17kc3@4ax.com>
Source record: 11613

On Sun, 13 Dec 2009 22:23:44 -0800 (PST), "Sal M. Onella"
<sobars@cox.net> wrote:

>Please pardon the slightly off-topic subject. I'm giving a class at
>my grandson's school next month and I'm going to include ham radio,
>with some of the kids presumably getting on the air. Of course, an
>unlicensed person can operate if a properly licensed control operator
>is present. Is there a source of more detailed information? I
>keyword searched Part 97 and found no surprises. I think good sense
>prevails.

It's mixed in under the term "control operator". That's the licensed
operator in charge of the station by the station owner. Note that
much of the wording comes from the days when there were seperate
station and operator licenses. The duties are scattered all over Part
97. For example:
<http://www.arrl.org/FandES/field/regulations/news/part97/b.html>

>But:
>If I set up two HTs to talk simplex across a room, how do I/we ID?
>KD6VKW/Alfa and KD6VKW/Bravo, maybe?

The same way you do during field day or any other multi-operator
station. Just the call sign of the station. If you want to get down
to details, see 97.119(c) which discusses "self assigned designators".
You could just use tactical call signs as in a typical emergency net,
but that would really be a stretch. As long as there's a licensed
operator in charge, and they ID every 10 minutes, you're fine.

>Can the kids call CQ?

Yes. They can do anything that the control operator allows.

>Do they ID with my callsign or must I provide the ID in my own
>voice?

They can ID on your behalf because it's a station license, not an
operator license.

>Are there other sticking points?

Yes. You'll bore the kids to death with such minutae and trivia.

>In the absence of official guidance, your opinions are welcome.

One of the harzards of being a licensed radio operator is that it
instantly tansforms one into a legal expert. If the rules were
obvious and simple, we wouldn't need devine, official, or amateur

guidance, but that's another rant.

--
Jeff Liebermann jeffl@cruzio.com
150 Felker St #D http://www.LearnByDestroying.com
Santa Cruz CA 95060 http://802.11junk.com
Skype: JeffLiebermann AE6KS 831-336-2558

3552. Re: FCC Rules

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-14 17:24:03 UTC
From: "Geoffrey S. Mendelson" <gsm@cable.mendelson.com>
Message-ID: <slrnhict43.ce8.gsm@cable.mendelson.com>
Source record: 11614

Jeff Liebermann wrote:

> Yes. You'll bore the kids to death with such minutae and trivia.

Show them the Jay leno morse code versus texting clip.

Geoff.

--
Geoffrey S. Mendelson, Jerusalem, Israel gsm@mendelson.com N3OWJ/4X1GM
New word I coined 12/13/09, "Sub-Wikipedia" adj, describing knowledge or
understanding, as in he has a sub-wikipedia understanding of the
situation. i.e possessing less facts or information than can be found in
the Wikipedia

3553. get kelp

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-14 17:29:58 UTC
From: kb9rqz@yahoooo.com
Message-ID: <4gtci595ppss4n6jukqeuad7m0krhhdncn@4ax.com>
Source record: 11615
Cross-posted to: rec.radio.amateur.policy,alt.usenet.kooks,rec.radio.cb,rec.radio.amateur.antenna

On Sun, 13 Dec 2009 21:40:06 -0800 (PST), Toadie NimMorgan
<toadie.nimmorgan@gmail.com> wrote:

>On Dec 9, 12:29?am, Marqueer Morgan <marqueer.mor...@gmail.com> wrote:
>> http://nimbusters.org/forum/poll/index.php?board=8
>> Let's make it two years in a row!
>>
>> REMEMBER:
>> Mark, cocksucker again in 2010 !
>
>I just voted.

"one useless man is disgrace 2 become a law firm 3 or more become a congress"
adams

woger you are a Congress all in your own head
"http://www.3ix.org/sys/aff.php?aff=7439" target="_blank"

altopia is never used by KB9RQZ
http://kb9rqz.cc.cc
http://kd8ctl.com
nor is Konstans@hotmail.com ever
btw i can be found at
17366 N River Rd
Chassel Mi

but the cowards asking lack the gut to act

3554. Re: FCC Rules

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-14 18:14:13 UTC
From: Jeff Liebermann <jeffl@cruzio.com>
Message-ID: <mgvci5hgidf424ij1tm6817bbtkhosqmgj@4ax.com>
Source record: 11616

On Mon, 14 Dec 2009 17:24:03 +0000 (UTC), "Geoffrey S. Mendelson"
<gsm@cable.mendelson.com> wrote:

>Jeff Liebermann wrote:
>> Yes. You'll bore the kids to death with such minutae and trivia.

>Show them the Jay leno morse code versus texting clip.
>Geoff.

The most effective song and dance I did in front of a Jr High Skool
class was tearing apart various cell phones, walkie talkies,
computahs, and consumer electronics to demonstrate that they should
not be afraid of such things. Unfortunately, the parents hated my
guts when the kids starting practicing what I showed them. Learn by
Destroying(tm).

2nd best was dragging in my collection of old cell phones including an
IMTS control head, various bag phones, and an unbelievable brick like
handset that's VERY heavy. I also brought an early Motorola tube type
Breaky-Backy with wet cells inside. Some of the stuff still works.

Nobody was interested in Morse Code until I mentioned that it could be
used for "secret communications". That means that the parents and
teachers couldn't understand what the kids were saying. Lots of
interest (and potential problems) there.

The problem with todays version of ham radio is that it's really
boring. Nobody wants to talk to someone around the world, when they
can pickup a POTS or cell phone and do it with much less effort and
expense. With the demise of Heathkit, building radios is no longer a
draw. The magic of radio is gone. So, show them what they can do
with radio. Weather stations, APRS, satellite, construction, etc are
a good start.

--
Jeff Liebermann jeffl@cruzio.com
150 Felker St #D http://www.LearnByDestroying.com
Santa Cruz CA 95060 http://802.11junk.com
Skype: JeffLiebermann AE6KS 831-336-2558

3555. Re: FCC Rules

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-14 21:55:07 UTC
From: Gaius <bin@127.0.0.1>
Message-ID: <4b26b43b$0$2482$db0fefd9@news.zen.co.uk>
Source record: 11617

Jeff Liebermann wrote:
> The problem with todays version of ham radio is that it's really
> boring. Nobody wants to talk to someone around the world, when they
> can pickup a POTS or cell phone and do it with much less effort and
> expense. With the demise of Heathkit, building radios is no longer a
> draw. The magic of radio is gone. So, show them what they can do
> with radio. Weather stations, APRS, satellite, construction, etc are
> a good start.
>
>
The magic hasn't gone - it's just been refined. The numbers of enthusiasts may drop, but those left will be more focussed and dedicated. The quantity is being replaced by quality. For every ten new hams who buy an off-the-shelf radio, play with it for a year or two, then lose interest, there is one in whom the spark is truly lit. Building is alive and well in the form of QRP. The satisfaction of operating a TX which is the product of your own efforts and ideas beats driving a commercial radio any day.

(There is a mirror to all this in the model aircraft hobby. Many now begin by buying a top-dollar almost-ready-to-fly radio controlled plane. All you need is money. Little achievement, little reward, other than the transient buzz of flying the thing. Same effect - 90 percent drop out, ten percent go on to greater things: building and designing their own creations).

Don't believe the prophets of doom who tell us that ham radio is dead. They're just pessimists and losers. Ignore them and move on.

3556. Re: FCC Rules

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-15 01:06:50 UTC
From: tom <news4792@taring.org>
Message-ID: <4b26e129$0$47479$8046368a@newsreader.iphouse.net>
Source record: 11618

Gaius wrote:
> The magic hasn't gone - it's just been refined. The numbers of
> enthusiasts may drop, but those left will be more focussed and
> dedicated. The quantity is being replaced by quality. For every ten new
> hams who buy an off-the-shelf radio, play with it for a year or two,
> then lose interest, there is one in whom the spark is truly lit.
> Building is alive and well in the form of QRP. The satisfaction of
> operating a TX which is the product of your own efforts and ideas beats
> driving a commercial radio any day.
>
> (There is a mirror to all this in the model aircraft hobby. Many now
> begin by buying a top-dollar almost-ready-to-fly radio controlled plane.
> All you need is money. Little achievement, little reward, other than
> the transient buzz of flying the thing. Same effect - 90 percent drop
> out, ten percent go on to greater things: building and designing their
> own creations).
>
> Don't believe the prophets of doom who tell us that ham radio is dead.
> They're just pessimists and losers. Ignore them and move on.
>
>

Correct - The magic hasn't gone. Take 10GHz. A 10 GHz SSB setup can do well over 200 miles with only 2 watts with an old DSS dish. You can call CQ in a 10G contest off of a local 30 story building, or even better - a local rain cloud. The systems are normally built as transverters from kits. And learning is involved in construction as you figure out how to interface a 2m SSB rig to a transverter, and where you find mini hardline, and SMA relays for cheap. Using them teaches the user a lot about practical microwave propagation.

Interested persons from the Midwest or those from anywhere else check out www.nlrs.org. We are one of the most active microwave groups in the US.

tom
K0TAR

3557. can you use this?-----free

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-15 02:34:06 UTC
From: walt <wbelsito@juno.com>
Message-ID: <c6fc7430-2018-41c1-9394-5a796759150f@m26g2000yqb.googlegroups.com>
Source record: 11619

its a whip ant , about 14 inches from end to base .

inner diameter at base end is 1/2 inch .

there is a set screw .

loading coil measures about 2 1/2 inches .

if you can use it , just pay postage from 06705 . for a picture go to
www.waltbelsito.4t.com

page 8 (it is shown next to a 12 inch ruler .)

3558. Re: FCC Rules

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-15 05:15:44 UTC
From: KU2S <ku2s@arast.org>
Message-ID: <fn6ei5lapbl3343rt4phqmlhbcokpjbrfb@4ax.com>
Source record: 11620

On Sun, 13 Dec 2009 22:23:44 -0800 (PST), "Sal M. Onella"
<sobars@cox.net>, in an obviously impaired state, wrote:

>Please pardon the slightly off-topic subject. I'm giving a class at
>my grandson's school next month and I'm going to include ham radio,
>with some of the kids presumably getting on the air. Of course, an
>unlicensed person can operate if a properly licensed control operator
>is present. Is there a source of more detailed information? I
>keyword searched Part 97 and found no surprises. I think good sense
>prevails.
>
>But:
>If I set up two HTs to talk simplex across a room, how do I/we ID?
>KD6VKW/Alfa and KD6VKW/Bravo, maybe?
>Can the kids call CQ?
>Do they ID with my callsign or must I provide the ID in my own
>voice?

Seems to me that "KD6VKW Portable 1" and and "KD6VKW Portable 2"
would be appropriate. The addition of arbitrary letters and or
numbers after your call sign could be misconstrued as meaning
something other than what you intend. The use of Portable 1, Portable
2, etc., is more straightforward and accurately describes the type of
conversation in progress.
--

Raymond Sirois - KU2S
http://www.hamxam.org
10-10 #70270

3559. Re: FCC Rules

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-15 05:59:25 UTC
From: Jeff Liebermann <jeffl@cruzio.com>
Message-ID: <kb8ei5db9ngiqm1271o9fsistv4cm0h0br@4ax.com>
Source record: 11621

On Mon, 14 Dec 2009 21:55:07 +0000, Gaius <bin@127.0.0.1> wrote:

>Jeff Liebermann wrote:
>> The problem with todays version of ham radio is that it's really
>> boring. Nobody wants to talk to someone around the world, when they
>> can pickup a POTS or cell phone and do it with much less effort and
>> expense. With the demise of Heathkit, building radios is no longer a
>> draw. The magic of radio is gone. So, show them what they can do
>> with radio. Weather stations, APRS, satellite, construction, etc are
>> a good start.

>The magic hasn't gone - it's just been refined.

For someone that's been in the hobby from before I could (legally)
drive a car, the magic is gone. To someone new to the hobby,
communicating with peoples on the other side of the planet is
commonplace. Pickup a cell phone, dial, and talk. There's no magic
in that. In the past, showing potential new hams how it works got an
"amazing" reaction. These days, I get asked "what's all that noise"?
It's no longer a technical hobby, but more like a "radio sport". It's
no longer about building and refining a radio to the bleeding edge of
the state of the art. It's now what you can do with a radio.
Fortunately, there's plenty to do with a radio. I listed a few.
There's plenty more (contesting, CW, boat anchors, xmitter hunts,
microwave, field day, packet, meteor scatter, etc). Plenty to
interest a Jr High Skool brat, but you have to show them first. I
used to worry about overwhelming them. Not any more. I show them in
everything I can find and let them find their own inspiration. Oddly,
the local new hams seem to be coming from the 4-H Organization.

>The numbers of
>enthusiasts may drop, but those left will be more focussed and
>dedicated. The quantity is being replaced by quality.

There was a surge of new hams wanting to use ham radio as a cheap cell
phone. That didn't last, but it sure fattened the various club
treasuries. I'm not sure those remaining are more dedicated. Most of
the radio club members are 50 or more years old. There are younger
members, that also tend to be very technical, but they're disappointed
at the general lack of technical expertise of the older hams. Comments
like "how do you expect to operate a software defined radio without
any programming skills?" are common. I give at least one technical
talk a year to the local clubs. I can tell by the audience's faces
that only a few have a clue what I'm talking about. I passed out about
30 CD's with 4NEC2, EZNEC demo, and a zillion models at one meeting.
I think perhaps 1 or 2 people tried it.

>Don't believe the prophets of doom who tell us that ham radio is dead.
>They're just pessimists and losers. Ignore them and move on.

I like to think of myself of being part of the solution, rather than
the prophet of doom and despair. Please ignore me and move on.

--
Jeff Liebermann 150 Felker St #D Santa Cruz CA 95060
831-336-2558
http://802.11junk.com jeffl@cruzio.com
http://www.LearnByDestroying.com AE6KS

3560. hot

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-15 08:10:40 UTC
From: hot <sajgsjgsjgsg@gmail.com>
Message-ID: <a3d52c35-715a-4cf6-8c6a-06746f2b312e@w19g2000pre.googlegroups.com>
Source record: 11622

kiss pics
http://allvideossee.blogspot.com/2009/10/kiss-pics.html
kiss kiss
http://allvideossee.blogspot.com/2009/10/kiss-kiss.html
hot pics
http://allvideossee.blogspot.com/2009/10/hot-pics.html
spicy pics
http://allvideossee.blogspot.com/2009/10/spicy-pics.html
hot hot
http://allvideossee.blogspot.com/2009/10/hot-hot.html
sexy pics
http://allvideossee.blogspot.com/2009/10/sexy-pics.html
hot boobs pics
http://allvideossee.blogspot.com/2009/10/hot-boobs-pics.html
hot navel pics
http://allvideossee.blogspot.com/2009/10/hot-navel-pics.html
half saree hot
http://allvideossee.blogspot.com/2009/10/half-saree-hot.html

3561. Re: FCC Rules

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-15 08:58:59 UTC
From: Lostgallifreyan <no-one@nowhere.net>
Message-ID: <Xns9CE25B5A5E762zoodlewurdle@216.196.109.145>
Source record: 11623

tom <news4792@taring.org> wrote in
news:4b26e129$0$47479$8046368a@newsreader.iphouse.net:

> Gaius wrote:
>> The magic hasn't gone - it's just been refined. The numbers of
>> enthusiasts may drop, but those left will be more focussed and
>> dedicated. The quantity is being replaced by quality. For every ten new
>> hams who buy an off-the-shelf radio, play with it for a year or two,
>> then lose interest, there is one in whom the spark is truly lit.
>> Building is alive and well in the form of QRP. The satisfaction of
>> operating a TX which is the product of your own efforts and ideas beats
>> driving a commercial radio any day.
>>
>> (There is a mirror to all this in the model aircraft hobby. Many now
>> begin by buying a top-dollar almost-ready-to-fly radio controlled
>> plane.
>> All you need is money. Little achievement, little reward, other than
>> the transient buzz of flying the thing. Same effect - 90 percent drop
>> out, ten percent go on to greater things: building and designing their
>> own creations).
>>
>> Don't believe the prophets of doom who tell us that ham radio is dead.
>> They're just pessimists and losers. Ignore them and move on.
>>
>>
>
> Correct - The magic hasn't gone. Take 10GHz. A 10 GHz SSB setup can do
> well over 200 miles with only 2 watts with an old DSS dish. You can
> call CQ in a 10G contest off of a local 30 story building, or even
> better - a local rain cloud. The systems are normally built as
> transverters from kits. And learning is involved in construction as you
> figure out how to interface a 2m SSB rig to a transverter, and where you
> find mini hardline, and SMA relays for cheap. Using them teaches the
> user a lot about practical microwave propagation.
>
> Interested persons from the Midwest or those from anywhere else check
> out www.nlrs.org. We are one of the most active microwave groups in the
> US.
>
> tom
> K0TAR
>

Another lively form of ham radio exists where people use Pringles tubes and
such to make small directional relays for RF-based localised internet. While

the TCP protocol comes ready made, the spirit of ham radio is very alive in the way people coerce a pringles tube into doing these things.

3562. Re: FCC Rules

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-15 11:44:03 UTC
From: "Geoffrey S. Mendelson" <gsm@cable.mendelson.com>
Message-ID: <slrnhietjq.goa.gsm@cable.mendelson.com>
Source record: 11624

Lostgallifreyan wrote:
> Another lively form of ham radio exists where people use Pringles tubes and
> such to make small directional relays for RF-based localised internet. While
> the TCP protocol comes ready made, the spirit of ham radio is very alive in
> the way people coerce a pringles tube into doing these things.

Unfortunately if they are properly made, they are illegal to use in the US and other places in the world.

The EIRP limit in the US is 1W for portable/mobile and 4W for fixed (point to point use), a properly made Pringles antenna produces slightly over 4W with 100mW input.

Here it's even worse, the EIRP limit is 100mW, so any gain antenna is technicaly illegal, though 5dbi ones they are sold here.

It's become IMHO more like the spirit of modifiying CB rigs to transmit and receive in that little slice of radio spectrum between CB and the 10m ham band aka "freebanding" than the spirit of lawful, respectful ham radio.

Geoff.

--
Geoffrey S. Mendelson, Jerusalem, Israel gsm@mendelson.com N3OWJ/4X1GM
New word I coined 12/13/09, "Sub-Wikipedia" adj, describing knowledge or understanding, as in he has a sub-wikipedia understanding of the situation. i.e possessing less facts or information than can be found in the Wikipedia.

3563. Re: FCC Rules

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-15 16:57:48 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <krffi5hb0g9qeha77po11s9p6f7qmdngbq@4ax.com>
Source record: 11625

On Tue, 15 Dec 2009 16:14:04 +0000 (UTC), "Geoffrey S. Mendelson"
<gsm@cable.mendelson.com> wrote:

>> It is not illegal if it is done on an amateur frequency by a licensed amateur.
>
>You forgot the words "in the US".
>
>Is using WiFi equipment for ham radio legal?

Hi Geoff,

If it is done by a Ham radio operator. Ham radio operators (in the
US) are the ONLY class of radio operation that do NOT have a type
acceptance requirement.

73's
Richard Clark, KB7QHC

3564. Re: FCC Rules

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-15 21:54:39 UTC
From: dplatt@radagast.org
Message-ID: <v5dlv6-fo.ln1@radagast.org>
Source record: 11626

In article <krffi5hb0g9qeha77po11s9p6f7qmdngbq@4ax.com>,
Richard Clark <kb7qhc@comcast.net> wrote:

>>> It is not illegal if it is done on an amateur frequency by a licensed
>amateur.
>>
>>You forgot the words "in the US".
>>
>>Is using WiFi equipment for ham radio legal?
>
>Hi Geoff,
>
>If it is done by a Ham radio operator. Ham radio operators (in the
>US) are the ONLY class of radio operation that do NOT have a type
>acceptance requirement.

There are, of course, certain restrictions.

The 13 cm band privileges for hams in the U.S. are not an exact
overlap for the license-free 802.11b/g frequencies. You can't assert
the use of your ham privileges if you're transmitting on channels not
covered by the ham authorizations.

You must ID properly (often done by setting the ESSID to the ham
callsign).

You may not encrypt the transmission for the purpose of obscuring its
meaning. [Some feel that encryption is permitted for the purpose of
ensuring that the link is used only by licensed hams, or for
"privacy". Some feel that encryption is OK if you make the actual
encryption key publicly available e.g. on a web site.]

If you have a valid U.S. ham license, and respect all of these (and
other) Part 97 ham restrictions, then you can legally use commercial
WiFi gear to transmit on these frequencies. Under those conditions,
you can use as much power as Part 97 will allow... the Part 15 rules
do not apply.

--
Dave Platt <dplatt@radagast.org> AE6EO
Friends of Jade Warrior home page: http://www.radagast.org/jade-warrior
I do _not_ wish to receive unsolicited commercial email, and I will
boycott any company which has the gall to send me such ads!

3565. Re: FCC Rules

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-15 23:07:32 UTC
From: Mike Coslo <mjc5@psu.edu>
Message-ID: <hg94rh$gc30$1@tr22n12.aset.psu.edu>
Source record: 11627

Jeff Liebermann wrote:

>
> For someone that's been in the hobby from before I could (legally)
> drive a car, the magic is gone.

For you, it is perhaps. Not for me.

> To someone new to the hobby,
> communicating with peoples on the other side of the planet is
> commonplace.

Has been for years.

> Pickup a cell phone, dial, and talk. There's no magic
> in that.

I remember making telephone calls to other countries when I was a little kid in the 60's. The Transatlantic cable was laid in the mid 19th century. People could talk a long way away then too. Worldwide communications pre-dates radio communications. It's a matter of infrastructure.

<some snippage>

> I like to think of myself of being part of the solution, rather than
> the prophet of doom and despair. Please ignore me and move on.

Not trying to bust your chops or anything, Jeff, but if you have no more magic in you for Ham radio, its going to be really hard being part of the solution.

- 73 de Mike N3LI -

3566. Re: FCC Rules

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-15 23:19:02 UTC
From: You <you@shadow.orgs>
Message-ID: <you-1D528B.14185515122009@unknown.hwng.net>
Source record: 11628

In article <slrnhietjq.goa.gsm@cable.mendelson.com>,
"Geoffrey S. Mendelson" <gsm@cable.mendelson.com> wrote:

> Unfortunately if they are properly made, they are illegal to use in the US
> and other places in the world.

Not for a Hams in the USA, with a Tech or higher License, on the Ham portion of the 2.4 Ghz band... We can use up to 1 Kw output power, not in a Pringles can, but with the appropriate Feedhorn, and an old 8 ft TVRO Dish, Moon bounce is a very real activity. It is the Tracking Hardware that gets expensive.... that and the 2.4 Ghz TWT's.....

3567. Re: FCC Rules

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-16 00:24:21 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <np9gi5p3cktf3uvjqjkv9lel51qfo5338v@4ax.com>
Source record: 11629

On Tue, 15 Dec 2009 18:07:32 -0500, Mike Coslo <mjc5@psu.edu> wrote:

>> Pickup a cell phone, dial, and talk. There's no magic
>> in that.
>
>I remember making telephone calls to other countries when I was a little
>kid in the 60's. The Transatlantic cable was laid in the mid 19th
>century. People could talk a long way away then too. Worldwide
>communications pre-dates radio communications. It's a matter of
>infrastructure.

I think I will drop my oar into this one too.

Being able to call someone in China is not the same thing as calling out, and getting a response from someone in China. A.G. Bell's practical invention of telephony long preceded practical (or even impractical) radiotelephony and no one seemed to care, but many got excited.

And to invert the argument. When I lived in Europe in the late 50s early 60s, Paris had such a funky telephone system that reportedly you could dial a "special number" that put you into an open common trunk where others would have been already deep in spontaneous conversation. It was very popular and "exciting...." until they fixed it (in their own time, of course - for the French that could have been many years later).

73's
Richard Clark, KB7QHC

3568. Re: FCC Rules

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-16 01:26:34 UTC
From: Jeff Liebermann <jeffl@cruzio.com>
Message-ID: <pjdgi5lu0oe8isnhehtducpl99a7rdd54r@4ax.com>
Source record: 11630

On Tue, 15 Dec 2009 17:21:01 -0800, Jeff Liebermann <jeffl@cruzio.com>
wrote:

>I don't want to comment on the legal part of the puzzle (because I
>already have a headache).

Oops. I forgot the link:
<http://www.arrl.org/tis/info/part15.html>

--
Jeff Liebermann 150 Felker St #D Santa Cruz CA 95060
831-336-2558
http://802.11junk.com jeffl@cruzio.com
http://www.LearnByDestroying.com AE6KS

3569. Re: FCC Rules

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-16 01:28:12 UTC
From: "Sal M. Onella" <sobars@cox.net>
Message-ID: <bd8684bd-e801-45cd-ad1c-60af27841a47@b36g2000prf.googlegroups.com>
Source record: 11631

>
> Why not go find a couple of el cheapo PRS handi-talkies (Personal Radio
> Service - 450 plus MHz) and let the kiddies talk to each other that way? Why
> bring ham radio into it at all?

It was by way of introducing them to our hobby in the course of giving
a lesson. That's all.

Thanks for your input.

"Sal"

3570. Re: FCC Rules

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-16 01:30:56 UTC
From: "Sal M. Onella" <sobars@cox.net>
Message-ID: <9409ae05-c11c-4f93-9d8e-d7611a10c85d@u1g2000pre.googlegroups.com>
Source record: 11632

Check with
> your club and find a woman operator to respond to the CQ. Smaller
> children will respond better to a woman's voice.
> --
> Tom Horne

Ah -- good idea. It will be out of my home area, but I'll bet if I
scouted around after I get there, I'll be able to find someone.
Thanks.

3571. Re: FCC Rules

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-16 01:33:47 UTC
From: "Sal M. Onella" <sobars@cox.net>
Message-ID: <c6b6fc8e-5338-4f34-ae75-ddffef66472d@13g2000prl.googlegroups.com>
Source record: 11633

On Dec 14, 9:13 am, Jeff Liebermann <je...@cruzio.com> wrote:

>
> >Are there other sticking points?
>
> Yes. You'll bore the kids to death with such minutae and trivia.

>
LOL TKS..

"Sal"

3572. Re: FCC Rules

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-16 01:42:25 UTC
From: "Sal M. Onella" <sobars@cox.net>
Message-ID: <681e9a36-b887-4fc9-b7c4-f6a676234948@15g2000prz.googlegroups.com>
Source record: 11634

>
> Nobody was interested in Morse Code until I mentioned that it could be
> used for "secret communications". That means that the parents and
> teachers couldn't understand what the kids were saying. Lots of
> interest (and potential problems) there.
>
> The problem with todays version of ham radio is that it's really
> boring. Nobody wants to talk to someone around the world, when they
> can pickup a POTS or cell phone and do it with much less effort and
> expense. With the demise of Heathkit, building radios is no longer a
> draw. The magic of radio is gone.

I have a diverse collection of demonstrations for them, hoping to
catch each one of them with something they find interesting. I have a
handout with eight Morse Code characters on it, enough to spell out
some easy words, They're mostly 4th graders. I'm doing magnetism and
communications and showing how they relate. I taught school in the
Navy, but I have no experience with little kids, except my own. My
Navy students were almost always well-motivated but I have no idea
what the 4th graders are going to be like. They are all in the
Gifted And Talented Education program and I think it's either going
to be great or awful -- no in-between.

3573. Re: FCC Rules

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-16 01:45:48 UTC
From: "Sal M. Onella" <sobars@cox.net>
Message-ID: <c41e2962-d364-42b8-be9c-4bf13aab4b79@k32g2000prb.googlegroups.com>
Source record: 11635

On Dec 14, 9:15 pm, KU2S <k...@arast.org> wrote:

> Seems to me that "KD6VKW Portable 1" and and "KD6VKW Portable 2"
> would be appropriate. The addition of arbitrary letters and or
> numbers after your call sign could be misconstrued as meaning
> something other than what you intend. The use of Portable 1, Portable
> 2, etc., is more straightforward and accurately describes the type of
> conversation in progress.

I thought of that but the numbers would seem to imply geography, like
when
I was in Colorado in the summer, I signed "Portable 0."

Thanks for the suggestion.

3574. Re: FCC Rules

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-16 02:16:01 UTC
From: tom <news4792@taring.org>
Message-ID: <4b2842db$0$47483$8046368a@newsreader.iphouse.net>
Source record: 11636

Richard Clark wrote:
>
> And to invert the argument. When I lived in Europe in the late 50s
> early 60s, Paris had such a funky telephone system that reportedly you
> could dial a "special number" that put you into an open common trunk
> where others would have been already deep in spontaneous conversation.
> It was very popular and "exciting...." until they fixed it (in their
> own time, of course - for the French that could have been many years
> later).
>
> 73's
> Richard Clark, KB7QHC

It probably wasn't "funky". It was just hacked.

It also existed in the US. The chances are that it was the same destination type as it was here. In the US you could dial a number that effectively put you into a conference. It was used for telco meet-me maintenance traffic. Neither person needed to know the other's number. I know someone that used to do music requests to their 6 MHz (plus/minus) pirate broadcasts using this hidden conference bridge. They were the first on the air as a pirate station in the US as far as I know.

I don't condone it, but it was a long time ago, and the persons involved have paid their dues. And are all good taxpaying citizens now.

tom
K0TAR

3575. Re: FCC Rules

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-16 03:26:08 UTC
From: ecregger <ecregger@bellsouth.net>
Message-ID: <hg9k0h$6fd$1@adenine.netfront.net>
Source record: 11637

"Sal M. Onella" <sobars@cox.net> wrote in message
news:bd8684bd-e801-45cd-ad1c-60af27841a47@b36g2000prf.googlegroups.com...
>
>
>>
>> Why not go find a couple of el cheapo PRS handi-talkies (Personal Radio
>> Service - 450 plus MHz) and let the kiddies talk to each other that way?
>> Why
>> bring ham radio into it at all?
>
> It was by way of introducing them to our hobby in the course of giving
> a lesson. That's all.
>
> Thanks for your input.
>
> "Sal"

Sal, who do you suppose that they will talk to if they did take the bait and
get a license and a radio?

I've heard kids calling CQ many times, only to go unanswered - even by me, I
shamefully admit. I leave my ham rigs running while I'm working in my shop,
so I seldom answer anyone's CQ if I'm busy working, so the kids weren't a
special case, although I did feel guilty that I didn't answer their call.

Ed, NM2K

3576. Re: FCC Rules

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-16 03:32:23 UTC
From: Jeff Liebermann <jeffl@cruzio.com>
Message-ID: <6dkgi5hh3ujvlt06ubn81kj6v2v9m0117a@4ax.com>
Source record: 11638

On Tue, 15 Dec 2009 17:42:25 -0800 (PST), "Sal M. Onella"
<sobars@cox.net> wrote:

>I have a diverse collection of demonstrations for them, hoping to
>catch each one of them with something they find interesting.

Perfect. That's the right idea. Lots of show and very little tell
(unless they ask).

>I have a
>handout with eight Morse Code characters on it, enough to spell out
>some easy words,

Good idea. Mind if I steal it?

>They're mostly 4th graders. I'm doing magnetism and
>communications and showing how they relate.

9-10 years old is the right age to start. Between 8 and 15, I tried
literally everything I could find. Cooking, guns, sewing, carpentry,
elecronics (buzzer and magnets), chemistry, fizzix, etc. Getting my
attention for only a few minutes was easy. More than an hour was
impossible. Somewhat later, I took the ones that were of interest and
went deeper. I still recall round the clock repeater building
sessions in my fathers garage.

>I taught school in the
>Navy, but I have no experience with little kids, except my own.

When I took teacher prep, one of the first exercises was to reduce my
vocabulary to about 9,000 words which was about right for a 12 year
old. I later found out that the typical 12 year old knew far more
words than officially recognized. Just avoid any technobabble with 3
or more syllables and you'll do ok. Try to get them to ask questions
and answer the questions at the same level as was asked.

>My
>Navy students were almost always well-motivated but I have no idea
>what the 4th graders are going to be like.

They will be out to see how far they can push or taunt you. Don't
fight it. Just be their friend and not their diciplinarian. If they
go over the top and riot, then maybe sacrifice the leaders for the
greater good. Smart kids are much easier to deal with than the
academic losers. My favorite line for getting them curious is "wanna
see what's inside" or "wanna know how this thing works"? Don't be
surprised if you get high level questions. Most of these kid so read

magazines and techy stuff online, mostly ammunition to make themselves look good in class. Be prepared to answer tough basic questions like "why does one radio talk around the world, while others just talk down the street"? You might learn as much from their questions as they're learning from your demo.

>They are all in the
>Gifted And Talented Education program and I think it's either going
>to be great or awful -- no in-between.

In the accellerated classes, they'll all be trying to show off how much (or little) they know.

--
Jeff Liebermann 150 Felker St #D Santa Cruz CA 95060
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http://www.LearnByDestroying.com AE6KS

3577. Re: FCC Rules

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-16 05:33:23 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <d2rgi5dkgn2t43lnije33o84i3kl3ippiu@4ax.com>
Source record: 11639

On Tue, 15 Dec 2009 17:42:25 -0800 (PST), "Sal M. Onella"
<sobars@cox.net> wrote:

> I taught school in the
>Navy, but I have no experience with little kids, except my own. My
>Navy students were almost always well-motivated but I have no idea
>what the 4th graders are going to be like.

I know what you mean because our experience has converged there.
Outside of the Navy, and just yesterday, I was Mentoring 3 of my high
school students to varying degrees of success. When asked how it
went, I responded "up, down, and sideways." Luckily this response is
not the typical experience. These kids are from the lower end of the
socio-economic spectrum, but the school system here in Seattle has
made an investment, and community (I do this through the NW Assoc. for
Biological Researcher) does its part to. Computer literacy is tops
(without the golden hand of Chairman Bill Gates being felt). From
their interest and drive, their challenged background (or challenged
emotional/developmental life) doesn't disrupt their momentum.

One of the most profound lectures I have ever read, insofar as
teaching science goes, dates back roughly 150 years to one of our own.
"The Chemical History of the Candle" by Michael Faraday is a series of
lectures by the master of inductance given to young students. It is
the classic of its type and sets the standard even to this day.

One might ponder about the significance of a history of the candle. In
one sense, it is quite complete to that heading alone. But beyond it,
and he goes vastly beyond it, there is coverage that is topical to the
current energy debate, the current green debate, and current to the
state of biology that is understandable by the mid-schooler on.

One point that still astonishes me is when Faraday makes the point
(and I will extrapolate to current capacities) that for every barrel
of oil burned, a barrel of water is produced in the combustion
process. I have to wonder at the plight of science understanding (not
just training) when I see huge flame geysers burning in the desert
(waste gas) of an oil rich country that has to import water:
"What the FUCK? Over"

73's
Richard Clark, KB7QHC

3578. Re: FCC Rules

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-16 05:38:40 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <jbsgi555aqr5926t66mi1ijnivuoqfv3qh@4ax.com>
Source record: 11640

On Tue, 15 Dec 2009 21:33:23 -0800, Richard Clark <kb7qhc@comcast.net>
wrote:

>"The Chemical History of the Candle" by Michael Faraday
complete text available at:
http://www.gutenberg.org/ebooks/14474

73's
Richard Clark, KB7QHC

3579. Re: FCC Rules

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-16 09:10:35 UTC
From: Lostgallifreyan <no-one@nowhere.net>
Message-ID: <Xns9CE35D58DD246zoodlewurdle@216.196.109.145>
Source record: 11641

Jeff Liebermann <jeffl@cruzio.com> wrote in
news:6dkgi5hh3ujvlt06ubn81kj6v2v9m0117a@4ax.com:

>>I have a
>>handout with eight Morse Code characters on it, enough to spell out
>>some easy words,
>
> Good idea. Mind if I steal it?
>

Or make it a puzzle. Some text they're likely to know, maybe a long and eventful paragraph of Harry Potter or similar, and translate for a short line that uses only a few letters of the alphabet and that does not identify the source text or content, but allows substitution to fill in other words, completed by working out what other parts of the text are saying, or by simple elimination within a word. I never did learn Morse well, never needed to, but playing with that method with other people on an internet forum was by far the closest I ever got, and the most fun. Someone would paste something into a code translator, and instead of doing the reverse I'd start with the few I always remember, E,A,N,S,T,O,H, and build on those.

It might sound like a lot for a young child, but if more than one are keen to find out what's being said they won't need much motivating, that will take care of itself. They won't remember every letter, but most adults who type every day would be hard put to locate every letter on a QUERTY keyboard without actually looking at one, what is retained is the memory of an important process.

3580. Re: Fractal Antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-16 14:51:02 UTC
From: George Csahanin <georgec@lintv.com>
Message-ID: <hgas5rvse1@news.eternal-september.org>
Source record: 11642

"Bill" <k4wge@arrl.net> wrote in message
news:ea37b291-57c8-4b52-a942-585f4ce02d0d@j9g2000prh.googlegroups.com...
On Dec 6, 9:20 pm, Art Unwin <arthurun...@gmail.com> wrote:
> On Dec 6, 7:47 pm, "amdx" <a...@knology.net> wrote:
>
>
>
>
>
> > "danl" <daninxpa...@gmail.com> wrote in message
>
> >news:2ainh510c1eviue0daktv5j4epdqsv2doo@4ax.com...> On Sun, 6 Dec 2009
> >10:44:30 +0000, EI5DD
> > > <EI5DD.5614...@radiobanter.com> wrote:
>
> > >>Would anyone have a copy of an article from either 73 or CQ magazine
> > >>somewhere around the 90's which contained an article on how to
> > >>construct a Fractal Quad antenna for 10 metres. The design was based
> > >>on
> > >>work done by Nathan Coen N1IR.
>
> > >>Steve (EI5DD)
>
> > > Popcorn! GET YER HOT BUTTERD POPCORN HERE! Popcorn!
>
> > > N9JBF
> > > >Whisper< Does the Buffoon still come around?
>
> > I don't think he is buffoon, he had an idea that was novel and looks
> > like
> > he is selling a bunch of them.
> > Mike
>
> No he isn't a buffoon, he had a Doctorate!

>A non sequitur. Look at posts by fractenna@aol.com and decide about
>buffoonery. Cohen loved to threaten people.
>http://opsyhopsy.com/MiscJunk/who_is_nc.htm

I was threatened with a lawyer by him in the 90's simply because I
questioned his theory.
He made no attempts to befriend the group.

GeorgeC

3581. Re: FCC Rules

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-16 16:35:54 UTC
From: Michael Coslo <mjc5@psu.edu>
Message-ID: <hgb29b$kk2s$1@tr22n12.aset.psu.edu>
Source record: 11643

Jeff Liebermann wrote:
>
> I don't want to comment on the legal part of the puzzle (because I
> already have a headache). However, it should be obvious that there's
> a potential conflict between unlicensed Part 15 operation, and
> licensed part 97 operation on 2.4GHz. Place your bets and blast a way
> with kilowatts on 2.4Ghz. Will 800,000 licensed US hams prevail over
> perhaps 300 million unlicensed wireless devices? Want to bet on who
> will win before an FCC tribunal? If there is a conflict, I'll place
> my bets on Part 15.
>

No one in their right mind is going to be running that much power -
being line of sight, at those frequencies, there isn't any point.

Regarding your hypothetical situation though, The likely outcome is that
the Amateur would be asked to turn down the power. They usually ask the
two parties to work together to get rid of the interference. But the
real onus is on the part 15 device owner. Dunno if you read the F.C.C.
enforcement actions, but the licensed service still "wins". BPL was an
attempt by economic interests to turn technical reality aside for
pecuniary reasons, but it looks like th elicensed services are going to
win that war now also. After the ARRL got hold of the original documents
the F.C.C. used during the run up to BPL, and founf out thet the
commission ignored their own engineers findings, then tried to hide that
fact, it kinda let the air outta that tire.

- 73 de Mike N3LI -

3582. Re: FCC Rules

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-16 16:47:04 UTC
From: Michael Coslo <mjc5@psu.edu>
Message-ID: <hgb2ua$9k6e$1@tr22n12.aset.psu.edu>
Source record: 11644

Richard Clark wrote:

> One of the most profound lectures I have ever read, insofar as
> teaching science goes, dates back roughly 150 years to one of our own.
> "The Chemical History of the Candle" by Michael Faraday is a series of
> lectures by the master of inductance given to young students. It is
> the classic of its type and sets the standard even to this day.

Thankyew! I'm reading it now. The first thing I am struck by is the readability of the thing. So much from that era was so hyperliterate.

> One point that still astonishes me is when Faraday makes the point
> (and I will extrapolate to current capacities) that for every barrel
> of oil burned, a barrel of water is produced in the combustion
> process. I have to wonder at the plight of science understanding (not
> just training) when I see huge flame geysers burning in the desert
> (waste gas) of an oil rich country that has to import water:

Most of those places have borrowed the technology to extract the oil in the first place. It isn't inherent in their lifestyle. They probably don't know about the water because we didn't tell them. And we were just worried about the oil.

Excellent point however.

- 73 de Mike N3LI -

3583. Re: FCC Rules

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-16 17:31:33 UTC
From: Jeff Liebermann <jeffl@cruzio.com>
Message-ID: <ml3ii5tbdqjb2vnist36abqiqm658un8jn@4ax.com>
Source record: 11645

On Wed, 16 Dec 2009 11:35:54 -0500, Michael Coslo <mjc5@psu.edu>
wrote:

>Jeff Liebermann wrote:
>>
>> I don't want to comment on the legal part of the puzzle (because I
>> already have a headache). However, it should be obvious that there's
>> a potential conflict between unlicensed Part 15 operation, and
>> licensed part 97 operation on 2.4GHz. Place your bets and blast a way
>> with kilowatts on 2.4Ghz. Will 800,000 licensed US hams prevail over
>> perhaps 300 million unlicensed wireless devices? Want to bet on who
>> will win before an FCC tribunal? If there is a conflict, I'll place
>> my bets on Part 15.

>No one in their right mind is going to be running that much power -
>being line of sight, at those frequencies, there isn't any point.

Most of the Wi-Fi installations are setup to go through walls where
power is helpful. Not exactly line of sight. Some of the outdoor
installations are installed by WISPs (Wireless Internet Service
Providers) that sometimes user maximum legal power amplifiers. You
can also buy relatively high power client radios:
<http://www.ubnt.com/products/xr2.php>
That's +28dBm or 630mw, which is considerably more power than the
typical 50mw radios. There are also bi-directional power amplifiers
allegedly sold only for ham, government, and industrial use only:
<http://www.ssbusa.com/kunamp1.html>
and the video equivalent:
<http://www.bhphotovideo.com/c/product/505472-REG/RF_Video_AMP_5000M_10_AMP_5000M_10_High_
Power.html>
from of all places a camera store. I've also helped identify and shut
down 3 such overpowered installations.

What's happening is as the 2.4GHz band gets more and more polluted,
some individuals seem to think that the solution is to increase their
TX power level. That's resulting in a very slow power war. The Wi-Fi
device manufacturers have caught on and are now advertising "high
power" devices, which seems to be anything over +20dBm (100mw).
Various pundits have predicted a power war, which fortunately hasn't
happened.

>Regarding your hypothetical situation though, The likely outcome is that
>the Amateur would be asked to turn down the power.

That's exactly what has happened in one of the situations that I was
involved. He didn't realize he was causing a problem and was very

cooperative. I also monitor the FCC enforcement actions:
<http://www.fcc.gov/eb/AmateurActions/Welcome.html>
and have not seen anything on 2.4 or 5.6GHz that required official
action. However, I do know of some warnings sent to WISPs over the
last 10 years or so for using too much power. So far so good.

>They usually ask the
>two parties to work together to get rid of the interference. But the
>real onus is on the part 15 device owner. Dunno if you read the F.C.C.
>enforcement actions, but the licensed service still "wins".

That's exactly the problem I mentioned. The licensed ham using 2.4Ghz
is within his rights to use 1Kw. He can also legally cause
interference to unlicensed devices without much consideration. So it
is written, and it must be. However, all it's going to take is a few
industry groups (i.e. lobbying interests) to claim that ham radio
operation on 2.4Ghz is somehow detrimental to the economy by impacting
Wi-Fi equipment sales, and I suspect there will be changes that impact
ham radio. Please consider my comments more as a warning than as a
denunciation.

>BPL was an
>attempt by economic interests to turn technical reality aside for
>pecuniary reasons, but it looks like th elicensed services are going to
>win that war now also.

BPL is going to die because the electric utility companies are not
seeing any revenue from the exercise, are getting some really bad
press, and really don't need the hassle. The interference issue gets
the press, but the decisions are always made on the basis of dollars.

>After the ARRL got hold of the original documents
>the F.C.C. used during the run up to BPL, and founf out thet the
>commission ignored their own engineers findings, then tried to hide that
>fact, it kinda let the air outta that tire.

True. Much credit to the ARRL for being able to do that. Still,
nothing has really changed at the FCC end. BPL systems that are
leaking well over established limits are still "working on the
problem". Most are still running in what is becoming a permanent
"trial" mode.
<http://p1k.arrl.org/~ehare/bpl/ex2.html>

Meanwhile, a rather large number of HomePlug devices, which is
essentially BPL for home internet, are being sold. They don't leak as
much RF power as real BPL systems, but still manage to make plenty of
noise:
<http://www.mds975.co.uk/Content/amateur_radio_BPL_interference.html>
Hmmm... It's QRN, not QRM. Oh well.
<http://p1k.arrl.org/~ehare/bpl/Testing_HomePlug.htm>
At least the ARRL is involved. Some HomePlug devices have
pre-programmed notch filters to reduce power on "sensitive"

frequencies which include ham bands.

> - 73 de Mike N3LI -

--
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Santa Cruz CA 95060 http://802.11junk.com
Skype: JeffLiebermann AE6KS 831-336-2558

3584. Re: FCC Rules

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-16 19:15:41 UTC
From: JIMMIE <JIMMIEDEE123@YAHOO.COM>
Message-ID: <23d72427-03b1-45e2-930d-259935dad3c4@t42g2000vba.googlegroups.com>
Source record: 11646

On Dec 14, 1:14 pm, Jeff Liebermann <je...@cruzio.com> wrote:
> On Mon, 14 Dec 2009 17:24:03 +0000 (UTC), "Geoffrey S. Mendelson"
>
> <g...@cable.mendelson.com> wrote:
> >Jeff Liebermann wrote:
> >> Yes. You'll bore the kids to death with such minutae and trivia.
> >Show them the Jay leno morse code versus texting clip.
> >Geoff.
>
> The most effective song and dance I did in front of a Jr High Skool
> class was tearing apart various cell phones, walkie talkies,
> computahs, and consumer electronics to demonstrate that they should
> not be afraid of such things. Unfortunately, the parents hated my
> guts when the kids starting practicing what I showed them. Learn by
> Destroying(tm).
>
> 2nd best was dragging in my collection of old cell phones including an
> IMTS control head, various bag phones, and an unbelievable brick like
> handset that's VERY heavy. I also brought an early Motorola tube type
> Breaky-Backy with wet cells inside. Some of the stuff still works.
>
> Nobody was interested in Morse Code until I mentioned that it could be
> used for "secret communications". That means that the parents and
> teachers couldn't understand what the kids were saying. Lots of
> interest (and potential problems) there.
>
> The problem with todays version of ham radio is that it's really
> boring. Nobody wants to talk to someone around the world, when they
> can pickup a POTS or cell phone and do it with much less effort and
> expense. With the demise of Heathkit, building radios is no longer a
> draw. The magic of radio is gone. So, show them what they can do
> with radio. Weather stations, APRS, satellite, construction, etc are
> a good start.
>
> --
> Jeff Liebermann   je...@cruzio.com
> 150 Felker St #D   http://www.LearnByDestroying.com
> Santa Cruz CA 95060http://802.11junk.com
> Skype: JeffLiebermann   AE6KS   831-336-2558

LOL I showed showed some kids how to disassembe and reassemble a
desktop computer. I understand a few did well on the disassembly part
but not so well on putting it back together their parents computers.

Jimmie

3585. archer swr / fsm need schematic

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-16 23:23:13 UTC
From: walt <wbelsito@juno.com>
Message-ID: <43a592d2-b0f2-4ae4-a922-601fb4188280@d21g2000yqn.googlegroups.com>
Source record: 11647

i have a model # 21 - 575

does anybody have the schematic ?

WALT

contact me at wbelsito at aol dot com

3586. archer swr / fsm need schematic

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-16 23:23:14 UTC
From: walt <wbelsito@juno.com>
Message-ID: <61b9bd19-0248-4c66-a122-6043aa18a14c@j19g2000yqk.googlegroups.com>
Source record: 11648

i have a model # 21 - 575

does anybody have the schematic ?

WALT

contact me at wbelsito at aol dot com

3587. Re: FCC Rules

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-17 01:46:07 UTC
From: Jeff Liebermann <jeffl@cruzio.com>
Message-ID: <f02ji5pu1k7nfibcg7p4hn99r3j7f0en6k@4ax.com>
Source record: 11649

On Wed, 16 Dec 2009 11:15:41 -0800 (PST), JIMMIE
<JIMMIEDEE123@YAHOO.COM> wrote:

>On Dec 14, 1:14ï¿½pm, Jeff Liebermann <je...@cruzio.com> wrote:
>> The most effective song and dance I did in front of a Jr High Skool
>> class was tearing apart various cell phones, walkie talkies,
>> computahs, and consumer electronics to demonstrate that they should
>> not be afraid of such things. ï¿½Unfortunately, the parents hated my
>> guts when the kids starting practicing what I showed them. ï¿½Learn by
>> Destroying(tm).

>LOL I showed showed some kids how to disassembe and reassemble a
>desktop computer. I understand a few did well on the disassembly part
>but not so well on putting it back together their parents computers.
>Jimmie

That's the way we all learn. Next time, they'll do better. You've
hit on one of my many pet peeves. The skools are so afraid of
liability issues that any activity that involves potentially dangerous
tools or devices are proscribed by the administration. The result is
a generation (or two) that don't know which end of the soldering iron
to grab, don't know how to use hand tools, and have zero experience
with machinery beyond simple power tools.

They really have to learn to use such tools early in life or they'll
never learn. A friend of mine's father was an auto mechanic. He
didn't want his son to also become an auto mechanic. Every time his
son would pickup a tool, his father would take it away from him. It
worked. We met when he was about 40 years old. Despite practice and
some instruction, he was a total klutz with hand tool, and a hazard to
life and property with power tools. Try as he might, he couldn't
recover from the lack of childhood experience with tools. However, he
was far from useless. He taught me Unix and some programming in trade
for me maintaining his (Plexus and NCR) servers.

One of my standard birthday (and sometime Hanukah) gifts is a tool box
stuffed full of quality hand tools. I build the kit myself which
includes everything from jewelers screwdrivers to a claw hammer. When
I have time, I hot stamp the birthday brat's name into the plastic
handles, mostly to discourage anyone from borrowing tools. Years
later, the kit is invariably dispersed and half missing, but during
those years, the birthday brat gets some very useful experience with
hand tools.

I was encouraged to take things apart when I was fairly young. I had
my own tool collection by age 7 or so and was encouraged to use it. I

managed to break many things. My father and I would sit down, and he would fix it. One day, I decided to take apart a brass mantle wind-up clock. The main spring went boing. Instead of my father fixing it while I watched, I got to fix it, while he watched. I fumbled, blundered, and generally made a mess while my father offered advice, but no direct help. At about an hour a day, we got it back together and mostly working after about 12 days. I noticed that my father was sitting on his hands. When I asked about it much later, he said it wasn't to stop him from grabbing the clock and fixing it himself. It was to keep him from grabbing my throat and strangling me because I was doing such a lousy job. Years later, I was rebuilding his factory sewing machines and later worked on rebuilding teletype machines. Without that early experience, I wouldn't have had a chance.

Learn by Destroying(tm) which means if you haven't broken it, ripped it apart, and fixed it, you don't understand how it works.

--
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http://www.LearnByDestroying.com AE6KS

3588. Re: FCC Rules

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-17 03:25:34 UTC
From: tom <news4792@taring.org>
Message-ID: <4b29a4a2$0$33860$8046368a@newsreader.iphouse.net>
Source record: 11650

Jeff Liebermann wrote:
> On Wed, 16 Dec 2009 11:35:54 -0500, Michael Coslo <mjc5@psu.edu>
>
>> No one in their right mind is going to be running that much power -
>> being line of sight, at those frequencies, there isn't any point.
>
> Most of the Wi-Fi installations are setup to go through walls where
> power is helpful. Not exactly line of sight. Some of the outdoor

But. The alligator syndrome gets nailed every time here, although with some dB recovered due to better receive front ends. But still doesn't overcome the 30 to 100mW coupled to negative gain antennas on the link back to the AP.

The semi-exception that I know of, as of about 2 years ago when my ex-employer ISP that did (somewhat successfully) muni wifi, was testing and eventually installed, Go Networks APs. They were the only ones at the time that could use 20W ERP because they were phased array antenna APs. And they mapped the vector vs MAC address so it knew the best antenna angle to your PC.

tom
K0TAR

3589. Re: FCC Rules

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-17 04:53:13 UTC
From: Jeff Liebermann <jeffl@cruzio.com>
Message-ID: <vpcji55mmbijhqm59t6bclbaed1h3vdoju@4ax.com>
Source record: 11551

On Wed, 16 Dec 2009 21:25:34 -0600, tom <news4792@taring.org> wrote:

>The semi-exception that I know of, as of about 2 years ago when my
>ex-employer ISP that did (somewhat successfully) muni wifi, was testing
> and eventually installed, Go Networks APs. They were the only ones at
>the time that could use 20W ERP because they were phased array antenna
>APs. And they mapped the vector vs MAC address so it knew the best
>antenna angle to your PC.
>
>tom
>K0TAR

What "vector"? The beamwidth width was 120 degrees for Go Networks
and 60 degress for Vivato. That's not a beam. That's a barn door.
That nonsense got me rather irate when the FCC concluded that an
overpowerful alligator, with beam steering, will somehow cause less
interference than a sector antenna system.

Go Networks was one of the later vendors to hop on the alligator
bandwagon:
<http://wifinetnews.com/archives/2006/04/go_networks_slips_veil_on_cellularmesh_metro_wi-fi.html>
They picked up the fumble after Vivato dropped the ball.
<http://en.wikipedia.org/wiki/Vivato>
To add insult to injury, Go Networks somehow convinced the FCC that
120 degree wide steerable "beams" qualified for the higher power. I
could do better with common sector antennas. At least Vivato used 60
degree beams, which was marginally better. As I recall, their
literature had an illustrators imaginative drawing showing what might
be hundreds of beams with what appeared to be about 5 degree
beamwidth. The illustration also showed the steerable antenna hung on
a wall, thus eliminating half the "beams".

What I saw with the one Vivato 2210 controller I played with was that
the usable range was about the same as a lower powered omni or panel
system because of the alligator effect. The AP was deaf. So was
management.

Incidentally, one local Muni Wi-Fi network turned DOWN their mesh
nodes TX power when they were finally convinced that they were
creating almost all of their own interference. Things worked much
better when the access points and repeaters used approximately the
same tx power as the client radios.

--
Jeff Liebermann 150 Felker St #D Santa Cruz CA 95060

```
# 831-336-2558
# http://802.11junk.com jeffl@cruzio.com
# http://www.LearnByDestroying.com AE6KS
```

3590. Re: FCC Rules

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-17 07:32:06 UTC
From: "Sal M. Onella" <sobars@cox.net>
Message-ID: <11ee4a36-6bb5-4797-88a4-ef8ea58e1f15@w19g2000pre.googlegroups.com>
Source record: 11552

On Dec 15, 7:32 pm, Jeff Liebermann <je...@cruzio.com> wrote:
> On Tue, 15 Dec 2009 17:42:25 -0800 (PST), "Sal M. Onella"
>
> <sob...@cox.net> wrote:

>
> >I have a
> >handout with eight Morse Code characters on it, enough to spell out
> >some easy words,
>
> Good idea. Mind if I steal it?

Feel free <g>

>
> 9-10 years old is the right age to start. Between 8 and 15, I tried
> literally everything I could find. Cooking, guns, sewing, carpentry,
> elecronics (buzzer and magnets), chemistry, fizzix, etc.

No serious Fizzix this time but I already have magnets and buzzers.

> You might learn as much from their questions as they're
> learning from your demo.

I'd be surprised if that didn't happen. I'm learning just from the
prep work.

John
KD6VKW

3591. Re: FCC Rules

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-17 13:10:49 UTC
From: tom <news4792@taring.org>
Message-ID: <4b2a2dcb$0$33860$8046368a@newsreader.iphouse.net>
Source record: 11553

Jeff Liebermann wrote:
> On Wed, 16 Dec 2009 21:25:34 -0600, tom <news4792@taring.org> wrote:
>
> What "vector"? The beamwidth width was 120 degrees for Go Networks
> and 60 degress for Vivato. That's not a beam. That's a barn door.
> That nonsense got me rather irate when the FCC concluded that an
> overpowerful alligator, with beam steering, will somehow cause less
> interference than a sector antenna system.
>
> Go Networks was one of the later vendors to hop on the alligator
> bandwagon:
> <http://wifinetnews.com/archives/2006/04/go_networks_slips_veil_on_cellularmesh_metro_wi
-fi.html>
> They picked up the fumble after Vivato dropped the ball.
> <http://en.wikipedia.org/wiki/Vivato>
> To add insult to injury, Go Networks somehow convinced the FCC that
> 120 degree wide steerable "beams" qualified for the higher power. I
> could do better with common sector antennas. At least Vivato used 60
> degree beams, which was marginally better. As I recall, their
> literature had an illustrators imaginative drawing showing what might
> be hundreds of beams with what appeared to be about 5 degree
> beamwidth. The illustration also showed the steerable antenna hung on
> a wall, thus eliminating half the "beams".
>
> What I saw with the one Vivato 2210 controller I played with was that
> the usable range was about the same as a lower powered omni or panel
> system because of the alligator effect. The AP was deaf. So was
> management.
>
> Incidentally, one local Muni Wi-Fi network turned DOWN their mesh
> nodes TX power when they were finally convinced that they were
> creating almost all of their own interference. Things worked much
> better when the access points and repeaters used approximately the
> same tx power as the client radios.
>

Absolutely right on the power.

I was referring to the panel antennas, not the pole mount units, but
your point is well made. I didn't mean to imply that it was a good
solution.

I modeled the 4 vertical pole mount unit and it's nothing great. At
least the panel versions ended up with some front to back.

Unfortunately, few muni systems seem to use sector antennas. Probably because you can lose money just as easily with a cheap system as an expensive one.

I am just glad that I am no longer near the WiFi biz.

tom
K0TAR

3592. Re: FCC Rules

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-17 13:59:22 UTC
From: Michael Coslo <mjc5@psu.edu>
Message-ID: <hgddfr$f05c$1@tr22n12.aset.psu.edu>
Source record: 11554

Jeff Liebermann wrote:
> On Wed, 16 Dec 2009 11:15:41 -0800 (PST), JIMMIE
> <JIMMIEDEE123@YAHOO.COM> wrote:
>
>> On Dec 14, 1:14 pm, Jeff Liebermann <je...@cruzio.com> wrote:
>>> The most effective song and dance I did in front of a Jr High Skool
>>> class was tearing apart various cell phones, walkie talkies,
>>> computahs, and consumer electronics to demonstrate that they should
>>> not be afraid of such things. Unfortunately, the parents hated my
>>> guts when the kids starting practicing what I showed them. Learn by
>>> Destroying(tm).
>
>> LOL I showed showed some kids how to disassembe and reassemble a
>> desktop computer. I understand a few did well on the disassembly part
>> but not so well on putting it back together their parents computers.
>> Jimmie
>
> That's the way we all learn. Next time, they'll do better. You've
> hit on one of my many pet peeves. The skools are so afraid of
> liability issues that any activity that involves potentially dangerous
> tools or devices are proscribed by the administration. The result is
> a generation (or two) that don't know which end of the soldering iron
> to grab, don't know how to use hand tools, and have zero experience
> with machinery beyond simple power tools.
>
> They really have to learn to use such tools early in life or they'll
> never learn. A friend of mine's father was an auto mechanic. He
> didn't want his son to also become an auto mechanic. Every time his
> son would pickup a tool, his father would take it away from him. It
> worked. We met when he was about 40 years old. Despite practice and
> some instruction, he was a total klutz with hand tool, and a hazard to
> life and property with power tools. Try as he might, he couldn't
> recover from the lack of childhood experience with tools. However, he
> was far from useless. He taught me Unix and some programming in trade
> for me maintaining his (Plexus and NCR) servers.
>
> One of my standard birthday (and sometime Hanukah) gifts is a tool box
> stuffed full of quality hand tools. I build the kit myself which
> includes everything from jewelers screwdrivers to a claw hammer. When
> I have time, I hot stamp the birthday brat's name into the plastic
> handles, mostly to discourage anyone from borrowing tools. Years
> later, the kit is invariably dispersed and half missing, but during
> those years, the birthday brat gets some very useful experience with
> hand tools.

>
> I was encouraged to take things apart when I was fairly young. I had
> my own tool collection by age 7 or so and was encouraged to use it. I
> managed to break many things. My father and I would sit down, and he
> would fix it. One day, I decided to take apart a brass mantle wind-up
> clock. The main spring went boing. Instead of my father fixing it
> while I watched, I got to fix it, while he watched. I fumbled,
> blundered, and generally made a mess while my father offered advice,
> but no direct help. At about an hour a day, we got it back together
> and mostly working after about 12 days. I noticed that my father was
> sitting on his hands. When I asked about it much later, he said it
> wasn't to stop him from grabbing the clock and fixing it himself. It
> was to keep him from grabbing my throat and strangling me because I
> was doing such a lousy job. Years later, I was rebuilding his factory
> sewing machines and later worked on rebuilding teletype machines.
> Without that early experience, I wouldn't have had a chance.
>
> Learn by Destroying(tm) which means if you haven't broken it, ripped
> it apart, and fixed it, you don't understand how it works.

Reading this post made me smile, as it brought back so many memories. When I was a young'un, I had a curiosity that went way past what most people would call common sense. I disassembled household appliances to see what made them work. Unfortunately it wasn't until I was 16 or so that I could put them back together. I tried chemically boring a lawnmower engine - btw, while hydrochloric acid will attack an Aluminum cylinder wall very well, it isn't too controllable. 8^) I took so many things apart that it was starting to become a bit of a hardship, and my folks were at a loss, because grounding me just gave more time at home to find things to take apart.

My Grandfather found the answer. He worked at Bendix where they made car and other radios. There were rejects and prototype radios that the company would give away. Anyhow, he and I sat down and built a power supply, and then he let me have at the radios. Ground rules were that I had to limit my taking apart to the radios, or things my folks were throwing out.

That was the start of both my electronics interest, and furthered my total lack of fear to tear things apart. All I know is that it was about as much fun as I ever had.

- 73 de Mike N3LI -

3593. BPL stuff, was Re: FCC Rules

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-17 14:54:46 UTC
From: Michael Coslo <mjc5@psu.edu>
Message-ID: <hgdgnn$f05e$1@tr22n12.aset.psu.edu>
Source record: 11555

Jeff Liebermann wrote:
> On Wed, 16 Dec 2009 11:35:54 -0500, Michael Coslo <mjc5@psu.edu>
> wrote:
>
>> Jeff Liebermann wrote:
>>> I don't want to comment on the legal part of the puzzle (because I
>>> already have a headache). However, it should be obvious that there's
>>> a potential conflict between unlicensed Part 15 operation, and
>>> licensed part 97 operation on 2.4GHz. Place your bets and blast a way
>>> with kilowatts on 2.4Ghz. Will 800,000 licensed US hams prevail over
>>> perhaps 300 million unlicensed wireless devices? Want to bet on who
>>> will win before an FCC tribunal? If there is a conflict, I'll place
>>> my bets on Part 15.
>
>> No one in their right mind is going to be running that much power -
>> being line of sight, at those frequencies, there isn't any point.
>
> Most of the Wi-Fi installations are setup to go through walls where
> power is helpful. Not exactly line of sight. Some of the outdoor
> installations are installed by WISPs (Wireless Internet Service
> Providers) that sometimes user maximum legal power amplifiers. You
> can also buy relatively high power client radios:
> <http://www.ubnt.com/products/xr2.php>
> That's +28dBm or 630mw, which is considerably more power than the
> typical 50mw radios. There are also bi-directional power amplifiers
> allegedly sold only for ham, government, and industrial use only:
> <http://www.ssbusa.com/kunamp1.html>
> and the video equivalent:
> <http://www.bhphotovideo.com/c/product/505472-REG/RF_Video_AMP_5000M_10_AMP_5000M_10_Hig
h_Power.html>
> from of all places a camera store. I've also helped identify and shut
> down 3 such overpowered installations.
>
> What's happening is as the 2.4GHz band gets more and more polluted,
> some individuals seem to think that the solution is to increase their
> TX power level. That's resulting in a very slow power war. The Wi-Fi
> device manufacturers have caught on and are now advertising "high
> power" devices, which seems to be anything over +20dBm (100mw).
> Various pundits have predicted a power war, which fortunately hasn't
> happened.
>
>> Regarding your hypothetical situation though, The likely outcome is that
>> the Amateur would be asked to turn down the power.
>

> That's exactly what has happened in one of the situations that I was
> involved. He didn't realize he was causing a problem and was very
> cooperative. I also monitor the FCC enforcement actions:
> <http://www.fcc.gov/eb/AmateurActions/Welcome.html>
> and have not seen anything on 2.4 or 5.6GHz that required official
> action. However, I do know of some warnings sent to WISPs over the
> last 10 years or so for using too much power. So far so good.
>
>> They usually ask the
>> two parties to work together to get rid of the interference. But the
>> real onus is on the part 15 device owner. Dunno if you read the F.C.C.
>> enforcement actions, but the licensed service still "wins".
>
> That's exactly the problem I mentioned. The licensed ham using 2.4Ghz
> is within his rights to use 1Kw. He can also legally cause
> interference to unlicensed devices without much consideration. So it
> is written, and it must be. However, all it's going to take is a few
> industry groups (i.e. lobbying interests) to claim that ham radio
> operation on 2.4Ghz is somehow detrimental to the economy by impacting
> Wi-Fi equipment sales, and I suspect there will be changes that impact
> ham radio. Please consider my comments more as a warning than as a
> denunciation.

That was the tactic for the BPL folks. It has to be faced down whenever they bring it up. The tail should never wag the dog. It becomes doomed anyhow, because when the device with special privileges starts interfering with other devices with special privileges, who wins then? We cannot do an "Animal Farm" Some are more equal than others situation without chaos.

>> BPL was an
>> attempt by economic interests to turn technical reality aside for
>> pecuniary reasons, but it looks like th elicensed services are going to
>> win that war now also.
>
> BPL is going to die because the electric utility companies are not
> seeing any revenue from the exercise, are getting some really bad
> press, and really don't need the hassle. The interference issue gets
> the press, but the decisions are always made on the basis of dollars.

BPL proponents allowed people to believe that they were going to just send the signals along the lines from some sort of "head end" site, and they would be there for the tapping. In fact, they were a last mile solution the Fiber would have to be run almost to the house, then the signal injected into a H-V line - the bpl signals could not survive going through transformers - finally a device to couple the BPL signal from the HV to the Household line after the transformer would allow the signal into the house.

That's bad technology on so many levels it's obvious that the decisions were based on economics and perhaps some politics (not R vs D, but the

idea that belief trumps science, that the intuitive idea of sending
multiple signals on one wire just has to work.

Are we going to bet our life on that H-V line isolator - injector never
failing closed, and allowing Several KV into our home electrical system?

But the final issue for me was that the source of the data signal had to
come almost to my house. Clean, yummy, digital goodness being degraded
to a shaky easy to disrupt DSL speed signal. No thanks, folks. But let's
talk about get me hooked directly into that fiber, pleeze!

>> After the ARRL got hold of the original documents
>> the F.C.C. used during the run up to BPL, and founf out thet the
>> commission ignored their own engineers findings, then tried to hide that
>> fact, it kinda let the air outta that tire.
>
> True. Much credit to the ARRL for being able to do that. Still,
> nothing has really changed at the FCC end. BPL systems that are
> leaking well over established limits are still "working on the
> problem". Most are still running in what is becoming a permanent
> "trial" mode.
> <http://p1k.arrl.org/~ehare/bpl/ex2.html>

Fortunately, they are going to eventually go away. Unless BPL is going
to become some sort of welfare system with companies sinking money into
it's maintenance for just a few customers.

I had always wondered what was going to happen to BPL systems when the
sunspot cycle hits it's peak.
I'd been assured that propagation wouldn't have any effect on it, but
we'll see.

>
> Meanwhile, a rather large number of HomePlug devices, which is
> essentially BPL for home internet, are being sold. They don't leak as
> much RF power as real BPL systems, but still manage to make plenty of
> noise:
> <http://www.mds975.co.uk/Content/amateur_radio_BPL_interference.html>
> Hmmm... It's QRN, not QRM. Oh well.
> <http://p1k.arrl.org/~ehare/bpl/Testing_HomePlug.htm>
> At least the ARRL is involved. Some HomePlug devices have
> pre-programmed notch filters to reduce power on "sensitive"
> frequencies which include ham bands.

All eventually doomed to failure.

If I might conjecture, I think that the current crop of EE's did not pay
any attention to RF while grooming themselves for the brave new future
of "Everything is digital". The HF bands are an unruly beast. They are
prone to static, they are prone to propagation, where at some times a
strong signal can't go much of anywhere, and at other times a milliwatt
works the world. And to make things worse, the propagation varies by
frequency.

For most digital wireless situations, you want a noise free, propagation free, short range system. HF will never satisfy these requirements. Some times at sunspot minimum, they might look a little better, but even then, they just aren't a good choice. Hell, VHF is only just usable. Gotta be well into UHF before you get good stable conditions

But The new crop of engineers and econo-politicians would like to impose their digital reality on sections of RF spectrum that just aren't going to cooperate.

- 73 de Mike N3LI -

3594. TLW Program problem

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-17 16:07:53 UTC
From: John Ferrell <jferrell13@triad.rr.com>
Message-ID: <2kkki5lc5qk0bgt7r2g1nhf60pee11bm8a@4ax.com>
Source record: 11556

I am having problems trying to use the TLW program from the ARRL antenna Book. The version is 3.0. An unsuccessful Google search plus the fact that I have the problem on two machines leads me to believe it is something I have done or am doing wrong. I believe it was working OK on both machines earlier. Both machines are running up to date XPPRO.

On one machine when I select the "Tuner" button the program does not come up. It does show an instance as a sub task of the TLW on the task bar at the bottom of my display. Clicking the subtask causes it to blink but nothing else. In the Windows Task Manager it shows as a process momentarily and then disappears.

On the other machine the tuner window comes up but the on choice that will display is the T-Network. I am certain this one worked well a short while back.

Both machines have had the program reinstalled.

Before my study of the L-Match continues I have four possible things I must do:
1-make TLW work in my environment.
2-do the calculations manually (rather not, I am both old & lazy) re:Chapter 25 latest ARRL Antenna Handbook.
3-G4FGQ programs (good possibility)
4-Find other affordable software for the task.

All suggestions considered!

John Ferrell W8CCW

3595. Re: BPL stuff, was Re: FCC Rules

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-17 17:49:42 UTC
From: Jeff Liebermann <jeffl@cruzio.com>
Message-ID: <mppki5hk3kv85sinf60c11gecpcv3puj74@4ax.com>
Source record: 11557

On Thu, 17 Dec 2009 09:54:46 -0500, Michael Coslo <mjc5@psu.edu>
wrote:

>Jeff Liebermann wrote:
>> That's exactly the problem I mentioned. The licensed ham using 2.4Ghz
>> is within his rights to use 1Kw. He can also legally cause
>> interference to unlicensed devices without much consideration. So it
>> is written, and it must be. However, all it's going to take is a few
>> industry groups (i.e. lobbying interests) to claim that ham radio
>> operation on 2.4Ghz is somehow detrimental to the economy by impacting
>> Wi-Fi equipment sales, and I suspect there will be changes that impact
>> ham radio. Please consider my comments more as a warning than as a
>> denunciation.
>
>That was the tactic for the BPL folks. It has to be faced down whenever
>they bring it up.

Good luck. Money talks as do votes. Who's right? 800,000 hams or
perhaps 50 million Wi-Fi users backed by a 2000 members of the Wi-Fi
consortium:
<http://www.wi-fi.org/our_members.php>
David got lucky with Goliath but might not do so well against an
industry alliance.

>The tail should never wag the dog. It becomes doomed
>anyhow, because when the device with special privileges starts
>interfering with other devices with special privileges, who wins then?

That's easy. In a court-o-law, such issues are settled by whichever
party lasts the longest and has the biggest war chest. If those are
equal, the winner is decided by which one can bury the courts in the
most paper. The merits of the case are rarely relevant. Before the
FCC, it's now who presents the case, but who's behind those presenting
the case. The only time the underdog wins is if there's a sacred cow
involved, or if the chairman is on his way out and needs to make an
impression on the press.

>We cannot do an "Animal Farm" Some are more equal than others situation
>without chaos.

Fairness and equality are nice theories that take the back seat to
greed, money, power, politics, and public relations. I don't think
anyone ever accused the FCC of being "fair" to all parties.

>BPL proponents allowed people to believe that they were going to just
>send the signals along the lines from some sort of "head end" site, and

>they would be there for the tapping. In fact, they were a last mile
>solution the Fiber would have to be run almost to the house, then the
>signal injected into a H-V line - the bpl signals could not survive
>going through transformers - finally a device to couple the BPL signal
>from the HV to the Household line after the transformer would allow the
>signal into the house.

Yep, that's about it. It was also suppose to be a test, pilot, or
demonstration system, not a fully functional deployment. That wasn't
at the insistence of the FCC, but rather because the power companies
didn't know what was going to happen and wanted to pull the plug if
necessary. Never mind that anyone with a clue about internet topology
might note that the rather unstructured wiring tangle was going to be
both expensive and unmanageable.

>That's bad technology on so many levels it's obvious that the decisions
>were based on economics and perhaps some politics (not R vs D, but the
>idea that belief trumps science, that the intuitive idea of sending
>multiple signals on one wire just has to work.

Hey, I like to read science fiction. Having written a few business
plans, I some also write sci-fi. If the FCC wants to get into the
act, I have no problem. In this case, their own staff told them that
it wouldn't work, which they solved by selective suppression of
unfavorable reports. These days, technical decisions are not made by
Dilbert. They're made by the clueless Pointy Hair Boss.

>Are we going to bet our life on that H-V line isolator - injector never
>failing closed, and allowing Several KV into our home electrical system?

Yep. Any risk is justifiable in order to deliver cheap internet to
the GUM (great unwashed masses). If we sacrifice a few customers for
the greater good, I'm sure it can be justified or at least
rationalized.

>But the final issue for me was that the source of the data signal had to
>come almost to my house. Clean, yummy, digital goodness being degraded
>to a shaky easy to disrupt DSL speed signal. No thanks, folks. But let's
>talk about get me hooked directly into that fiber, pleeze!

How about FTTS (fiber through the sewer)?
<http://fiberopticnews.blogspot.com/2007/08/ftts-fiber-through-sewer.html>
It sorta solves the expensive right of way problem, but may still have
problems with topology and interface. "Don't flush the toilet right
now... I'm watching YouTube".

>> Meanwhile, a rather large number of HomePlug devices, which is
>> essentially BPL for home internet, are being sold.

>All eventually doomed to failure.

Really? Sales and product announcements for HomePlug AV devices seems
to be on the increase.

<http://www.homeplug.org>
There's talk of using HomePlug for home energy management as part of
the "Smart Grid" initiative.
<http://en.wikipedia.org/wiki/Smart_grid>
A few blurps of data from each house won't cause much interference,
but city wide, will probably make BPL look like a minor irritation.

>But The new crop of engineers and econo-politicians would like to impose
>their digital reality on sections of RF spectrum that just aren't going
>to cooperate.

Yeah, but their clients have made their money long before anyone
figures out it won't work. Some technically flawed RF based ideas
that have percolated to the top:
1. BPL
2. White Space
3. Terrestrial use of the Ka and Ku band shared with satellite TV.
4. Satellite broadcast radio with terrestrial repeaters.
5. 8VSB versus COFDM for digital TV.
6. Part 15 communications without automatic tx power control.
7. Narrow banding, spectrum rebranding, spectrum auctions, etc.
8.... I'm late. that should do for now. gotta run.

--
Jeff Liebermann jeffl@cruzio.com
150 Felker St #D http://www.LearnByDestroying.com
Santa Cruz CA 95060 http://802.11junk.com
Skype: JeffLiebermann AE6KS 831-336-2558

3596. Re: TLW Program problem

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-17 21:39:26 UTC
From: Jeff Liebermann <jeffl@cruzio.com>
Message-ID: <su8li518dgi01nh5ga9oojaict52jvgaub@4ax.com>
Source record: 11558

On Thu, 17 Dec 2009 11:07:53 -0500, John Ferrell
<jferrell13@triad.rr.com> wrote:

>I am having problems trying to use the TLW program from the ARRL
>antenna Book. The version is 3.0.

Current version is 3.0b:
<http://www2.arrl.org/notes/9043/index.html>

>On one machine when I select the "Tuner" button the program does not
>come up. It does show an instance as a sub task of the TLW on the task
>bar at the bottom of my display. Clicking the subtask causes it to
>blink but nothing else. In the Windows Task Manager it shows as a
>process momentarily and then disappears.

That sounds like a broken shortcut or that you're running the MSDOS
version (TLA.exe) from a Windoze shortcut. Try:
Start -> Programs -> ARRL Antenna Book -> TLW
instead of using the shortcut on the desktop.

>On the other machine the tuner window comes up but the on choice that
>will display is the T-Network. I am certain this one worked well a
>short while back.

Sounds like the program is corrupted. Uninstall, reboot, and
reinstall.

>1-make TLW work in my environment.

Get someone there who knows computahs. Have them run a virus scan,
spyware scan, scandisk, registry check, Windoze updates, and other
maintenance tasks.

>2-do the calculations manually (rather not, I am both old & lazy)
>re:Chapter 25 latest ARRL Antenna Handbook.

What calculations?

>3-G4FGQ programs (good possibility)
>4-Find other affordable software for the task.

What task? If you want help finding alternatives, it's a good idea to
describe what you're trying to accomplish, and what you have to work
with.

>John Ferrell W8CCW
--
Jeff Liebermann 150 Felker St #D Santa Cruz CA 95060

```
# 831-336-2558
# http://802.11junk.com jeffl@cruzio.com
# http://www.LearnByDestroying.com AE6KS
```

3597. Re: an ontopic post about code

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-17 22:32:21 UTC
From: kb9rqz@yahoooo.com
Message-ID: <jbcli5tg3f8nj2i11luo6l0pc58faprodd@4ax.com>
Source record: 11559
Cross-posted to: alt.ham-radio.vhf-uhf,rec.radio.amateur.policy,rec.radio.amateur.antenna

On Fri, 01 Dec 2006 09:36:47 -0800, John Smith
<assemblywizard@gmail.com> wrote:

>K4YZ wrote:
>> Nope.
>>
>> The IP Address and servers are complete proof that I do NOT share
>> any annonymous character's "address".
>>
>> Sounds like Lennie, to me....
>>
>> Steve, K4YZ
>>
>
>To anyone with even an elementary understanding of anonymous proxies,
>anonymous remailers, zombie backdoors, etc., the ability to change ones
>IP address and header details is simplistic, indeed, with little time
>spent anyone can appear to be "coming" from anywhere in the world.
>
>You waste my time. Worse, you think us all idiots here. You remind me
>of the "street smart" prosecutors and defense attorneys who stack jurys
>with members of little or no technical knowledge and then call in
>"expert witnesses" and propose arguments of technical details to boggle
>their minds.
>
>You have only proven that you, yourself are either ignorant to such
>technical details, or else you are indeed street smart, I favor the
>latter in this case (however, if you in the dark about such things, 15
>minutes on google will enlighten you.)
>
>JS

"one useless man is disgrace 2 become a law firm 3 or more become a congress"
adams

woger you are a Congress all in your own head
"http://www.3ix.org/sys/aff.php?aff=7439" target="_blank"

altopia is never used by KB9RQZ
http://kb9rqz.cc.cc
http://kd8ctl.com
nor is Konstans@hotmail.com ever
btw i can be found at
17366 N River Rd

Chassel Mi

but the cowards asking lack the gut to act

3598. Re: TLW Program problem

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-17 22:46:01 UTC
From: Jeff Liebermann <jeffl@cruzio.com>
Message-ID: <c0dli5h0s62oc3b0it4s4b7ble45vhlkn1@4ax.com>
Source record: 11560

On Thu, 17 Dec 2009 13:39:26 -0800, Jeff Liebermann <jeffl@cruzio.com>
wrote:

>On Thu, 17 Dec 2009 11:07:53 -0500, John Ferrell
><jferrell13@triad.rr.com> wrote:
>
>>I am having problems trying to use the TLW program from the ARRL
>>antenna Book. The version is 3.0.
>
>Current version is 3.0b:
><http://www2.arrl.org/notes/9043/index.html>

Argh. When I download it, the TLW3.EXE program says version 2.03 from
Jan 2005. I have no idea which is the latest version.

--
Jeff Liebermann 150 Felker St #D Santa Cruz CA 95060
831-336-2558
http://802.11junk.com jeffl@cruzio.com
http://www.LearnByDestroying.com AE6KS

3599. Ultra-compact 2m antenna ?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-18 08:05:49 UTC
From: Robert Lacoste <see-alciom-dot-com@na.com>
Message-ID: <4b2b37de$0$938$ba4acef3@news.orange.fr>
Source record: 11561

Dear all,

For a quite specific application I'm looking for an antenna design with ideally the following characteristics, which are, I know, contradictory :

- 2m band
- TX (low power, less than 1W) & RX
- ultra compact, ideally able to fit in a 12-15cm x 5 cm x 5cm volume
- as omnidirectionnal as possible on the horizontal plane
- more or less vertical polarisation
- raisonnable gain for its size (-5 to 0 dBi ?)
- low dependency to nearby grounds (would be installed either at ground level or on a wall)
- could be narrow band (say 1MHz) but in that case with stable tuning...
- low cost

Not trivial, isn't it ? For the moment my best match is a dual helix antenna (two colinear helix, each made with a L/4 long wire, driven differentially), but performances and size are not optimal.

Any good idea ? Would small magnetic loops be usable in such high frequencies and small size ? Has someone already experimented other good designs ?

Thanks,
73s,
Robert

3600. Re: Ultra-compact 2m antenna ?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-18 16:47:19 UTC
From: Wimpie <wimabctel@tetech.nl>
Message-ID: <1d776cc7-dd09-4491-b798-13d75dd1c4fd@s20g2000yqd.googlegroups.com>
Source record: 11562

On 18 dic, 09:05, "Robert Lacoste" <see-alciom-dot-...@na.com> wrote:
> Dear all,
>
> For a quite specific application I'm looking for an antenna design with
> ideally the following characteristics, which are, I know, contradictory :
>
> - 2m band
> - TX (low power, less than 1W) & RX
> - ultra compact, ideally able to fit in a 12-15cm x 5 cm x 5cm volume
> - as omnidirectionnal as possible on the horizontal plane
> - more or less vertical polarisation
> - raisonnable gain for its size (-5 to 0 dBi ?)
> - low dependency to nearby grounds (would be installed either at ground
> level or on a wall)
> - could be narrow band (say 1MHz) but in that case with stable tuning...
> - low cost
>
> Not trivial, isn't it ? For the moment my best match is a dual helix antenna
> (two colinear helix, each made with a L/4 long wire, driven differentially),
> but performances and size are not optimal.
>
> Any good idea ? Would small magnetic loops be usable in such high
> frequencies and small size ? Has someone already experimented other good
> designs ?
>
> Thanks,
> 73s,
> Robert

Hello Robert,

Loop antennas (from strip material) are an option when you accept a
figure-of-eigtht radiation pattern in the horizontal plane. When your
link budget has sufficient margin, a figure-of-eight pattern can be
accaptable for indoor applications as propagation can take place via
reflection.

For a strip material loop that covers 0.12*0.05 m^2, you may expect
about 17 pF tuning capacitance. That capacitor must be able to handle
some kV (at 1W input power). matching can be done, for example, with
a gamma match or just an inductive coupling loop.

Your may add capacitive end-plates to your helical dipole. The actual
wire length will reduce, hence giving better efficiency and some
bandwidth increase. With a good match, -5 dBi must be possible with 1

MHz BW (VSWR=2, in open air).

I have serious doubts about efficiency and tuning stability when in close proximity of materials. As fields close to the antenna are very strong, comparing to full size antennas with same input power, I expect significant loss in wall building materials and detuning. So the match to the transmitter will vary significantly.

You should use all the volume you have to get reasonable efficiency and useful bandwidth, so you will very likely not find a ready-to-build design that fits your needs.

Best regards,

Wim
PA3DJS
www.tetech.nl
when using PM, remove abc first.

3601. Re: Ultra-compact 2m antenna ?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-18 17:09:02 UTC
From: Dave <k1ttt@arrl.net>
Message-ID: <c8a51a20-9687-4115-8669-65b33e5f163e@21g2000yqj.googlegroups.com>
Source record: 11563

On Dec 18, 8:05 am, "Robert Lacoste" <see-alciom-dot-...@na.com>
wrote:
> Dear all,
>
> For a quite specific application I'm looking for an antenna design with
> ideally the following characteristics, which are, I know, contradictory :
>
> - 2m band
> - TX (low power, less than 1W) & RX
> - ultra compact, ideally able to fit in a 12-15cm x 5 cm x 5cm volume
> - as omnidirectionnal as possible on the horizontal plane
> - more or less vertical polarisation
> - raisonnable gain for its size (-5 to 0 dBi ?)
> - low dependency to nearby grounds (would be installed either at ground
> level or on a wall)
> - could be narrow band (say 1MHz) but in that case with stable tuning...
> - low cost
>
> Not trivial, isn't it ? For the moment my best match is a dual helix antenna
> (two colinear helix, each made with a L/4 long wire, driven differentially),
> but performances and size are not optimal.
>
> Any good idea ? Would small magnetic loops be usable in such high
> frequencies and small size ? Has someone already experimented other good
> designs ?
>
> Thanks,
> 73s,
> Robert

a rubber duck or just a loaded vertical should do it. add a small
ground plane or counterpoise coiled in the allotted space and you may
even get better than 0dbi.

3602. Re: TLW Program problem

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-18 19:02:29 UTC
From: John Ferrell <jferrell13@triad.rr.com>
Message-ID: <noini5pojq2cuoolb1k3e0b5l72i4rd18p@4ax.com>
Source record: 11564

On Thu, 17 Dec 2009 13:39:26 -0800, Jeff Liebermann <jeffl@cruzio.com>
wrote:

>On Thu, 17 Dec 2009 11:07:53 -0500, John Ferrell
><jferrell13@triad.rr.com> wrote:
>
>>I am having problems trying to use the TLW program from the ARRL
>>antenna Book. The version is 3.0.
>
>Current version is 3.0b:
><http://www2.arrl.org/notes/9043/index.html>
>
>
>>On one machine when I select the "Tuner" button the program does not
>>come up. It does show an instance as a sub task of the TLW on the task
>>bar at the bottom of my display. Clicking the subtask causes it to
>>blink but nothing else. In the Windows Task Manager it shows as a
>>process momentarily and then disappears.
>
>That sounds like a broken shortcut or that you're running the MSDOS
>version (TLA.exe) from a Windoze shortcut. Try:
> Start -> Programs -> ARRL Antenna Book -> TLW
>instead of using the shortcut on the desktop.
>
>>On the other machine the tuner window comes up but the on choice that
>>will display is the T-Network. I am certain this one worked well a
>>short while back.
>
>Sounds like the program is corrupted. Uninstall, reboot, and
>reinstall.
>
>>1-make TLW work in my environment.
>
>Get someone there who knows computahs. Have them run a virus scan,
>spyware scan, scandisk, registry check, Windoze updates, and other
>maintenance tasks.
>
Norton keeps the virii & spy ware in check, the updates are current. I
have not run scandisk in a while so I will get that on the schedule.
As far as the registry is concerned I will save that as a last resort
because of the risks involved.

>>2-do the calculations manually (rather not, I am both old & lazy)
>>re:Chapter 25 latest ARRL Antenna Handbook.
>

>What calculations?
The equations that provide the basis for the calculations in the TLW program.

>
>>3-G4FGQ programs (good possibility)
>>4-Find other affordable software for the task.
>
>What task? If you want help finding alternatives, it's a good idea to
>describe what you're trying to accomplish, and what you have to work
>with.
I thought I was doing that. The services performed by the TLW program are what I seek. I made the assumption that those interested in helping would already be acquainted with the program.

You have pointed out the likely trouble spots and I will check these first! I also have more information in that I have discovered that the TLW program is working properly on my backup system. I suspect that wherever TLW stores its session to session parameters has been corrupted with un computable data. I have run many absurd configurations while testing design limitations.
>
>>John Ferrell W8CCW

Thanks for the help!
John Ferrell W8CCW

3603. Re: TLW Program problem

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-18 20:48:15 UTC
From: John Ferrell <jferrell13@triad.rr.com>
Message-ID: <v5qni5d72ipgg42k9f6p1iclt5pmbour2v@4ax.com>
Source record: 11565

On Fri, 18 Dec 2009 14:02:29 -0500, John Ferrell
<jferrell13@triad.rr.com> wrote:

>On Thu, 17 Dec 2009 13:39:26 -0800, Jeff Liebermann <jeffl@cruzio.com>
>wrote:
>
>>On Thu, 17 Dec 2009 11:07:53 -0500, John Ferrell
>><jferrell13@triad.rr.com> wrote:
>>
>>>I am having problems trying to use the TLW program from the ARRL
>>>antenna Book. The version is 3.0.
>>
>>Current version is 3.0b:
>><http://www2.arrl.org/notes/9043/index.html>
>>
>>
>>>On one machine when I select the "Tuner" button the program does not
>>>come up. It does show an instance as a sub task of the TLW on the task
>>>bar at the bottom of my display. Clicking the subtask causes it to
>>>blink but nothing else. In the Windows Task Manager it shows as a
>>>process momentarily and then disappears.
>>
>>That sounds like a broken shortcut or that you're running the MSDOS
>>version (TLA.exe) from a Windoze shortcut. Try:
>> Start -> Programs -> ARRL Antenna Book -> TLW
>>instead of using the shortcut on the desktop.
>>
>>>On the other machine the tuner window comes up but the on choice that
>>>will display is the T-Network. I am certain this one worked well a
>>>short while back.
>>
>>Sounds like the program is corrupted. Uninstall, reboot, and
>>reinstall.
>>
>>>1-make TLW work in my environment.
>>
>>Get someone there who knows computahs. Have them run a virus scan,
>>spyware scan, scandisk, registry check, Windoze updates, and other
>>maintenance tasks.
>>
>Norton keeps the virii & spy ware in check, the updates are current. I
>have not run scandisk in a while so I will get that on the schedule.
>As far as the registry is concerned I will save that as a last resort
>because of the risks involved.

>
>>>2-do the calculations manually (rather not, I am both old & lazy)
>>>re:Chapter 25 latest ARRL Antenna Handbook.
>>
>>What calculations?
>The equations that provide the basis for the calculations in the TLW
>program.
>
>>
>>>3-G4FGQ programs (good possibility)
>>>4-Find other affordable software for the task.
>>
>>What task? If you want help finding alternatives, it's a good idea to
>>describe what you're trying to accomplish, and what you have to work
>>with.
>I thought I was doing that. The services performed by the TLW program
>are what I seek. I made the assumption that those interested in
>helping would already be acquainted with the program.
>
>You have pointed out the likely trouble spots and I will check these
>first! I also have more information in that I have discovered that the
>TLW program is working properly on my backup system. I suspect that
>wherever TLW stores its session to session parameters has been
>corrupted with un computable data. I have run many absurd
>configurations while testing design limitations.
>>
>>>John Ferrell W8CCW
>
>Thanks for the help!
>John Ferrell W8CCW
You asked the right questions to get me on track.

I prowled around the registry without anything looking interesting.
Upon examining the folder containing the tlw3.exe file I found a file
"TL.DEF" which I replaced from with the one from the working backup
machine and all is well!
I will now return to my matching studies...

Thanks for the help,
John Ferrell W8CCW

3604. Re: Ultra-compact 2m antenna ?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-18 21:09:17 UTC
From: IanT <noemail@email.co.uk>
Message-ID: <hggr29ihd1@news.eternal-september.org>
Source record: 11566

"Robert Lacoste" <see-alciom-dot-com@na.com> wrote in message
news:4b2b37de$0$938$ba4acef3@news.orange.fr...
> Dear all,
>
> For a quite specific application I'm looking for an antenna design with
> ideally the following characteristics, which are, I know, contradictory :
>
> - 2m band
> - TX (low power, less than 1W) & RX
> - ultra compact, ideally able to fit in a 12-15cm x 5 cm x 5cm volume
> - as omnidirectionnal as possible on the horizontal plane
> - more or less vertical polarisation
> - raisonnable gain for its size (-5 to 0 dBi ?)
> - low dependency to nearby grounds (would be installed either at ground
> level or on a wall)
> - could be narrow band (say 1MHz) but in that case with stable tuning...
> - low cost
>
> Not trivial, isn't it ? For the moment my best match is a dual helix
> antenna (two colinear helix, each made with a L/4 long wire, driven
> differentially), but performances and size are not optimal.
>
> Any good idea ? Would small magnetic loops be usable in such high
> frequencies and small size ? Has someone already experimented other good
> designs ?
>
> Thanks,
> 73s,
> Robert

No point using a "short" aerial as the radiaton angle will be up in the sky
and coverage absolutely rubbish.
The easiest aerial you can make is from a piece of 300ohm ribbon cable.
It's a slim jim type aerial which has a low angle of radiation and will give
a brilliant coverage compared to expensive colinear aerials.
You can just roll it up and stick it in your pocket, then when you want
to use it - hang it from a curtain rail. or a tall structure. No need for
any
ground.

3605. Re: TLW Program problem

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-18 21:10:58 UTC
From: Jeff Liebermann <jeffl@cruzio.com>
Message-ID: <dnrni5tco3qhn19rtbbdejsn8vnitpuu3i@4ax.com>
Source record: 11567

On Fri, 18 Dec 2009 15:48:15 -0500, John Ferrell
<jferrell13@triad.rr.com> wrote:

>I prowled around the registry without anything looking interesting.
>Upon examining the folder containing the tlw3.exe file I found a file
>"TL.DEF" which I replaced from with the one from the working backup
>machine and all is well!
>I will now return to my matching studies...
>
>Thanks for the help,
>John Ferrell W8CCW

Nicely done. TL.DEF is created when you first run TLW. I assumed
wrongly that the settings were saved in the registry. It would have
been messy to fix if they were because uninstalling most programs
preserves the user settings in the registry. When you reinstall, the
problems just return.

--
Jeff Liebermann jeffl@cruzio.com
150 Felker St #D http://www.LearnByDestroying.com
Santa Cruz CA 95060 http://802.11junk.com
Skype: JeffLiebermann AE6KS 831-336-2558

3606. Re: Ultra-compact 2m antenna ?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-18 22:22:58 UTC
From: dplatt@radagast.org
Message-ID: <2vbtv6-0k.ln1@radagast.org>
Source record: 11568

In article <hggr29ihd1@news.eternal-september.org>,
IanT <noemail@email.co.uk> wrote:

>No point using a "short" aerial as the radiaton angle will be up in the sky
>and coverage absolutely rubbish.

Not so, at least not for the stated reason.

The radiation pattern of an "infinitesimally short" dipole (or very short monopole over a good ground) isn't very different from that of a half-wave dipole (or quarter-wave whip over a good ground). There's only a dB or so of difference in the shape of the patterns, at any angle.

The problem with short mono-/di-poles is that you need to add a whole bunch of loading to them, in order to make them resonant and easy to drive. The usual methods for such loading are electrically inefficient... much of the power ends up being burned up as heat in the coil.

It'd help to know a bit more about the intended installation/application of this particular antenna, in additional to the described physical parameters.

There might be some form of slot antenna which would do the trick.

--
Dave Platt <dplatt@radagast.org> AE6EO
Friends of Jade Warrior home page: http://www.radagast.org/jade-warrior
I do _not_ wish to receive unsolicited commercial email, and I will
boycott any company which has the gall to send me such ads!

3607. Re: TLW Program problem

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-19 00:10:24 UTC
From: John Ferrell <jferrell13@triad.rr.com>
Message-ID: <dr5oi5tkg2lrenlih7vbldnr2khimjq4cg@4ax.com>
Source record: 11569

On Fri, 18 Dec 2009 13:10:58 -0800, Jeff Liebermann <jeffl@cruzio.com>
wrote:

>On Fri, 18 Dec 2009 15:48:15 -0500, John Ferrell
><jferrell13@triad.rr.com> wrote:
>
>>I prowled around the registry without anything looking interesting.
>>Upon examining the folder containing the tlw3.exe file I found a file
>>"TL.DEF" which I replaced from with the one from the working backup
>>machine and all is well!
>>I will now return to my matching studies...
>>
>>Thanks for the help,
>>John Ferrell W8CCW
>
>Nicely done. TL.DEF is created when you first run TLW. I assumed
>wrongly that the settings were saved in the registry. It would have
>been messy to fix if they were because uninstalling most programs
>preserves the user settings in the registry. When you reinstall, the
>problems just return.

I suppose the uninstall program was leaving the TL.DEF file and the
folders intact in the same manner. The problem remained after an
uninstall-install sequence. I simply removed the corrupted copy from
my laptop and a new TL.DEF file was created on the next execution.

My personal preference would be to always operate this way. Keeping
the parameters & execution info in the programs subfolder makes it
possible to sanitize as required.
Thanks again!
John Ferrell W8CCW

3608. Re: TLW Program problem

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-19 10:02:25 UTC
From: Lostgallifreyan <no-one@nowhere.net>
Message-ID: <Xns9CE66622628D4zoodlewurdle@216.196.109.145>
Source record: 11570

Jeff Liebermann <jeffl@cruzio.com> wrote in
news:dnrni5tco3qhn19rtbbdejsn8vnitpuu3i@4ax.com:

> On Fri, 18 Dec 2009 15:48:15 -0500, John Ferrell
> <jferrell13@triad.rr.com> wrote:
>
>>I prowled around the registry without anything looking interesting.
>>Upon examining the folder containing the tlw3.exe file I found a file
>>"TL.DEF" which I replaced from with the one from the working backup
>>machine and all is well!
>>I will now return to my matching studies...
>>
>>Thanks for the help,
>>John Ferrell W8CCW
>
> Nicely done. TL.DEF is created when you first run TLW. I assumed
> wrongly that the settings were saved in the registry. It would have
> been messy to fix if they were because uninstalling most programs
> preserves the user settings in the registry. When you reinstall, the
> problems just return.
>
>

I've found that most programs will set user and program settings directly under a section names after the company, or the program itself, so a look at the 'about' dialog usually shows a name or two that can be used to search for in the registry. A look at whatever the search reveals will usually narrow it down correctly unless the keys and values are named so cryptically that they make no sense to anyone but the coder. Few try that hard to obfuscate, and most tend to verbosity in commenting and readability so it's usually easy to find a program's settings to remove a branch and renew it. Trial and other license settings are usually much better hidden, but those won't affect subleties of program operation unless features are limited by license types.

One thing worth doing is to back up the entire registry to a file before testing a new program, then doing it again to a new file after first install (and perhaps reboot if required). Comparing the two will show what if anything it added. The time taken to do this is always less than that consumed in solving problems related to not doing it. :)

3609. Re: TLW Program problem

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-19 10:09:52 UTC
From: Lostgallifreyan <no-one@nowhere.net>
Message-ID: <Xns9CE6676572017zoodlewurdle@216.196.109.145>
Source record: 11571

John Ferrell <jferrell13@triad.rr.com> wrote in
news:dr5oi5tkg2lrenlih7vbldnr2khimjq4cg@4ax.com:

> I simply removed the corrupted copy from
> my laptop and a new TL.DEF file was created on the next execution.
>
> My personal preference would be to always operate this way. Keeping
> the parameters & execution info in the programs subfolder makes it
> possible to sanitize as required.
>

Fortunately a lot of coders now agree. I think the infatuation with the registry is declining. What's really weird is that in *nix systems, BSD and Linux etc, that have different filing subsystems, it's not common practise to put related config files in the base dir for the executable, so arguably they'd have more use for a common registry than Windows does but they don't have one. Life is strange... On the other hand, BSD and all do tend to use human-readable and editable configs more so it's easier to change things and back them up reliably while the program isn't running.

3610. Sangean ATS-909 external antenna impedance??

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-19 15:14:46 UTC
From: Lostgallifreyan <no-one@nowhere.net>
Message-ID: <Xns9CE69B09D13ACzoodlewurdle@216.196.109.145>
Source record: 11572

Does anyone know what the Sangean ATS-909's external antenna input impedance is?

I searched for days for documentation on that radio and found plenty, mods, schematics, service manuals, reviews, but no straight word on the impedance of that input! (Not even in the service manual specs). The only reference I found was a from a guy on a 7-page set of ham reviews, and all he said was that it was a mystery!

Maybe the only way to know is to start from the schematic but I don't know how, but here's the best schematic I could find:
http://eric.horsemensociety.info/TECH/images/ATS909_Schematic_A.gif
(Antenna input is near top right).
(Link appears to be dead, 403, forbidden. I'm sure it worked last week..)

What I really want to know is whether the ATS-909 will work ok with a long(ish) wire outside feeding a 50 ohm coax via a 9:1 transformer, or if that would cause more bother than connecting a wire directly to it and putting up with local noise picked up from nearby buildings.

3611. Re: Slinkey Antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-19 16:11:03 UTC
From: M0WYM <Sansspam@peartreegreen.org>
Message-ID: <hgitup$9lo$1@news.albasani.net>
Source record: 11573

clyde wrote:
> 'Doc;694986 Wrote:
>> This is a metal slinky, not the plastic ones?
>> - 'Doc
>
> HI DOC,
>
> YES IT IS METAL. I BOUGHT IT OFF EBAY. THANKS FOR YOUR REPLY.
>
> CLYDE
>
>
>
>

I make one of these in an attempt to create an 80m dipole in my loft
and did work to some extent and my IC703 was OK with it. I took it
down in the end because as part of a 'fan dipole' it was fantastic
at picking electrical noise. You can see what I did at
http://www.radiowymsey.org/FanDipole/slinky.htm

Charlie.

--
M0WYM
www.radiowymsey.org

Sales @ radiowymsey
http://shop.ebay.co.uk/gnome7763/m.html?

3612. Re: Sangean ATS-909 external antenna impedance??

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-19 16:21:01 UTC
From: Dave <k1ttt@arrl.net>
Message-ID: <f119aab9-3597-4cba-ac75-a421c0a73b3f@m25g2000yqc.googlegroups.com>
Source record: 11574

On Dec 19, 3:14 pm, Lostgallifreyan <no-...@nowhere.net> wrote:
> Does anyone know what the Sangean ATS-909's external antenna input impedance
> is?
>
> I searched for days for documentation on that radio and found plenty, mods,
> schematics, service manuals, reviews, but no straight word on the impedance
> of that input! (Not even in the service manual specs). The only reference I
> found was a from a guy on a 7-page set of ham reviews, and all he said was
> that it was a mystery!
>
> Maybe the only way to know is to start from the schematic but I don't know
> how, but here's the best schematic I could
find:http://eric.horsemensociety.info/TECH/images/ATS909_Schematic_A.gif
> (Antenna input is near top right).
> (Link appears to be dead, 403, forbidden. I'm sure it worked last week..)
>
> What I really want to know is whether the ATS-909 will work ok with a
> long(ish) wire outside feeding a 50 ohm coax via a 9:1 transformer, or if
> that would cause more bother than connecting a wire directly to it and
> putting up with local noise picked up from nearby buildings.

just hook it up with the coax even without the transformer and it
should be fine.

3613. Re: Sangean ATS-909 external antenna impedance??

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-19 16:52:17 UTC
From: Gaius <bin@127.0.0.1>
Message-ID: <4b2d04c1$0$2488$db0fefd9@news.zen.co.uk>
Source record: 11575

Lostgallifreyan wrote:
> Does anyone know what the Sangean ATS-909's external antenna input impedance
> is?
<SNIP>

> What I really want to know is whether the ATS-909 will work ok with a
> long(ish) wire outside feeding a 50 ohm coax via a 9:1 transformer, or if
> that would cause more bother than connecting a wire directly to it and
> putting up with local noise picked up from nearby buildings.

There's a 1K0 pot across the input which is used as a cheap and cheerful
RF gain control. So i'd assume about 1K. You wouldn't have a problem
with the wire attached direct, but you'll get lots of front end
intermod, as it's wide open - just a low pass filter (presumably 30MHz
cut off)before the RF amp. A bit of preselection is pretty necessary for
an external wire of any size.

3614. Re: Sangean ATS-909 external antenna impedance??

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-19 17:18:18 UTC
From: Lostgallifreyan <no-one@nowhere.net>
Message-ID: <Xns9CE6B00814103zoodlewurdle@216.196.109.145>
Source record: 11576

Dave <k1ttt@arrl.net> wrote in news:f119aab9-3597-4cba-ac75-a421c0a73b3f@m25g2000yqc.googlegroups.com:

> On Dec 19, 3:14 pm, Lostgallifreyan <no-...@nowhere.net> wrote:

>> What I really want to know is whether the ATS-909 will work ok with a
>> long(ish) wire outside feeding a 50 ohm coax via a 9:1 transformer, or if
>> that would cause more bother than connecting a wire directly to it and
>> putting up with local noise picked up from nearby buildings.
>
> just hook it up with the coax even without the transformer and it
> should be fine.
>

Really? Wouldn't that be 'matching' a fairly high impedance in the wire to the low 50 ohm coax, then risking further loss in unknown input impedance mismatch? I like the idea though, if I thought it would be that easy I might have tried it. :) If it's really ok I'll do it. I haven't got scope for a really long wire so I do need to try to minimise losses, I imagine..

3615. Re: Sangean ATS-909 external antenna impedance??

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-19 17:32:12 UTC
From: Ralph Mowery <rmowery28146@earthlink.net>
Message-ID: <1smdnSTij4Ock7DWnZ2dnUVZ_gydnZ2d@earthlink.com>
Source record: 11577

"Lostgallifreyan" <no-one@nowhere.net> wrote in message
news:Xns9CE69B09D13ACzoodlewurdle@216.196.109.145...
> Does anyone know what the Sangean ATS-909's external antenna input
> impedance
> is?
>
> I searched for days for documentation on that radio and found plenty,
> mods,
> schematics, service manuals, reviews, but no straight word on the
> impedance
> of that input! (Not even in the service manual specs). The only reference
> I
> found was a from a guy on a 7-page set of ham reviews, and all he said was
> that it was a mystery!
>
> Maybe the only way to know is to start from the schematic but I don't know
> how, but here's the best schematic I could find:
> http://eric.horsemensociety.info/TECH/images/ATS909_Schematic_A.gif
> (Antenna input is near top right).
> (Link appears to be dead, 403, forbidden. I'm sure it worked last week..)
>
> What I really want to know is whether the ATS-909 will work ok with a
> long(ish) wire outside feeding a 50 ohm coax via a 9:1 transformer, or if
> that would cause more bother than connecting a wire directly to it and
> putting up with local noise picked up from nearby buildings.

Who cares what the impedance is for that radio. Unless you plan on putting
up an antenna for one very narrow band of frequencies, the impedance of the
system will be all over the place. YOu can probably run coax to the antenna
and never have any problems.

3616. Re: TLW Program problem

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-19 17:37:08 UTC
From: Jeff Liebermann <jeffl@cruzio.com>
Message-ID: <ni3qi51p1u4e3o7gphnaovnhu2utkjrvnk@4ax.com>
Source record: 11578

On Sat, 19 Dec 2009 04:02:25 -0600, Lostgallifreyan
<no-one@nowhere.net> wrote:

>One thing worth doing is to back up the entire registry to a file before
>testing a new program...

I use ERUNT for both manual and automatic (on boot) registry backups.
<http://www.larshederer.homepage.t-online.de/erunt/>
<http://technologizer.com/2009/05/26/why-i-dumped-windows-system-restore-for-erunt/>
It has saved my posterior more times than I care to admit.

--
Jeff Liebermann jeffl@cruzio.com
150 Felker St #D http://www.LearnByDestroying.com
Santa Cruz CA 95060 http://802.11junk.com
Skype: JeffLiebermann AE6KS 831-336-2558

3617. Re: Sangean ATS-909 external antenna impedance??

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-19 17:39:43 UTC
From: Lostgallifreyan <no-one@nowhere.net>
Message-ID: <Xns9CE6B3A4743FFzoodlewurdle@216.196.109.145>
Source record: 11579

Gaius <bin@127.0.0.1> wrote in
news:4b2d04c1$0$2488$db0fefd9@news.zen.co.uk:

> Lostgallifreyan wrote:
>> Does anyone know what the Sangean ATS-909's external antenna input
>> impedance is?
> <SNIP>
>
>> What I really want to know is whether the ATS-909 will work ok with a
>> long(ish) wire outside feeding a 50 ohm coax via a 9:1 transformer, or
>> if that would cause more bother than connecting a wire directly to it
>> and putting up with local noise picked up from nearby buildings.
>
> There's a 1K0 pot across the input which is used as a cheap and cheerful
> RF gain control. So i'd assume about 1K. You wouldn't have a problem
> with the wire attached direct, but you'll get lots of front end
> intermod, as it's wide open - just a low pass filter (presumably 30MHz
> cut off)before the RF amp. A bit of preselection is pretty necessary for
> an external wire of any size.
>
>

Front end intermod? Do you mean pickup from local active gain stages or other RF subcircuits in the receiver being picked back up by the wire antenna and makign sum/difference signals or similar effects?

Also, I see that pot now, (and noticed that it also affects the telescopic inbuilt antenna's pickup on SW (not FM as far as I know)), but I also see a lot of other parts associated with that part of the circuit. I don't know enough to be sure but it seems they might complicate the picture. If not, I don't know why the impedance seems to be a mystery. If it were well established I know my searches would found it so in triplicate by now...

3618. Re: Sangean ATS-909 external antenna impedance??

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-19 17:42:55 UTC
From: Lostgallifreyan <no-one@nowhere.net>
Message-ID: <Xns9CE6B42ECA291zoodlewurdle@216.196.109.145>
Source record: 11580

"Ralph Mowery" <rmowery28146@earthlink.net> wrote in
news:1smdnSTij4Ock7DWnZ2dnUVZ_gydnZ2d@earthlink.com:

>
> "Lostgallifreyan" <no-one@nowhere.net> wrote in message
> news:Xns9CE69B09D13ACzoodlewurdle@216.196.109.145...
>> Does anyone know what the Sangean ATS-909's external antenna input
>> impedance
>> is?
>>
>> I searched for days for documentation on that radio and found plenty,
>> mods,
>> schematics, service manuals, reviews, but no straight word on the
>> impedance
>> of that input! (Not even in the service manual specs). The only
>> reference I
>> found was a from a guy on a 7-page set of ham reviews, and all he said
>> was that it was a mystery!
>>
>> Maybe the only way to know is to start from the schematic but I don't
>> know how, but here's the best schematic I could find:
>> http://eric.horsemensociety.info/TECH/images/ATS909_Schematic_A.gif
>> (Antenna input is near top right).
>> (Link appears to be dead, 403, forbidden. I'm sure it worked last
>> week..)
>>
>> What I really want to know is whether the ATS-909 will work ok with a
>> long(ish) wire outside feeding a 50 ohm coax via a 9:1 transformer, or
>> if that would cause more bother than connecting a wire directly to it
>> and putting up with local noise picked up from nearby buildings.
>
> Who cares what the impedance is for that radio. Unless you plan on
> putting up an antenna for one very narrow band of frequencies, the
> impedance of the system will be all over the place. YOu can probably
> run coax to the antenna and never have any problems.
>

Ok, so that's two people saying that could work, and sure, I won't be relying
on a single narrow range, I want to see what's out there and detectable. I
might want to limit peaks and troughs in sensitivity by using a 9:1
transformer though, as I read several times that it is a useful way to do
that for general SW listening via a long wire. That alone means I probably DO
need to care about impedance matching.

3619. Re: TLW Program problem

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-19 17:48:36 UTC
From: Lostgallifreyan <no-one@nowhere.net>
Message-ID: <Xns9CE6B525C7D7Czoodlewurdle@216.196.109.145>
Source record: 11581

Jeff Liebermann <jeffl@cruzio.com> wrote in
news:ni3qi51p1u4e3o7gphnaovnhu2utkjrvnk@4ax.com:

> On Sat, 19 Dec 2009 04:02:25 -0600, Lostgallifreyan
> <no-one@nowhere.net> wrote:
>
>>One thing worth doing is to back up the entire registry to a file before
>>testing a new program...
>
> I use ERUNT for both manual and automatic (on boot) registry backups.
> <http://www.larshederer.homepage.t-online.de/erunt/>
> <http://technologizer.com/2009/05/26/why-i-dumped-windows-system-restore-
> for-erunt/> It has saved my posterior more times than I care to admit.
>
>

:)
I heard of that one I think, maybe even kept a copy. I developed habits of doing stuff manually though, and eventually using wxLua to script stuff. In the long run it turned out easier than finding stuff and testing it..

I do a registry lock too, so each boot it's the same. Easy to override at prompt by hitting ESC. On W98 though (I stay, obstinately), not at all sure how easy that kind of thing might be to solve with WXP and later. With W98.. locking, backups, all equally easy with a batch file or two. I agree with the philosophy of dumping system restore nonsense for a specialised tool. Ghost saves my hide more often than I can count.

3620. Re: Sangean ATS-909 external antenna impedance??

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-19 18:03:09 UTC
From: Gaius <bin@127.0.0.1>
Message-ID: <4b2d155e$0$2525$da0feed9@news.zen.co.uk>
Source record: 11582

Lostgallifreyan wrote:
> Gaius <bin@127.0.0.1> wrote in
> news:4b2d04c1$0$2488$db0fefd9@news.zen.co.uk:
>
>> Lostgallifreyan wrote:
>>
> Also, I see that pot now, (and noticed that it also affects the telescopic
> inbuilt antenna's pickup on SW (not FM as far as I know)), but I also see a
> lot of other parts associated with that part of the circuit. I don't know
> enough to be sure but it seems they might complicate the picture. If not, I
> don't know why the impedance seems to be a mystery. If it were well
> established I know my searches would found it so in triplicate by now...

I've just found a schematic JPG - 475Kb. It claims to be a "RK777", but
I think that's one of the 909's aliases. I can send it - mail me at john
at aultmore dot net.

3621. Re: Sangean ATS-909 external antenna impedance??

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-19 18:31:57 UTC
From: IanT <noemail@email.co.uk>
Message-ID: <hgj676$b0r$1@news.eternal-september.org>
Source record: 11583

"Lostgallifreyan" <no-one@nowhere.net> wrote in message
news:Xns9CE6B42ECA291zoodlewurdle@216.196.109.145...
> "Ralph Mowery" <rmowery28146@earthlink.net> wrote in
> news:1smdnSTij4Ock7DWnZ2dnUVZ_gydnZ2d@earthlink.com:
>
>>
>> "Lostgallifreyan" <no-one@nowhere.net> wrote in message
>> news:Xns9CE69B09D13ACzoodlewurdle@216.196.109.145...
>>> Does anyone know what the Sangean ATS-909's external antenna input
>>> impedance
>>> is?
>>>
>>> I searched for days for documentation on that radio and found plenty,
>>> mods,
>>> schematics, service manuals, reviews, but no straight word on the
>>> impedance
>>> of that input! (Not even in the service manual specs). The only
>>> reference I
>>> found was a from a guy on a 7-page set of ham reviews, and all he said
>>> was that it was a mystery!
>>>
>>> Maybe the only way to know is to start from the schematic but I don't
>>> know how, but here's the best schematic I could find:
>>> http://eric.horsemensociety.info/TECH/images/ATS909_Schematic_A.gif
>>> (Antenna input is near top right).
>>> (Link appears to be dead, 403, forbidden. I'm sure it worked last
>>> week..)
>>>
>>> What I really want to know is whether the ATS-909 will work ok with a
>>> long(ish) wire outside feeding a 50 ohm coax via a 9:1 transformer, or
>>> if that would cause more bother than connecting a wire directly to it
>>> and putting up with local noise picked up from nearby buildings.
>>
>> Who cares what the impedance is for that radio. Unless you plan on
>> putting up an antenna for one very narrow band of frequencies, the
>> impedance of the system will be all over the place. YOu can probably
>> run coax to the antenna and never have any problems.
>>
>
> Ok, so that's two people saying that could work, and sure, I won't be
> relying
> on a single narrow range, I want to see what's out there and detectable. I
> might want to limit peaks and troughs in sensitivity by using a 9:1
> transformer though, as I read several times that it is a useful way to do

> that for general SW listening via a long wire. That alone means I probably
> DO
> need to care about impedance matching.

You need an impedance matching device otherwise incorrectly called
"antenna tuning unit". It doesn't tune the antenna, it only matches the
impedance
for a given frequency. The main loss will be with the aerial NOT being
resonant at your chosen frequency.
The only way you are going to find out is try what people have suggested,
then compare the results for yourself.

3622. Re: an ontopic post about code

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-20 00:25:56 UTC
From: kb9rqz@yahoooo.com
Message-ID: <0mrqi5l6aaboug279usatuvpbrgp5gustm@4ax.com>
Source record: 11584
Cross-posted to: alt.ham-radio.vhf-uhf,rec.radio.amateur.policy,rec.radio.amateur.antenna

On Fri, 01 Dec 2006 09:36:47 -0800, John Smith
<assemblywizard@gmail.com> wrote:

>K4YZ wrote:
>> Nope.
>>
>> The IP Address and servers are complete proof that I do NOT share
>> any annonymous character's "address".
>>
>> Sounds like Lennie, to me....
>>
>> Steve, K4YZ
>>
>
>To anyone with even an elementary understanding of anonymous proxies,
>anonymous remailers, zombie backdoors, etc., the ability to change ones
>IP address and header details is simplistic, indeed, with little time
>spent anyone can appear to be "coming" from anywhere in the world.
>
>You waste my time. Worse, you think us all idiots here. You remind me
>of the "street smart" prosecutors and defense attorneys who stack jurys
>with members of little or no technical knowledge and then call in
>"expert witnesses" and propose arguments of technical details to boggle
>their minds.
>
>You have only proven that you, yourself are either ignorant to such
>technical details, or else you are indeed street smart, I favor the
>latter in this case (however, if you in the dark about such things, 15
>minutes on google will enlighten you.)
>
>JS

"one useless man is disgrace 2 become a law firm 3 or more become a congress"
adams

woger you are a Congress all in your own head
"http://www.3ix.org/sys/aff.php?aff=7439" target="_blank"

altopia is never used by KB9RQZ
http://kb9rqz.cc.cc
http://kd8ctl.com
nor is Konstans@hotmail.com ever
btw i can be found at
17366 N River Rd

Chassel Mi

but the cowards asking lack the gut to act

3623. Re: Sangean ATS-909 external antenna impedance??

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-20 04:35:47 UTC
From: Bob <rmiller47@satx.rr.com>
Message-ID: <io9ri5hoppjnarnai417mraeask4rvghou@4ax.com>
Source record: 11585

On Sat, 19 Dec 2009 09:14:46 -0600, Lostgallifreyan
<no-one@nowhere.net> wrote:

>Does anyone know what the Sangean ATS-909's external antenna input impedance
>is?

The Sangean external antenna input is a 2.1mm jack which would
acommodate a high impedance long wire, as per the instructions:

"ANT-60 PORTABLE SW ANTENNA
Included with the ATS-909 is the Sangean ANT-60 Portable SW Antenna.
The antenna is plugged into
jack (26) labeled EXT AM ANT. When fully extended this antenna should
improve SW reception. For
maximum performance this antenna should be placed as high as possible
above the ground and in an
unobstructed area if possible."

Your idea of attaching the antenna via 50 ohm coax would probably be
below the impedance range of the jack, tho' I'm not sure you would
really hear much difference.

If the Sangean external antenna input were designed for 50 ohm coax,
it would probably have a coax jack, not the 2.1 mm jack.

bob
k5qwg

>
>I searched for days for documentation on that radio and found plenty, mods,
>schematics, service manuals, reviews, but no straight word on the impedance
>of that input! (Not even in the service manual specs). The only reference I
>found was a from a guy on a 7-page set of ham reviews, and all he said was
>that it was a mystery!
>
>Maybe the only way to know is to start from the schematic but I don't know
>how, but here's the best schematic I could find:
>http://eric.horsemensociety.info/TECH/images/ATS909_Schematic_A.gif
>(Antenna input is near top right).
>(Link appears to be dead, 403, forbidden. I'm sure it worked last week..)
>
>What I really want to know is whether the ATS-909 will work ok with a
>long(ish) wire outside feeding a 50 ohm coax via a 9:1 transformer, or if
>that would cause more bother than connecting a wire directly to it and
>putting up with local noise picked up from nearby buildings.

3624. Selling Electronic stuffs on ebay? I'll tell you why you should block this buyer >> jason116

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-20 06:44:07 UTC
From: Speeders & Drunk Drivers are MURDERERS <xeton2001@yahoo.com>
Message-ID: <sbudndtfmdyJVbDWnZ2dnUVZ_oednZ2d@posted.toastnet>
Source record: 11586
Cross-posted to: rec.radio.amateur.antenna,alt.internet.radio,alt.ham-radio.hf,alt.ham-radio,alt.ham-radio.vhf-uhf,alt.ham-radio.marketplace,alt.ham-radio.mods,rec.radio.amateur.antenna

jason116 loves to nag about your shipping cost, even for a gain of $0.85, if you refused to sell to him, he will report you to eBay for not setting shipping cost appropriately according to his mind. He wants to see you ship something to him without tracking #, you pay fuel cost, you spend your time waiting in line should be free to him!

If you blocked him from buying your stuffs, he also threatened you to report you about anything he can come up with. The sonofabitch wants things cheap below your cost, and you pay eBay as much as 20% to sell, he doesn't care. He's a snake!! I was right and thanks to my intuition, I blocked him 5mn before he makes a purchase. Glad I did, so I don't have to deal with his shit! You should never make friend with this jerk! Let him learn his lesson, don't sell anything to him.

PS. The FCC should keep an eye on this guy, he wanted to build a large radio transmitter before his license! He's looking for parts to produce high voltage over 100amp for his RF project.

3625. Re: Sangean ATS-909 external antenna impedance??

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-20 09:50:19 UTC
From: Ian Jackson <ianREMOVETHISjackson@g3ohx.demon.co.uk>
Message-ID: <x56HvaKbNfLLFwav@g3ohx.demon.co.uk>
Source record: 11587

In message <io9ri5hoppjnarnai417mraeask4rvghou@4ax.com>, Bob
<rmiller47@satx.rr.com> writes
>

>If the Sangean external antenna input were designed for 50 ohm coax,
>it would probably have a coax jack, not the 2.1 mm jack.
>
The 'type' of connector - especially on something like a small portable
radio - is absolutely NO guide to the input impedance (which, actually
could be almost anything). It's often determined by the need to keep it
small. I have a small VHF/UHF TV set which use a 3.5mm audio jack.
--
Ian

3626. Re: Sangean ATS-909 external antenna impedance??

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-20 10:01:16 UTC
From: Lostgallifreyan <no-one@nowhere.net>
Message-ID: <Xns9CE765F08B1B4zoodlewurdle@216.196.109.145>
Source record: 11588

Bob <rmiller47@satx.rr.com> wrote in
news:io9ri5hoppjnarnai417mraeask4rvghou@4ax.com:

> The Sangean external antenna input is a 2.1mm jack which would
> acommodate a high impedance long wire, as per the instructions:
>

3.5mm, not 2.1mm

> "ANT-60 PORTABLE SW ANTENNA
> Included with the ATS-909 is the Sangean ANT-60 Portable SW Antenna.
> The antenna is plugged into
> jack (26) labeled EXT AM ANT. When fully extended this antenna should
> improve SW reception. For
> maximum performance this antenna should be placed as high as possible
> above the ground and in an
> unobstructed area if possible."
>

I know that, it was the first thing I found, but it doesn't answer any
questions about impedance, especially if the radio you buy is second hand and
doesn't have the antenna wire with it.

> Your idea of attaching the antenna via 50 ohm coax would probably be
> below the impedance range of the jack, tho' I'm not sure you would
> really hear much difference.
>
> If the Sangean external antenna input were designed for 50 ohm coax,
> it would probably have a coax jack, not the 2.1 mm jack.
>

Agreed, which is why I don't assume it's 50 ohms, and I start looking for
answers. I think you're likely right that it might not make enough difference
to worry about though. If using coax can get the SNR higher I'm in business
so long as the signal is strong enough for the input's gain to use.

3627. Re: Sangean ATS-909 external antenna impedance??

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-20 10:04:40 UTC
From: Lostgallifreyan <no-one@nowhere.net>
Message-ID: <Xns9CE76683F4A1Ezoodlewurdle@216.196.109.145>
Source record: 11589

Gaius <bin@127.0.0.1> wrote in
news:4b2d155e$0$2525$da0feed9@news.zen.co.uk:

> Lostgallifreyan wrote:
>> Gaius <bin@127.0.0.1> wrote in
>> news:4b2d04c1$0$2488$db0fefd9@news.zen.co.uk:
>>
>>> Lostgallifreyan wrote:
>>>
>> Also, I see that pot now, (and noticed that it also affects the
>> telescopic inbuilt antenna's pickup on SW (not FM as far as I know)),
>> but I also see a lot of other parts associated with that part of the
>> circuit. I don't know enough to be sure but it seems they might
>> complicate the picture. If not, I don't know why the impedance seems to
>> be a mystery. If it were well established I know my searches would
>> found it so in triplicate by now...
>
> I've just found a schematic JPG - 475Kb. It claims to be a "RK777", but
> I think that's one of the 909's aliases. I can send it - mail me at john
> at aultmore dot net.
>

Thanks, but I'm ok, I got a schematic.. It just appears that those links
became forbidden access in the week or so since I found them. Might even be a
local error, thogh as I no longer do HTML or User-Agent filtering or similar
things I can't see what the cause might be.

3628. Re: Sangean ATS-909 external antenna impedance??

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-20 10:08:30 UTC
From: Lostgallifreyan <no-one@nowhere.net>
Message-ID: <Xns9CE7672A7B5E0zoodlewurdle@216.196.109.145>
Source record: 11590

"IanT" <noemail@email.co.uk> wrote in
news:hgj676$b0r$1@news.eternal-september.org:

>> Ok, so that's two people saying that could work, and sure, I won't be
>> relying
>> on a single narrow range, I want to see what's out there and
>> detectable. I might want to limit peaks and troughs in sensitivity by
>> using a 9:1 transformer though, as I read several times that it is a
>> useful way to do that for general SW listening via a long wire. That
>> alone means I probably DO
>> need to care about impedance matching.
>
> You need an impedance matching device otherwise incorrectly called
> "antenna tuning unit". It doesn't tune the antenna, it only matches the
> impedance
> for a given frequency. The main loss will be with the aerial NOT being
> resonant at your chosen frequency.
> The only way you are going to find out is try what people have
> suggested, then compare the results for yourself.
>

Thanks, that could be useful. I've heard of them, wasn't sure if I'd need
something beyond a means to reduce peaks and troughs in resonance or
sensitivity across bands while trying to match impedance though. I read some
old posts by John Doty (archived on web sites) that suggested that a single
device could be set and placed at the end of the antenna wire and grounded
there too, and then weatherproofed and ignored. :) It's an attractive idea.

3629. Re: Fractal Antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-20 15:08:16 UTC
From: danl <daninxpasco@gmail.com>
Message-ID: <9bfsi5l9aijr0vg171vjvqiar5e72kei9f@4ax.com>
Source record: 11591

On Sun, 6 Dec 2009 19:47:28 -0600, "amdx" <amdx@knology.net> wrote:

>
>"danl" <daninxpasco@gmail.com> wrote in message
>news:2ainh510c1eviue0daktv5j4epdqsv2doo@4ax.com...
>> On Sun, 6 Dec 2009 10:44:30 +0000, EI5DD
>> <EI5DD.5614748@radiobanter.com> wrote:
>>
>>>
>>>>Would anyone have a copy of an article from either 73 or CQ magazine
>>>>somewhere around the 90's which contained an article on how to
>>>>construct a Fractal Quad antenna for 10 metres. The design was based on
>>>>work done by Nathan Coen N1IR.
>>>
>>>Steve (EI5DD)
>>
>> Popcorn! GET YER HOT BUTTERD POPCORN HERE! Popcorn!
>>
>> N9JBF
>> >Whisper< Does the Buffoon still come around?
> I don't think he is buffoon, he had an idea that was novel and looks like
>he is selling a bunch of them.
> Mike
>

The way he acted, not what he knew or how many he could sell
determined if he was a Buffoon...He was/is.

3630. Re: Sangean ATS-909 external antenna impedance??

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-20 15:39:28 UTC
From: amdx <amdx@knology.net>
Message-ID: <b72de$4b2e4527$18ec6dd7$9024@KNOLOGY.NET>
Source record: 11592

"Lostgallifreyan" <no-one@nowhere.net> wrote in message
news:Xns9CE765F08B1B4zoodlewurdle@216.196.109.145...
> Bob <rmiller47@satx.rr.com> wrote in
> news:io9ri5hoppjnarnai417mraeask4rvghou@4ax.com:
>
>> The Sangean external antenna input is a 2.1mm jack which would
>> acommodate a high impedance long wire, as per the instructions:
>>
>
> 3.5mm, not 2.1mm
>
>> "ANT-60 PORTABLE SW ANTENNA
>> Included with the ATS-909 is the Sangean ANT-60 Portable SW Antenna.
>> The antenna is plugged into
>> jack (26) labeled EXT AM ANT. When fully extended this antenna should
>> improve SW reception. For
>> maximum performance this antenna should be placed as high as possible
>> above the ground and in an
>> unobstructed area if possible."
>>
>
> I know that, it was the first thing I found, but it doesn't answer any
> questions about impedance, especially if the radio you buy is second hand
> and
> doesn't have the antenna wire with it.
>
>> Your idea of attaching the antenna via 50 ohm coax would probably be
>> below the impedance range of the jack, tho' I'm not sure you would
>> really hear much difference.
>>
>> If the Sangean external antenna input were designed for 50 ohm coax,
>> it would probably have a coax jack, not the 2.1 mm jack.
>>
>
> Agreed, which is why I don't assume it's 50 ohms, and I start looking for
> answers. I think you're likely right that it might not make enough
> difference
> to worry about though. If using coax can get the SNR higher I'm in
> business
> so long as the signal is strong enough for the input's gain to use.

Hey Lost,
This page has lots of good info,
http://www.hard-core-dx.com/nordicdx/antenna/feed/magbalun.html

Sounds like the N8KDV Transformer would work for you, but you
still don't know the input impedance of your radio. You could try
getting that info from Sangean.
The problem you have is whatever antenna you have the impedance changes
with frequency. If you find a band that interests you, build an antenna for
that band.
Here's another that shows how impedance changes with frequency, it's put
in
mismatch loss rather than resistance and reactance, but it gives the general
idea.
www.iw5edi.com/ham-radio/?swl-longwires,47
Mike

3631. Re: Sangean ATS-909 external antenna impedance??

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-20 15:44:18 UTC
From: amdx <amdx@knology.net>
Message-ID: <10e52$4b2e464a$18ec6dd7$28771@KNOLOGY.NET>
Source record: 11593

>>
>> 3.5mm, not 2.1mm
>>
>>> "ANT-60 PORTABLE SW ANTENNA
>>> Included with the ATS-909 is the Sangean ANT-60 Portable SW Antenna.
>>> The antenna is plugged into
>>> jack (26) labeled EXT AM ANT. When fully extended this antenna should
>>> improve SW reception. For
>>> maximum performance this antenna should be placed as high as possible
>>> above the ground and in an
>>> unobstructed area if possible."
>>>
>>
>> I know that, it was the first thing I found, but it doesn't answer any
>> questions about impedance, especially if the radio you buy is second hand
>> and
>> doesn't have the antenna wire with it.
>>
>>> Your idea of attaching the antenna via 50 ohm coax would probably be
>>> below the impedance range of the jack, tho' I'm not sure you would
>>> really hear much difference.
>>>
>>> If the Sangean external antenna input were designed for 50 ohm coax,
>>> it would probably have a coax jack, not the 2.1 mm jack.
>>>
>>
>> Agreed, which is why I don't assume it's 50 ohms, and I start looking for
>> answers. I think you're likely right that it might not make enough
>> difference
>> to worry about though. If using coax can get the SNR higher I'm in
>> business
>> so long as the signal is strong enough for the input's gain to use.
>
> Hey Lost,
> This page has lots of good info,
> http://www.hard-core-dx.com/nordicdx/antenna/feed/magbalun.html
> Sounds like the N8KDV Transformer would work for you, but you
> still don't know the input impedance of your radio. You could try
> getting that info from Sangean.
> The problem you have is whatever antenna you have the impedance changes
> with frequency. If you find a band that interests you, build an antenna
> for
> that band.
> Here's another that shows how impedance changes with frequency, it's put

> in
> mismatch loss rather than resistance and reactance, but it gives the
> general idea.
> www.iw5edi.com/ham-radio/?swl-longwires,47
> Mike
>
You might try posting on >rec.radio.shortwave<, someone there may know
about the Sangean.
Mike

3632. Re: Sangean ATS-909 external antenna impedance??

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-20 15:58:41 UTC
From: Bob <rmiller47@satx.rr.com>
Message-ID: <g4isi5ds5lkfl5q21ejv3m2rpgmr7u2jor@4ax.com>
Source record: 11594

On Sun, 20 Dec 2009 04:01:16 -0600, Lostgallifreyan
<no-one@nowhere.net> wrote:

>Bob <rmiller47@satx.rr.com> wrote in
>news:io9ri5hoppjnarnai417mraeask4rvghou@4ax.com:
>
>> The Sangean external antenna input is a 2.1mm jack which would
>> acommodate a high impedance long wire, as per the instructions:
>>
>
>3.5mm, not 2.1mm
>
>> "ANT-60 PORTABLE SW ANTENNA
>> Included with the ATS-909 is the Sangean ANT-60 Portable SW Antenna.
>> The antenna is plugged into
>> jack (26) labeled EXT AM ANT. When fully extended this antenna should
>> improve SW reception. For
>> maximum performance this antenna should be placed as high as possible
>> above the ground and in an
>> unobstructed area if possible."
>>
>
>I know that, it was the first thing I found, but it doesn't answer any
>questions about impedance, especially if the radio you buy is second hand and
>doesn't have the antenna wire with it.
>
>> Your idea of attaching the antenna via 50 ohm coax would probably be
>> below the impedance range of the jack, tho' I'm not sure you would
>> really hear much difference.
>>
>> If the Sangean external antenna input were designed for 50 ohm coax,
>> it would probably have a coax jack, not the 2.1 mm jack.
>>
>
>Agreed, which is why I don't assume it's 50 ohms, and I start looking for
>answers. I think you're likely right that it might not make enough difference
>to worry about though. If using coax can get the SNR higher I'm in business
>so long as the signal is strong enough for the input's gain to use.

You might shoot an email to tech at C.Crane Co. -- a lot of their
branded radios are actually customized Sangeans...they might be able
to tell you the most effective antenna and/or the impedance of the
thing.

bob
k5qwg

3633. Re: Sangean ATS-909 external antenna impedance??

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-20 16:32:25 UTC
From: Lostgallifreyan <no-one@nowhere.net>
Message-ID: <Xns9CE7A8403C9B2zoodlewurdle@216.196.109.145>
Source record: 11595

Bob <rmiller47@satx.rr.com> wrote in
news:g4isi5ds5lkfl5q21ejv3m2rpgmr7u2jor@4ax.com:

> You might shoot an email to tech at C.Crane Co. -- a lot of their
> branded radios are actually customized Sangeans...they might be able
> to tell you the most effective antenna and/or the impedance of the
> thing.
>
> bob
> k5qwg
>

Nice, I saw their page, didn't check that far though, and it is worth a try.

3634. Re: Sangean ATS-909 external antenna impedance??

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-20 16:52:18 UTC
From: Lostgallifreyan <no-one@nowhere.net>
Message-ID: <Xns9CE7AB9A04C71zoodlewurdle@216.196.109.145>
Source record: 11596

"amdx" <amdx@knology.net> wrote in
news:b72de$4b2e4527$18ec6dd7$9024@KNOLOGY.NET:

> www.iw5edi.com/ham-radio/?swl-longwires,47

Oh yeah.. :) Saw that one. That was what I had in mind. It irons the bumps out. That guy mentions John Doty, his page was one of many I found while looking for John Doty's DIY transformer plans. (Still not found those).

The way I see it (hopefully this is right) is that those deep level variations really DO need smoothing out as described there, because they represent signal loss greater than is likely to be caused by other errors like basic mismatches, and possible overload at peaks as Europe has many strong SW stations. Again, if I can use coax to increase SNR by reducing noise out of nearby buildings, it reduces the problem to one of loss/gain.

As Anthony Alouitius StJohn Hancock pronounced: "Stone me, you've got to have something to start with!". Not that I'd trust his judgement as a radio ham. :)

That's my plan for the other end of the wire though, the question is whether I'll have trouble at the ATS-909 radio end if I use it. Though I guess the antenna matcher (misnamed 'tuner' as IanT mentioned in his post) can help, and probably further assist the business.

I'll probably try longwire straight to coax first just to see what results, then an earth rod to ground the coax far end, and then the 9:1 transformer, before considering the more complex adjustable impedance matcher though. Got other problems like money and dodgy neighbour problems to solve first too, which is why I'm saying more than doing right now (and gathering info). Once I start doing, I need to minimise the actions so I don't have more than reception issues to worry about.

3635. Re: Sangean ATS-909 external antenna impedance??

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-20 17:47:20 UTC
From: amdx <amdx@knology.net>
Message-ID: <b7cca$4b2e631f$18ec6dd7$20965@KNOLOGY.NET>
Source record: 11597

"Lostgallifreyan" <no-one@nowhere.net> wrote in message
news:Xns9CE7AB9A04C71zoodlewurdle@216.196.109.145...
> "amdx" <amdx@knology.net> wrote in
> news:b72de$4b2e4527$18ec6dd7$9024@KNOLOGY.NET:
>
>> www.iw5edi.com/ham-radio/?swl-longwires,47
>
> Oh yeah.. :) Saw that one. That was what I had in mind. It irons the bumps
> out. That guy mentions John Doty, his page was one of many I found while
> looking for John Doty's DIY transformer plans. (Still not found those).
>
> The way I see it (hopefully this is right) is that those deep level
> variations really DO need smoothing out as described there, because they
> represent signal loss greater than is likely to be caused by other errors
> like basic mismatches, and possible overload at peaks as Europe has many
> strong SW stations. Again, if I can use coax to increase SNR by reducing
> noise out of nearby buildings, it reduces the problem to one of loss/gain.
>
> As Anthony Alouitius StJohn Hancock pronounced: "Stone me, you've got to
> have
> something to start with!". Not that I'd trust his judgement as a radio
> ham.
> :)
>
> That's my plan for the other end of the wire though, the question is
> whether
> I'll have trouble at the ATS-909 radio end if I use it. Though I guess the
> antenna matcher (misnamed 'tuner' as IanT mentioned in his post) can help,
> and probably further assist the business.
>

Well most tuner/antenna matcher are designed to take the impedance that
the
antenna cable presents and transformer it to 50 ohms. Your problem is the
Sangean is probably not 50 ohms. So to do it all right, you need to know the
antenna impedance at the frequency of interest., transform that to 50 ohms,
send it down the 50 ohm coax then transform it up (guess) to 600 ohms for
the Sangean.
Here's a good plot of resistance and reactance vs frequency.
http://thebellringers.blogspot.com/2009/04/plot-of-impedance-vs-frequency.html
The top graph, (Blue Line) is resistance and the (Red Line) is reactance
plotted from
1Mhz to 30 Mhz. As you can see it swings wildly. One antenna won't do it
all.

> I'll probably try longwire straight to coax first just to see what
> results,
> then an earth rod to ground the coax far end, and then the 9:1
> transformer,
> before considering the more complex adjustable impedance matcher though.
> Got
> other problems like money and dodgy neighbour problems to solve first too,
> which is why I'm saying more than doing right now (and gathering info).
> Once
> I start doing, I need to minimise the actions so I don't have more than
> reception issues to worry about.

You might find this useful, to stay out of neighbor problems.
http://www.kongsfjord.no/dl/Antennas/The%20Best%20Small%20Antennas%20For%20MW,%20LW,%20And%20SW%20rev%202.pdf

The start page for that link is here;
http://www.kongsfjord.no/dl/dl.htm

Mike

3636. Re: Sangean ATS-909 external antenna impedance??

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-20 18:12:24 UTC
From: Lostgallifreyan <no-one@nowhere.net>
Message-ID: <Xns9CE7B92AFBB0Azoodlewurdle@216.196.109.145>
Source record: 11598

"amdx" <amdx@knology.net> wrote in
news:b7cca$4b2e631f$18ec6dd7$20965@KNOLOGY.NET:

> Here's a good plot of resistance and reactance vs frequency.
> http://thebellringers.blogspot.com/2009/04/plot-of-impedance-vs-frequency
> .html The top graph, (Blue Line) is resistance and the (Red Line) is
> reactance plotted from
> 1Mhz to 30 Mhz. As you can see it swings wildly. One antenna won't do it
> all.
>

It's going to have to do the best it can. :) though I might find scope to try a few variants, more than one shorter wire, for example. Just got to reduce trial and error because that's what might cause neighbourly upset.

>
> You might find this useful, to stay out of neighbor problems.
> http://www.kongsfjord.no/dl/Antennas/The%20Best%20Small%20Antennas%20For%
> 20MW,%20LW,%20And%20SW%20rev%202.pdf
>

That I like. I also saw your earlier link before but went back to reread what he (the Florentian Ham) said about antennas for apartments (That page looks like a CSS disaster but the advice is good), and especially the how-it-works paragraphs on longwire matching.

From what I can tell, it might not need a long or large antenna at all, so long as it doesn't have high resonance, sharp bandwidth, or noise. I imagined that if a small antenna (perhaps with capacitative or inductive loading) could cover the wide range from 1.7 MHz to 30 MHz without much modification then so long as common mode signals were strongly reduced, and the other problems solved, extra gain could be used between the coax and receiver, and that PDF shows a way to do it. I guess loading with deliberately higher resistance involved to damp resonances will be ok with a small antenna and a preamp if I can mount the antenna near a remote ground and get the coax right. I'll try to avoid complexity I find hard to grasp though.

I might also more easily find 30 feet straight upwards than in any other direction... Already got an FM 1/4 wave dipole out there doing just that.

> The start page for that link is here;
> http://www.kongsfjord.no/dl/dl.htm
>

3637. Re: Sangean ATS-909 external antenna impedance??

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-20 18:16:55 UTC
From: Lostgallifreyan <no-one@nowhere.net>
Message-ID: <Xns9CE7B9F9550F6zoodlewurdle@216.196.109.145>
Source record: 11599

"amdx" <amdx@knology.net> wrote in
news:b7cca$4b2e631f$18ec6dd7$20965@KNOLOGY.NET:

> Well most tuner/antenna matcher are designed to take the impedance that
> the
> antenna cable presents and transformer it to 50 ohms. Your problem is the
> Sangean is probably not 50 ohms.

Ah, but in reverse? :) I don't know if this is good thinking, but if the coax IS 50 ohms, could I not put the 50 ohm connection onto the coax and tweak the other end (on the input instead of the coax) impedance by watching the signal strength meter on the receiver?

(Might be undeed according to posts people made earlier that suggest that losses here might matter less than what happens on the longwire end of the coax).

3638. Re: Sangean ATS-909 external antenna impedance??

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-20 18:19:40 UTC
From: Lostgallifreyan <no-one@nowhere.net>
Message-ID: <Xns9CE7BA700B6CEzoodlewurdle@216.196.109.145>
Source record: 11600

Lostgallifreyan <no-one@nowhere.net> wrote in
news:Xns9CE7B9F9550F6zoodlewurdle@216.196.109.145:

> undeed

Un-needed. Some typos shall not pass.

3639. Re: Sangean ATS-909 external antenna impedance??

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-20 19:24:10 UTC
From: dplatt@radagast.org
Message-ID: <q7a207-ggc.ln1@radagast.org>
Source record: 11451

In article <Xns9CE7AB9A04C71zoodlewurdle@216.196.109.145>,
Lostgallifreyan <no-one@nowhere.net> wrote:

>The way I see it (hopefully this is right) is that those deep level
>variations really DO need smoothing out as described there, because they
>represent signal loss greater than is likely to be caused by other errors
>like basic mismatches, and possible overload at peaks as Europe has many
>strong SW stations. Again, if I can use coax to increase SNR by reducing
>noise out of nearby buildings, it reduces the problem to one of loss/gain.

Looking at it from the opposite angle, though: it's fairly common in
the HF bands for the signal level isn't the limiting factor in your
reception. Even an inefficiently-matched antenna can deliver enough
signal to overcome the self-noise of the front-end circuitry in your
receiver.

What limits your ability to receive, under these conditions, is band
noise and other spurious signals, which "drown out" the desired
signal. Improving the antenna matching wil have little or no benefit
in dealing with external noise. Neither will a preamp.

Now, using coax as a way of excluding some of the close-in interferers
isn't a bad idea at all. What you might want to consider doing, is
adding an active buffer at the longwire-to-coax feedpoint...
basically, a low-gain preamp (a few dB) designed to drive a 50-ohm
load efficiently and to overcome the (slight) signal losses in the
coax. Some people seem to favor the grounded-base or grounded-gate
broadband amplifier, as it has a modest gain, can be quite stable, and
has a good resistance to strong-signal overload. You could use a DC
inserter/block system to feed 9-12 volts up the same coax which
carries the signal down.

If you're really concerned about matching the resulting coax-carried
signal to your radio's antenna input, you could wind a fixed-ratio
broadband transformer with the correct impedance ratio.

--
Dave Platt <dplatt@radagast.org> AE6EO
Friends of Jade Warrior home page: http://www.radagast.org/jade-warrior
I do _not_ wish to receive unsolicited commercial email, and I will
boycott any company which has the gall to send me such ads!

3640. Re: Sangean ATS-909 external antenna impedance??

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-20 21:02:38 UTC
From: Lostgallifreyan <no-one@nowhere.net>
Message-ID: <Xns9CE7D61134E87zoodlewurdle@216.196.109.145>
Source record: 11452

dplatt@radagast.org (Dave Platt) wrote in news:q7a207-ggc.ln1@radagast.org:

> What limits your ability to receive, under these conditions, is band
> noise and other spurious signals, which "drown out" the desired
> signal. Improving the antenna matching wil have little or no benefit
> in dealing with external noise. Neither will a preamp.
>

Point taken, at least with the matching vs noise. Others have said it won't matter much and I see why. preamp might be another issue though, especially in light of 'amdx's post:

"http://www.kongsfjord.no/dl/Antennas/The%20Best%20Small%20Antennas%20For%20MW,%20LW,%20And%20SW%20rev%202.pdf

The start page for that link is here;
http://www.kongsfjord.no/dl/dl.htm"

> Now, using coax as a way of excluding some of the close-in interferers
> isn't a bad idea at all. What you might want to consider doing, is
> adding an active buffer at the longwire-to-coax feedpoint...
> basically, a low-gain preamp (a few dB) designed to drive a 50-ohm
> load efficiently and to overcome the (slight) signal losses in the
> coax. Some people seem to favor the grounded-base or grounded-gate
> broadband amplifier, as it has a modest gain, can be quite stable, and
> has a good resistance to strong-signal overload. You could use a DC
> inserter/block system to feed 9-12 volts up the same coax which
> carries the signal down.
>

This is a good idea, though maybe the one I learned and reposted might do better, it has a very attractive aspect, as it drives a simple speaker wire. That stuff is cheap, (even the heavy stuff is cheap and durable, I use it already for solar power..), and effectively forms a very low loss balanced current loop that is isolated entirely from any current path anywhere else. I wouldn't even have to bury the feed line, I could likely just run it along the guide wire in a nearby chainlink fence or whatever is convenient because it will very effectively reject common mode noise. It might still benefit from a preamp current driver at the far end but as it uses a low impedance input at the near end to take care of common mode noise it should be fine, and a lot easier to get power to. :)

> If you're really concerned about matching the resulting coax-carried
> signal to your radio's antenna input, you could wind a fixed-ratio
> broadband transformer with the correct impedance ratio.
>

Might try that, though more as an effort to extend learning than any need. Right now I'm really glad I asked here because these answers are good, and I now seem to have a better idea (the vertical long whip and balanced feed and Norton preamp scheme) than the longwire-and-balun-and-coax I'd originally intended. I haven't yet verified the new idea but it appears to be from someone who has demonstrated capability among a group of radio hams, and it certainly fits with what I know without contraindications, and it would be much easier to arrange safely and discreetly than any other scheme I've seen. The author even states permanently retiring his longwires and inverted L's and so forth in favour of a phased array of two of the vertical whip. I haven't got the 60 feet of space for the two he specifies, but I think I'll do ok with one.

3641. Re: Sangean ATS-909 external antenna impedance??

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-20 21:05:37 UTC
From: amdx <amdx@knology.net>
Message-ID: <9da56$4b2e9198$18ec6dd7$7942@KNOLOGY.NET>
Source record: 11453

"Lostgallifreyan" <no-one@nowhere.net> wrote in message
news:Xns9CE7B9F9550F6zoodlewurdle@216.196.109.145...
> "amdx" <amdx@knology.net> wrote in
> news:b7cca$4b2e631f$18ec6dd7$20965@KNOLOGY.NET:
>
>> Well most tuner/antenna matcher are designed to take the impedance that
>> the
>> antenna cable presents and transformer it to 50 ohms. Your problem is the
>> Sangean is probably not 50 ohms.
>
> Ah, but in reverse? :) I don't know if this is good thinking, but if the
> coax
> IS 50 ohms, could I not put the 50 ohm connection onto the coax and tweak
> the
> other end (on the input instead of the coax) impedance by watching the
> signal
> strength meter on the receiver?
>

Ideally you would adjust the impedance of the antenna to match 50 ohms
then attach your 50 ohm coax, then connect to a 50 ohm receiver. (you don't
have)
But trying to adjust an antenna that is way out there (say 4000 ohms with
200 Reactance)
from the shack is not an easy task.

> (Might be undeed according to posts people made earlier that suggest that
> losses here might matter less than what happens on the longwire end of the
> coax).

I'm in agreement with those that say just put up a wire and listen.
Then pick your favorite band and put up a resonant antenna and compare the
two.
Then your learning something.
Mike

3642. Re: Sangean ATS-909 external antenna impedance??

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-20 21:12:24 UTC
From: Lostgallifreyan <no-one@nowhere.net>
Message-ID: <Xns9CE7D7B9221ABzoodlewurdle@216.196.109.145>
Source record: 11454

"amdx" <amdx@knology.net> wrote in
news:9da56$4b2e9198$18ec6dd7$7942@KNOLOGY.NET:

>> (Might be undeed according to posts people made earlier that suggest
>> that losses here might matter less than what happens on the longwire
>> end of the coax).
>
> I'm in agreement with those that say just put up a wire and listen.
> Then pick your favorite band and put up a resonant antenna and compare
> the two.
> Then your learning something.
> Mike
>

Right now I have no idea what my favourite band might be. :) I'll try the basic wire, I used to try that many years ago as a kid, in places where it was easy, on private land with space for it. But that was the seventies, in the country. Now I'm in an inner city full of mobile phones and computers, things have changed so much that I know it won't be the same. I like that 18' whip scheme you linked to though, I really like that one and want to try it.

3643. Re: Sangean ATS-909 external antenna impedance??

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-20 22:07:28 UTC
From: amdx <amdx@knology.net>
Message-ID: <649a$4b2ea017$18ec6dd7$14306@KNOLOGY.NET>
Source record: 11455

"Lostgallifreyan" <no-one@nowhere.net> wrote in message
news:Xns9CE7D61134E87zoodlewurdle@216.196.109.145...
> dplatt@radagast.org (Dave Platt) wrote in
> news:q7a207-ggc.ln1@radagast.org:
>
>> What limits your ability to receive, under these conditions, is band
>> noise and other spurious signals, which "drown out" the desired
>> signal. Improving the antenna matching wil have little or no benefit
>> in dealing with external noise. Neither will a preamp.
>>
>
> Point taken, at least with the matching vs noise. Others have said it
> won't
> matter much and I see why. preamp might be another issue though,
> especially
> in light of 'amdx's post:
>
> "http://www.kongsfjord.no/dl/Antennas/The%20Best%20Small%20Antennas%20For%20M
> W,%20LW,%20And%20SW%20rev%202.pdf
>
> The start page for that link is here;
> http://www.kongsfjord.no/dl/dl.htm"
>
>> Now, using coax as a way of excluding some of the close-in interferers
>> isn't a bad idea at all. What you might want to consider doing, is
>> adding an active buffer at the longwire-to-coax feedpoint...
>> basically, a low-gain preamp (a few dB) designed to drive a 50-ohm
>> load efficiently and to overcome the (slight) signal losses in the
>> coax. Some people seem to favor the grounded-base or grounded-gate
>> broadband amplifier, as it has a modest gain, can be quite stable, and
>> has a good resistance to strong-signal overload. You could use a DC
>> inserter/block system to feed 9-12 volts up the same coax which
>> carries the signal down.
>>
>
> This is a good idea, though maybe the one I learned and reposted might do
> better, it has a very attractive aspect, as it drives a simple speaker
> wire.
> That stuff is cheap, (even the heavy stuff is cheap and durable, I use it
> already for solar power..), and effectively forms a very low loss balanced
> current loop that is isolated entirely from any current path anywhere
> else. I
> wouldn't even have to bury the feed line, I could likely just run it along
> the guide wire in a nearby chainlink fence or whatever is convenient

> because
> it will very effectively reject common mode noise. It might still benefit
> from a preamp current driver at the far end but as it uses a low impedance
> input at the near end to take care of common mode noise it should be fine,
> and a lot easier to get power to. :)
>
>> If you're really concerned about matching the resulting coax-carried
>> signal to your radio's antenna input, you could wind a fixed-ratio
>> broadband transformer with the correct impedance ratio.
>>
>
> Might try that, though more as an effort to extend learning than any need.
> Right now I'm really glad I asked here because these answers are good, and
> I
> now seem to have a better idea (the vertical long whip and balanced feed
> and
> Norton preamp scheme) than the longwire-and-balun-and-coax I'd originally
> intended. I haven't yet verified the new idea but it appears to be from
> someone who has demonstrated capability among a group of radio hams, and
> it
> certainly fits with what I know without contraindications, and it would be
> much easier to arrange safely and discreetly than any other scheme I've
> seen.

> The author even states permanently retiring his longwires and inverted L's
> and so forth in favour of a phased array of two of the vertical whip.

Yes, I was a little diappointent, I remembered seeing a lot of other
antennas
from Dallas, but they seem to have been removed them from the site. I guess
once
he finds something that works better and is not terribly difficult to make,
he
drops previous setups.
Mike

3644. Re: Fractal Antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-21 16:09:56 UTC
From: Wayne <mygarbagecan@verizon.net>
Message-ID: <hgo6kmocf1@news.eternal-september.org>
Source record: 11456

"danl" <daninxpasco@gmail.com> wrote in message
news:9bfsi5l9aijr0vg171vjvqiar5e72kei9f@4ax.com...
> On Sun, 6 Dec 2009 19:47:28 -0600, "amdx" <amdx@knology.net> wrote:
>
>>
>>"danl" <daninxpasco@gmail.com> wrote in message
>>news:2ainh510c1eviue0daktv5j4epdqsv2doo@4ax.com...
>>> On Sun, 6 Dec 2009 10:44:30 +0000, EI5DD
>>> <EI5DD.5614748@radiobanter.com> wrote:
>>>
>>>>
>>>>>>>>Would anyone have a copy of an article from either 73 or CQ magazine
>>>>>>>>somewhere around the 90's which contained an article on how to
>>>>>>>>construct a Fractal Quad antenna for 10 metres. The design was based on
>>>>>>>>work done by Nathan Coen N1IR.
>>>>>>>>
>>>>>>>>Steve (EI5DD)
>>>
>>> Popcorn! GET YER HOT BUTTERD POPCORN HERE! Popcorn!
>>>
>>> N9JBF
>>> >Whisper< Does the Buffoon still come around?
>> I don't think he is buffoon, he had an idea that was novel and looks like
>>he is selling a bunch of them.
>> Mike
>>
>
> The way he acted, not what he knew or how many he could sell
> determined if he was a Buffoon...He was/is.
-
You must admit that there was a certain amount of entertainment in Chip's
postings. If someone asked him a simple question, such as "how long was the
longest element on the antenna you built"....he could have just said "x
feet". Instead, he would post a 6 paragraph rant and direct the person
asking the question to some obscure publication.

3645. Re: Ultra-compact 2m antenna ?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-21 16:47:36 UTC
From: Robert Lacoste <see-alciom-dot-com@na.com>
Message-ID: <4b2fa6a8$0$17514$ba4acef3@news.orange.fr>
Source record: 11457

Many thanks to all for your answers, I will try some of these ideas and let
you know...
Friendly,
Robert

3646. Re: BPL stuff, was Re: FCC Rules

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-22 18:26:09 UTC
From: Jim Lux <james.p.lux@jpl.nasa.gov>
Message-ID: <hgr301$2hs$4@news.jpl.nasa.gov>
Source record: 11459

Michael Coslo wrote:

>
>>> BPL was an attempt by economic interests to turn technical reality
>>> aside for pecuniary reasons, but it looks like th elicensed services
>>> are going to win that war now also.
>>
>> BPL is going to die because the electric utility companies are not
>> seeing any revenue from the exercise, are getting some really bad
>> press, and really don't need the hassle. The interference issue gets
>> the press, but the decisions are always made on the basis of dollars.
>
> BPL proponents allowed people to believe that they were going to just
> send the signals along the lines from some sort of "head end" site, and
> they would be there for the tapping. In fact, they were a last mile
> solution the Fiber would have to be run almost to the house, then the
> signal injected into a H-V line - the bpl signals could not survive
> going through transformers - finally a device to couple the BPL signal
> from the HV to the Household line after the transformer would allow the
> signal into the house.
>
> That's bad technology on so many levels it's obvious that the decisions
> were based on economics and perhaps some politics (not R vs D, but the
> idea that belief trumps science, that the intuitive idea of sending
> multiple signals on one wire just has to work.
>
> Are we going to bet our life on that H-V line isolator - injector never
> failing closed, and allowing Several KV into our home electrical system?
>
> But the final issue for me was that the source of the data signal had to
> come almost to my house. Clean, yummy, digital goodness being degraded
> to a shaky easy to disrupt DSL speed signal. No thanks, folks. But let's
> talk about get me hooked directly into that fiber, pleeze!
>

I've always thought that BPL was a solution to getting metering and rate data to and from the household from the head end. A fairly low rate application. This has great value to the regulated side of the utility (smart grid, before it was known as such). The idea that it could be used for consumer data was probably promulgated by folks who wanted to sell bigger/better modems, and latch onto "let's wire america" kinds of funding. Especially if the unregulated side could get income from infrastructure installed by the regulated side.

3647. Re: Sangean ATS-909 external antenna impedance??

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-22 18:52:11 UTC
From: Fred McKenzie <fmmck@aol.com>
Message-ID: <fmmck-03732B.13521122122009@nntp.aioe.org>
Source record: 11458

In article <Xns9CE7D7B9221ABzoodlewurdle@216.196.109.145>,
Lostgallifreyan <no-one@nowhere.net> wrote:

> Right now I have no idea what my favourite band might be. :) I'll try the
> basic wire, I used to try that many years ago as a kid, in places where it
> was easy, on private land with space for it. But that was the seventies, in
> the country. Now I'm in an inner city full of mobile phones and computers,
> things have changed so much that I know it won't be the same. I like that 18'
> whip scheme you linked to though, I really like that one and want to try it.

Lost-

I agree that the "basic wire" antenna approach will almost certainly
work. At least you will get your feet wet. That is the kind of
external antenna most often used with that type of radio.

If you want to continue the search for input impedance, consider trying
something like an MFJ Antenna Analyzer (MFJ-259 or 269?), which uses a
sufficiently low signal level that it shouldn't hurt the radio. Instead
of analyzing the antenna, use it to analyze the input of the radio. You
can use the information to design a matching circuit, but you may find
that the improvement is disappointing for reasons already discussed.

Fred
K4DII

3648. Re: an ontopic post about code

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-23 17:05:46 UTC
From: kb9rqz@yahoooo.com
Message-ID: <2fj4j51fiv0r8qcsfbha0ia9b0891h4k2f@4ax.com>
Source record: 11460
Cross-posted to: alt.ham-radio.vhf-uhf,rec.radio.amateur.policy,rec.radio.amateur.antenna

On Fri, 01 Dec 2006 09:36:47 -0800, John Smith
<assemblywizard@gmail.com> wrote:

>K4YZ wrote:
>> Nope.
>>
>> The IP Address and servers are complete proof that I do NOT share
>> any annonymous character's "address".
>>
>> Sounds like Lennie, to me....
>>
>> Steve, K4YZ
>>
>
>To anyone with even an elementary understanding of anonymous proxies,
>anonymous remailers, zombie backdoors, etc., the ability to change ones
>IP address and header details is simplistic, indeed, with little time
>spent anyone can appear to be "coming" from anywhere in the world.
>
>You waste my time. Worse, you think us all idiots here. You remind me
>of the "street smart" prosecutors and defense attorneys who stack jurys
>with members of little or no technical knowledge and then call in
>"expert witnesses" and propose arguments of technical details to boggle
>their minds.
>
>You have only proven that you, yourself are either ignorant to such
>technical details, or else you are indeed street smart, I favor the
>latter in this case (however, if you in the dark about such things, 15
>minutes on google will enlighten you.)
>
>JS

"one useless man is disgrace 2 become a law firm 3 or more become a congress"
adams

woger you are a Congress all in your own head
"http://www.3ix.org/sys/aff.php?aff=7439" target="_blank"

altopia is never used by KB9RQZ
http://kb9rqz.cc.cc
http://kd8ctl.com
nor is Konstans@hotmail.com ever
btw i can be found at
17366 N River Rd

Chassel Mi

but the cowards asking lack the gut to act

3649. Re: Sangean ATS-909 external antenna impedance??

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-24 10:08:41 UTC
From: Lostgallifreyan <no-one@nowhere.net>
Message-ID: <Xns9CEB672E31486zoodlewurdle@216.196.109.145>
Source record: 11461

Bob <rmiller47@satx.rr.com> wrote in
news:g4isi5ds5lkfl5q21ejv3m2rpgmr7u2jor@4ax.com:

> You might shoot an email to tech at C.Crane Co. -- a lot of their
> branded radios are actually customized Sangeans...they might be able
> to tell you the most effective antenna and/or the impedance of the
> thing.
>
> bob
> k5qwg
>

I got a reply, but Sangean didn't tell them that either. :) But he says what many here do, that it doesn't matter that much, and that 50 ohm line should be ok.

One thing that keeps coming up is the need to make my own transformer for the far end, whatever scheme I use, and in that context I often see mention of a ferrite core: Amidon FT-114-75 (AL about 3000, permeability u=5000, about 1.14 inch outside diameter as described on one page). Cheap but apparently not easy to find in Britain. Does anyone know a current source of something equivalent to it? It's beginning to look like I should get a small handful of them. Another thing that might be better fetched locally is something like the broadband preamp for LW to >30 MHz sold by Kiwa Electronics. If anyone knows of one, please point me to it.. It's a Norton balanced input amp with gain of around 10 dB. Even if I don't need it I'd like to know where to find such things locally. I can likely build something based on the Dallas design in a PDF I found but a good picture of the construction would help, as I can't easily visualise the coil and former arrangements from the schematic.

3650. Re: Sangean ATS-909 external antenna impedance??

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-24 10:15:53 UTC
From: Lostgallifreyan <no-one@nowhere.net>
Message-ID: <Xns9CEB686675778zoodlewurdle@216.196.109.145>
Source record: 11462

Fred McKenzie <fmmck@aol.com> wrote in
news:fmmck-03732B.13521122122009@nntp.aioe.org:

> In article <Xns9CE7D7B9221ABzoodlewurdle@216.196.109.145>,
> Lostgallifreyan <no-one@nowhere.net> wrote:
>
>> Right now I have no idea what my favourite band might be. :) I'll try
>> the basic wire, I used to try that many years ago as a kid, in places
>> where it was easy, on private land with space for it. But that was the
>> seventies, in the country. Now I'm in an inner city full of mobile
>> phones and computers, things have changed so much that I know it won't
>> be the same. I like that 18' whip scheme you linked to though, I really
>> like that one and want to try it.
>
> Lost-
>
> I agree that the "basic wire" antenna approach will almost certainly
> work. At least you will get your feet wet. That is the kind of
> external antenna most often used with that type of radio.
>
> If you want to continue the search for input impedance, consider trying
> something like an MFJ Antenna Analyzer (MFJ-259 or 269?), which uses a
> sufficiently low signal level that it shouldn't hurt the radio. Instead
> of analyzing the antenna, use it to analyze the input of the radio. You
> can use the information to design a matching circuit, but you may find
> that the improvement is disappointing for reasons already discussed.
>
> Fred
> K4DII
>

I'll pass. :) I think the reason no-one knows is that as you (and others)
say, it's not important enough. What does seem important is to try to reduce
localised noise, and to break the current link to protect the radio input
from static discharges. Whether I use coax or a balanced loop made from
speaker wire, it loooks like my next step is to get Amidon FT-114-75 ferrite
cores to play with, and in Britain I can't easily do that, but if anyone
knows a local direct equivalent to them I can try that. I'll Google for
things that fit the description (AL about 3000, permeability u=5000, about
1.14 inch outside diameter) but I think it's wise to ask here to try to save
time.

3651. Re: Sangean ATS-909 external antenna impedance??

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-24 19:07:48 UTC
From: dplatt@radagast.org
Message-ID: <4pqc07-vfr.ln1@radagast.org>
Source record: 11463

In article <Xns9CEB686675778zoodlewurdle@216.196.109.145>,
Lostgallifreyan <no-one@nowhere.net> wrote:

>I'll pass. :) I think the reason no-one knows is that as you (and others)
>say, it's not important enough. What does seem important is to try to reduce
>localised noise, and to break the current link to protect the radio input
>from static discharges. Whether I use coax or a balanced loop made from
>speaker wire, it loooks like my next step is to get Amidon FT-114-75 ferrite
>cores to play with, and in Britain I can't easily do that, but if anyone
>knows a local direct equivalent to them I can try that. I'll Google for
>things that fit the description (AL about 3000, permeability u=5000, about
>1.14 inch outside diameter) but I think it's wise to ask here to try to save
>time.

You can probably at least start your experimentation using the common sort of interference-suppression ferrites that are found in many computer accessories - e.g. molded onto DC cords, VGA cables, USB cables, and so forth. Here in the U.S. these are easily available at electronics surplus stores, ham-fest flea markets, and other such sources.

In my experience, these tend to be a ferrite mix such as type 43, which is optimized for use at somewhat higher frequencies than HF/SWL... so they will probably not be optimal for your purposes. However, they can be made to work.

A few years ago I constructed a common-mode feedline choke for our local ARES/RACES ham station, to try to keep 40- and 80-meter signals from being carried back down the outside of the coax and into the building (our signal was audible on phones in the city's "911" emergency dispatch center... *not* good). I took several tubular computer-interference-suppression ferrite cores (large inner diameter), glued them end-to-end with cyanoacrylate, let them dry, and then ran some RG-8X coax through the center and back around the outside and through the center again. The coax looped through the tube of ferrites three times.

This resulted in an extremely effective common-mode choke. According to my MFJ antenna analyzer, the impedance looking up through the coax in the usual way (standard hookup, into a 50-ohm dummy load) was 50 ohms... the ferrites had no effect at all on the differential-mode signal in the coax.

But, when I measured the impedance along the braid (i.e. from the ground shell at one end of the coax, to the ground shell at the other... a DC short circuit), I couldn't get a reading at any frequency... the

meter just said "> 1500 ohms". Even at the lowest frequency of interest, these non-optimal ferrites added so much inductance to the common-mode signal path that they were blocking the feedline current flow very effectively.

[Unfortunately, we determined that the phone interference was caused by direct RF pickup by the phone wiring, which was in the "near field" of the antenna above the roof. It occurred even if we completely disconnected the building feedline, and fed the antenna directly from a radio located up on the roof. The feedline choke couldn't help us.]

In your situation, I'd guess that you could probably make an efficient feedline choke by using almost any surplus ferrite toroid which is sufficiently large to wind your feedline (coax or speaker wire) through it a few times. Or, use several surplus ferrite cores, end-to-end, and if they're large enough in diameter, loop the feedline down through the center more than once.

It won't be perfect (nor as good as if you used a ferrite optimized for use at lower frequencies) but it will probably help matters, and will give you some sense as to whether it makes sense to go to the trouble and expense of buying ferrites that are better for your purpose.

--
Dave Platt <dplatt@radagast.org> AE6EO
Friends of Jade Warrior home page: http://www.radagast.org/jade-warrior
I do _not_ wish to receive unsolicited commercial email, and I will boycott any company which has the gall to send me such ads!

3652. Re: Sangean ATS-909 external antenna impedance??

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-24 19:56:33 UTC
From: Lostgallifreyan <no-one@nowhere.net>
Message-ID: <Xns9CEBCADCBB33Ezoodlewurdle@216.196.109.145>
Source record: 11464

dplatt@radagast.org (Dave Platt) wrote in
news:4pqc07-vfr.ln1@radagast.org:

> In article <Xns9CEB686675778zoodlewurdle@216.196.109.145>,
> Lostgallifreyan <no-one@nowhere.net> wrote:
>
>>I'll pass. :) I think the reason no-one knows is that as you (and
>>others) say, it's not important enough. What does seem important is to
>>try to reduce localised noise, and to break the current link to protect
>>the radio input from static discharges. Whether I use coax or a balanced
>>loop made from speaker wire, it loooks like my next step is to get
>>Amidon FT-114-75 ferrite cores to play with, and in Britain I can't
>>easily do that, but if anyone knows a local direct equivalent to them I
>>can try that. I'll Google for things that fit the description (AL about
>>3000, permeability u=5000, about 1.14 inch outside diameter) but I think
>>it's wise to ask here to try to save time.
>
> You can probably at least start your experimentation using the common
> sort of interference-suppression ferrites that are found in many
> computer accessories - e.g. molded onto DC cords, VGA cables, USB
> cables, and so forth. Here in the U.S. these are easily available at
> electronics surplus stores, ham-fest flea markets, and other such
> sources.
>
> In my experience, these tend to be a ferrite mix such as type 43,
> which is optimized for use at somewhat higher frequencies than
> HF/SWL... so they will probably not be optimal for your purposes.
> However, they can be made to work.
>

A complete ring is better, air gaps might make it harder to assess how good
it is unless you know enough (or have equipment) to make comparisons. I
don't. :) But I did find an appropriately sized type 43 ferrite ring on eBay
and put it on my watch list a few hours ago, so I guess this is what I'll buy
if I don't find better quickly. The seller has a few, I think.

> A few years ago I constructed a common-mode feedline choke for our
> local ARES/RACES ham station, to try to keep 40- and 80-meter signals
> from being carried back down the outside of the coax and into the
> building (our signal was audible on phones in the city's "911"
> emergency dispatch center... *not* good). I took several tubular
> computer-interference-suppression ferrite cores (large inner
> diameter), glued them end-to-end with cyanoacrylate, let them dry, and
> then ran some RG-8X coax through the center and back around the
> outside and through the center again. The coax looped through the

> tube of ferrites three times.
>
> This resulted in an extremely effective common-mode choke. According
> to my MFJ antenna analyzer, the impedance looking up through the coax
> in the usual way (standard hookup, into a 50-ohm dummy load) was 50
> ohms... the ferrites had no effect at all on the differential-mode
> signal in the coax.
>
> But, when I measured the impedance along the braid (i.e. from the
> ground shell at one end of the coax, to the ground shell at the other...
> a DC short circuit), I couldn't get a reading at any frequency... the
> meter just said "> 1500 ohms". Even at the lowest frequency of
> interest, these non-optimal ferrites added so much inductance to the
> common-mode signal path that they were blocking the feedline current
> flow very effectively.
>
> [Unfortunately, we determined that the phone interference was caused by
> direct RF pickup by the phone wiring, which was in the "near field" of
> the antenna above the roof. It occurred even if we completely
> disconnected the building feedline, and fed the antenna directly from
> a radio located up on the roof. The feedline choke couldn't help us.]
>
> In your situation, I'd guess that you could probably make an efficient
> feedline choke by using almost any surplus ferrite toroid which is
> sufficiently large to wind your feedline (coax or speaker wire)
> through it a few times. Or, use several surplus ferrite cores,
> end-to-end, and if they're large enough in diameter, loop the feedline
> down through the center more than once.
>

I hadn't thought of this for common mode noise suppression but I will try it, sounds like a good idea. The rings I'm after are for the coupling at each end of the line though, 9:1 or 10:1 at far end, 1:1 at receiver end. But I guess that the clamp-on ferrite slug could be useful on the balanced line loop that runs between the rings. I've also wondered if that balanced line might better be a twisted pair with each twist perhaps 10 cm or so long to be sure that common mode really is common, but I have no idea if that's wise or required. Haven't seen anything to suggest I need to do it.

> It won't be perfect (nor as good as if you used a ferrite optimized
> for use at lower frequencies) but it will probably help matters, and
> will give you some sense as to whether it makes sense to go to the
> trouble and expense of buying ferrites that are better for your purpose.
>

80 turns.. plus another 8 for the secondary.. I read they should be close turns, and the ring size was probably specified mainly to accomodate them all. I will try other ferrites and carbonyl iron power type cores and whatever else comes my way perhaps, I found four small toroids in a broken computer SMPU that might be fun to try. Ultimately though, I'm aiming for best shots because it's like plotting an unknown graph curve with only a few

samples, so the better the accuracy of each move, the better I can understand any discrepancy in any one of those moves.

I have a basic philosophy that is similar to Jeff Liebermann's 'Learn By Destroying' thing, as I also used to take stuff apart as a kid, and destroyed plenty, but actually apart from seeing what sort of build quality was acceptable and how discrete components were built, I didn't learn much beyond tool handling, the thing that taught me most was when I took apart something I had to put together again for fear of punishment if I failed and got found out. So the closer I get to starting with something like an ideal working part or whole, the faster I can figure out the meaning of significant excursions from that ideal. It's kind of like the argument of whether a kid should get his first bike new and working, or self-built from bits. I think the first way is right because it's the fastest way to know what working (and safety) really is, then start changing things, knowing what path was taken and how to get back without help. Works great with computers too...

3653. Re: Sangean ATS-909 external antenna impedance??

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-24 20:09:40 UTC
From: JIMMIE <JIMMIEDEE123@YAHOO.COM>
Message-ID: <a189b33a-452f-4dd7-8f82-62b2e0b1acad@s31g2000yqs.googlegroups.com>
Source record: 11465

On Dec 19, 10:14 am, Lostgallifreyan <no-...@nowhere.net> wrote:
> Does anyone know what the Sangean ATS-909's external antenna input impedance
> is?
>
> I searched for days for documentation on that radio and found plenty, mods,
> schematics, service manuals, reviews, but no straight word on the impedance
> of that input! (Not even in the service manual specs). The only reference I
> found was a from a guy on a 7-page set of ham reviews, and all he said was
> that it was a mystery!
>
> Maybe the only way to know is to start from the schematic but I don't know
> how, but here's the best schematic I could
find:http://eric.horsemensociety.info/TECH/images/ATS909_Schematic_A.gif
> (Antenna input is near top right).
> (Link appears to be dead, 403, forbidden. I'm sure it worked last week..)
>
> What I really want to know is whether the ATS-909 will work ok with a
> long(ish) wire outside feeding a 50 ohm coax via a 9:1 transformer, or if
> that would cause more bother than connecting a wire directly to it and
> putting up with local noise picked up from nearby buildings.

Ive measured the input impedance of a few SW receivers and found them
to be in the 1Kohm ballpark for the most part. I did this by applying
a voltage through a series resistor to the frontend of the radio and
adjusting the value of the resistor until the voltage dropped by 50%.
If you have a schematic an analysis of the front end circuit might
give you and idea.

Jimmie

3654. Re: Sangean ATS-909 external antenna impedance??

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-24 20:56:43 UTC
From: Lostgallifreyan <no-one@nowhere.net>
Message-ID: <Xns9CEBD4FDACA7Azoodlewurdle@216.196.109.145>
Source record: 11466

JIMMIE <JIMMIEDEE123@YAHOO.COM> wrote in news:a189b33a-452f-4dd7-8f82-62b2e0b1acad@s31g2000yqs.googlegroups.com:

> Ive measured the input impedance of a few SW receivers and found them
> to be in the 1Kohm ballpark for the most part. I did this by applying
> a voltage through a series resistor to the frontend of the radio and
> adjusting the value of the resistor until the voltage dropped by 50%.
> If you have a schematic an analysis of the front end circuit might
> give you and idea.
>

Ok. That fits with the 1K pot for RF attenuation in that radio, someone mentioned this and I wasn't sure if other parts might alter the picture, but I guess not by anything that matters. I'll be using a ferrite at the radio end of a balanced line so I guess I can experiment with turns count and watch the signal strength meter. Might not even need a preamp if that works.

If I'm thinking wrong, please stop me before I crash into something. :)

3655. HomeBrew Capacitors?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-24 21:23:05 UTC
From: John Ferrell <jferrell13@triad.rr.com>
Message-ID: <crm7j59k5mssqs8e13jvnuchpt81gbn3ul@4ax.com>
Source record: 11467

I have been successful at modeling and then constructing transmitter matching circuits at low power with common sizes of capacitors. Now I want to move up to the 1 KW power level. Inductors are easy enough to homebrew but capacitors are both expensive and scarce. Anyone have ideas or maybe experience in this area?

DigiKey has a good selection of High Voltage units (3 KV Plus) at modest cost but considering their size and the losses expected in the capacitors I don't think they can dissipate the heat...

John Ferrell W8CCW

3656. Re: Sangean ATS-909 external antenna impedance??

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-24 22:15:13 UTC
From: Dave <k1ttt@arrl.net>
Message-ID: <16a090f4-50b1-4644-83db-e109421ce604@k19g2000yqc.googlegroups.com>
Source record: 11468

On Dec 19, 3:14 pm, Lostgallifreyan <no-...@nowhere.net> wrote:
>
> What I really want to know is whether the ATS-909 will work ok with a
> long(ish) wire outside feeding a 50 ohm coax via a 9:1 transformer, or if
> that would cause more bother than connecting a wire directly to it and
> putting up with local noise picked up from nearby buildings.

lets go back to the beginning... this is what i would do.
1. hook up whatever coax you have to the radio and run it as far
outside away from the house as it will go.
2. hook up a wire directly to it as long as you can go in whatever
random direction you may be able to go
3. enjoy.

if in the future there are signals that just aren't strong enough, but
still above the local noise, then start playing around with either a
matching network or a preamp. but until you know how well the
receiver by itself works with the plain wire/coax you are wasting time
over designing something you probably won't need.

3657. Re: HomeBrew Capacitors?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-24 22:27:57 UTC
From: Gary <jgboyles@aol.com>
Message-ID: <6197e34d-6872-47c2-b198-be5ce7a8423b@21g2000yqj.googlegroups.com>
Source record: 11469

On Dec 24, 3:23 pm, John Ferrell <jferrel...@triad.rr.com> wrote:
> I have been successful at modeling and then constructing transmitter
> matching circuits at low power with common sizes of capacitors. Now I
> want to move up to the 1 KW power level. Inductors are easy enough to
> homebrew but capacitors are both expensive and scarce. Anyone have
> ideas or maybe experience in this area?
>
> DigiKey has a good selection of High Voltage units (3 KV Plus) at
> modest cost but considering their size and the losses expected in the
> capacitors I don't think they can dissipate the heat...
>
> John Ferrell W8CCW

Hi John, Are you using L networks for matching? If so, then you want a variable capacitor to be able to match a variety of loads. TenTec sells a 500pf ~3kv variable capacitor kit for about $50 that I have used with good results. It is the one that they use in the antenna tuner that they sell. Takes about a hour or so to put together.

If you want some cheep low pf fixed caps use either RG-8 for real hv and RG-58 for just hv. Consult the data books for the pf/foot rating of the cable, or measure with Z meter or antenna analyzer.

Gary N4AST

3658. Re: Sangean ATS-909 external antenna impedance??

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-24 22:45:20 UTC
From: JIMMIE <JIMMIEDEE123@YAHOO.COM>
Message-ID: <a9ea4a6a-d328-4959-b9da-a53e0ae00fca@m26g2000yqb.googlegroups.com>
Source record: 11470

On Dec 24, 5:15 pm, Dave <k1...@arrl.net> wrote:
> On Dec 19, 3:14 pm, Lostgallifreyan <no-...@nowhere.net> wrote:
>
>
>
> > What I really want to know is whether the ATS-909 will work ok with a
> > long(ish) wire outside feeding a 50 ohm coax via a 9:1 transformer, or if
> > that would cause more bother than connecting a wire directly to it and
> > putting up with local noise picked up from nearby buildings.
>
> lets go back to the beginning... this is what i would do.
> 1. hook up whatever coax you have to the radio and run it as far
> outside away from the house as it will go.
> 2. hook up a wire directly to it as long as you can go in whatever
> random direction you may be able to go
> 3. enjoy.
>
> if in the future there are signals that just aren't strong enough, but
> still above the local noise, then start playing around with either a
> matching network or a preamp. but until you know how well the
> receiver by itself works with the plain wire/coax you are wasting time
> over designing something you probably won't need.

You may find that a good RF ground more benificial than any particular
antenna. I discovered this while in the military and had a chance to
hook my little cheap portable Setico rx to an antenna made of 20ft of
emt conduit and the ground system on an abandoned comm unit. Lots of
good info arounf on RF grounds on the web and this group.

Jimmie

Jimmie

3659. Re: HomeBrew Capacitors?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-25 00:26:43 UTC
From: dplatt@radagast.org
Message-ID: <3fdd07-rs4.ln1@radagast.org>
Source record: 11471

In article <crm7j59k5mssqs8e13jvnuchpt81gbn3ul@4ax.com>,
John Ferrell <jferrell13@triad.rr.com> wrote:

>I have been successful at modeling and then constructing transmitter
>matching circuits at low power with common sizes of capacitors. Now I
>want to move up to the 1 KW power level. Inductors are easy enough to
>homebrew but capacitors are both expensive and scarce. Anyone have
>ideas or maybe experience in this area?
>
>DigiKey has a good selection of High Voltage units (3 KV Plus) at
>modest cost but considering their size and the losses expected in the
>capacitors I don't think they can dissipate the heat...

People working on "small magnetic loop" transmitting antennas have developed some homebrew approaches. These antennas present a highly inductive feedpoint impedance, and must be tuned to a high-Q match using a variable capacitor which can stand off very high voltages.

I've seen at least three types described:

(1) "Trombone" capacitors. These typically consist of a U-shaped piece of copper pipe (adjustable element), whose ends slide into two longer pieces of larger-diameter pipe that act as the connection terminals for the capacitor. The sliding pipe is insulated from the outer pipe - its ends are wrapped in sheets of a suitable dielectric (Teflon or Kapton sheet is often used). The cap can be adjusted by sliding the U in or out of the terminal pieces... often done via a worm-gear motor drive, attached to the center of the bottom of the U.

(2) "Butterfly" capacitors... two stator plates, one completely-insulated rotor plate, and suitable dielectric insulation sheets between them.

(3) "Sliding glass sheet" capacitors... plate glass dielectric, with a fixed metal sheet sitting below (as one terminal) and a metal sheet glued to the top of the glass (as the other terminal). Slide the glass sheet back and forth on the bottom metal sheet to vary the capacitance. Researching the dielectric and high-voltage properties of leaded window glass, borosilicate glass (Pyrex and similar), acrylic, polycarbonate, and Teflon sheets might be worthwhile.

Other (non-homebrew, but available-surplus) choices are large-gap air variable caps, and "doorknob" fixed-value transmitting capacitors. The former are often known as "cheese slicers"... and I've actually seen

some people home-brew them, using either sheet aluminum or brass, or
copper-clad PCB material for the stator and rotor plates.

--
Dave Platt <dplatt@radagast.org> AE6EO
Friends of Jade Warrior home page: http://www.radagast.org/jade-warrior
I do _not_ wish to receive unsolicited commercial email, and I will
boycott any company which has the gall to send me such ads!

3660. Re: HomeBrew Capacitors?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-25 00:33:31 UTC
From: Jeff Liebermann <jeffl@cruzio.com>
Message-ID: <q318j5lqnjvctq1qohvhh29uigiom2p7a6@4ax.com>
Source record: 11472

On Thu, 24 Dec 2009 16:23:05 -0500, John Ferrell
<jferrell13@triad.rr.com> wrote:

>I have been successful at modeling and then constructing transmitter
>matching circuits at low power with common sizes of capacitors. Now I
>want to move up to the 1 KW power level. Inductors are easy enough to
>homebrew but capacitors are both expensive and scarce. Anyone have
>ideas or maybe experience in this area?

Lots of idea, but the only high power experience I've had is design of
a VMOS NMR power amp in the early 1980's. Reading between your lines,
my guess is that you're building a tube amplifier.

>DigiKey has a good selection of High Voltage units (3 KV Plus) at
>modest cost but considering their size and the losses expected in the
>capacitors I don't think they can dissipate the heat...
>
>John Ferrell W8CCW

For high voltage and high power, vacuum caps are a good way to go:
<http://en.wikipedia.org/wiki/Vacuum_variable_capacitor>

There are also porcelain capacitors:
<http://www.atceramics.com/products/power_capacitors.asp>

There are ceramic dielectic high voltage caps but they tend to be more
lossy than vacuum or porcelain.

Jennings vacuum caps. The voltages in the table are in Kv.
<http://www.jenningstech.com/ps/jen/caplist.cgi>

If you want to make your own, there are always Leyden Jars and window
glass with alternating layers of aluminum foil. I've used both for
Tesla coils.

I suggest you look at various existing KW amplifier designs and see
what they use.

--
Jeff Liebermann jeffl@cruzio.com
150 Felker St #D http://www.LearnByDestroying.com
Santa Cruz CA 95060 http://802.11junk.com
Skype: JeffLiebermann AE6KS 831-336-2558

3661. Re: HomeBrew Capacitors?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-25 01:12:02 UTC
From: Tim Shoppa <shoppa@trailing-edge.com>
Message-ID: <c0ffe596-4793-4bcd-b9be-cc712360425a@p8g2000yqb.googlegroups.com>
Source record: 11473

On Dec 24, 4:23 pm, John Ferrell <jferrel...@triad.rr.com> wrote:
> I have been successful at modeling and then constructing transmitter
> matching circuits at low power with common sizes of capacitors. Now I
> want to move up to the 1 KW power level. Inductors are easy enough to
> homebrew but capacitors are both expensive and scarce. Anyone have
> ideas or maybe experience in this area?
>
> DigiKey has a good selection of High Voltage units (3 KV Plus) at
> modest cost but considering their size and the losses expected in the
> capacitors I don't think they can dissipate the heat...
>
> John Ferrell W8CCW

I'm guessing that you're talking about capacitors in the few pF to low thousand pF range used in L matching etc.

(The other alternative is electrolytics in the power supply, where the common solution since the dawn of time has been series connected 450V units with equalizing resistors).

For fixed capacitors, a surplus source of "doorknob capacitors" is the standard way. Not cheap or available at the corner store but they are available. Try Ebay, where by far most of the parts you'll find are Russian, or rfparts.com.

For variable capacitors, if you don't want to find some old Hammarlunds or EF Johnsons or whatever, MFJ sells some new manufacture large air variables, and other people homebrew their own out of sheet metal, threaded rods, and nuts:

http://www.metaphoria.us/hamradio/DL5DBM_cap_plans.pdf
http://www.metaphoria.us/hamradio/transmatch.html

Tim.

3662. Social Networking

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-25 09:04:55 UTC
From: chakaravarthi chakaravarthi <chakara.cri@gmail.com>
Message-ID: <b134297d-cddc-4e8f-a43f-0b8e7f9be087@u16g2000pru.googlegroups.com>
Source record: 11474

Social Networking has been effectively used in reaching the goal of bringing down the prices of costly items through volume shopping. Go shopping with http://www.shoppingreps.com?SourceId=1163

3663. Re: Fractal Antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-25 13:42:54 UTC
From: danl <daninxpasco@gmail.com>
Message-ID: <6vf9j5hvlkcbjkkuhuqrgim8h93bljl7nv@4ax.com>
Source record: 11475

On Mon, 21 Dec 2009 08:09:56 -0800, "Wayne" <mygarbagecan@verizon.net>
wrote:

>
>"danl" <daninxpasco@gmail.com> wrote in message
>news:9bfsi5l9aijr0vg171vjvqiar5e72kei9f@4ax.com...
>> On Sun, 6 Dec 2009 19:47:28 -0600, "amdx" <amdx@knology.net> wrote:
>>
>>>
>>>"danl" <daninxpasco@gmail.com> wrote in message
>>>news:2ainh510c1eviue0daktv5j4epdqsv2doo@4ax.com...
>>>> On Sun, 6 Dec 2009 10:44:30 +0000, EI5DD
>>>> <EI5DD.5614748@radiobanter.com> wrote:
>>>>
>>>>>
>>>>>Would anyone have a copy of an article from either 73 or CQ magazine
>>>>>somewhere around the 90's which contained an article on how to
>>>>>construct a Fractal Quad antenna for 10 metres. The design was based on
>>>>>work done by Nathan Coen N1IR.
>>>>>
>>>>>Steve (EI5DD)
>>>>
>>>> Popcorn! GET YER HOT BUTTERD POPCORN HERE! Popcorn!
>>>>
>>>> N9JBF
>>>> >Whisper< Does the Buffoon still come around?
>>> I don't think he is buffoon, he had an idea that was novel and looks like
>>>he is selling a bunch of them.
>>> Mike
>>>
>>
>> The way he acted, not what he knew or how many he could sell
>> determined if he was a Buffoon...He was/is.
>-
>You must admit that there was a certain amount of entertainment in Chip's
>postings. If someone asked him a simple question, such as "how long was the
>longest element on the antenna you built"....he could have just said "x
>feet". Instead, he would post a 6 paragraph rant and direct the person
>asking the question to some obscure publication.
>

He was great entertainment as a Buffoon! He just never caught on to
the fact he was the featured headliner. If threats to sue people were
money, many here would be much wealthier than they are now!
Many people use the phrase,"They laughed all the way to the bank".

Which may be true, but does not lessen the fact that some are just destined to be Buffoons. It is their "lot in life", "their fate". No matter how much money he makes or fame he acquires, be will always be a Buffoon.

Dan
N9JBF

3664. Re: Social Networking Interesting SPAM!

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-25 13:48:17 UTC
From: IanT <noemail@email.co.uk>
Message-ID: <hh2frc$rt6$1@news.eternal-september.org>
Source record: 11476

"chakaravarthi chakaravarthi" <chakara.cri@gmail.com> wrote in message
news:b134297d-cddc-4e8f-a43f-0b8e7f9be087@u16g2000pru.googlegroups.com...
> Social Networking has been effectively used in reaching the goal of
> bringing down the prices of costly items through volume shopping. Go
> shopping.

The only way it would do that is for a number of people to get together and
do a bulk buy. Some manufacturers will not allow this of course. The
mark-up
on goods by retailers is terrible. As you have spammed a radio amateur
group,
what is more appropriate than discussing Amateur Radio equipment. Let's
take
KENWOOD for example. As an employee I could buy *ANY* device made
by Kenwood at 30% of the retail price, that included VAT in the UK and
delivery charges for the 24hour courier.
So a radio costing £1000 would cost me a grand total of £300!
Major UK resellers will get more of a reduction if they buy so many radios
or
antennas. For example, the shop will be charged £300 for a Kenwood radio
and offer it for sale at £900 special offer. They still make £600 minimum
out
of that sale - but if you take out finance at 34% APR over 2 years you will
pay
back a fee for arranging finance, £2000 minimum, then a fee for paying your
last payment. So from £300 you end up paying out £2500!
Supermarkets also try a con trick by offering goods at "3 for the price of
2" or
"buy 1 get 1 half price". The reason for that is bulk buying, the
supermarket
will drive the price right down, but not change the retail price. When you
are
forced to buy lots of items they make even more money. People are fooled
by psychological tricks in advertising, they think they are getting a
bargain but
are really paying out far more than they would like to! One way to cut the
costs is to get a friend/neighbour to join your shopping trip, then you can
get
all the 2 for 1 offers and split the costs.
Amateur radio antennas are also overpriced.

3665. Re: an ontopic post about code

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-25 17:36:58 UTC
From: kb9rqz <mark@kb9rqz.com>
Message-ID: <35ae1ecc-1cf7-4602-9042-01812244a62b@s19g2000vbm.googlegroups.com>
Source record: 11477
Cross-posted to: alt.ham-radio.vhf-uhf,rec.radio.amateur.policy,rec.radio.amateur.antenna

On Dec 23, 12:05 pm, kb9...@yahoooo.com wrote:
> On Fri, 01 Dec 2006 09:36:47 -0800, John Smith
>
>
>
>
>
> <assemblywiz...@gmail.com> wrote:
> >K4YZ wrote:
> >>   Nope.
>
> >>   The IP Address and servers are complete proof that I do NOT share
> >> any annonymous character's "address".
>
> >>   Sounds like Lennie, to me....
>
> >> Steve, K4YZ
>
> >To anyone with even an elementary understanding of anonymous proxies,
> >anonymous remailers, zombie backdoors, etc., the ability to change ones
> >IP address and header details is simplistic, indeed, with little time
> >spent anyone can appear to be "coming" from anywhere in the world.
>
> >You waste my time. Worse, you think us all idiots here. You remind me
> >of the "street smart" prosecutors and defense attorneys who stack jurys
> >with members of little or no technical knowledge and then call in
> >"expert witnesses" and propose arguments of technical details to boggle
> >their minds.
>
> >You have only proven that you, yourself are either ignorant to such
> >technical details, or else you are indeed street smart, I favor the
> >latter in this case (however, if you in the dark about such things, 15
> >minutes on google will enlighten you.)
>
> >JS
>
> "one useless man is disgrace 2 become a law firm 3 or more become a congress"
> adams
>
> woger you are a Congress all in your own head
> "http://www.3ix.org/sys/aff.php?aff=7439" target="_blank"
>
> altopia is never used by KB9RQZhttp://kb9rqz.cc.cchttp://kd8ctl.com

> nor is Konst...@hotmail.com ever
> btw i can be found at
> 17366 N River Rd
> Chassel Mi
>
> but the cowards asking lack the gut to act- Hide quoted text -
>
> - Show quoted text -

3666. Re: an ontopic post about code

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-25 17:43:42 UTC
From: kb9rqz@yahoooo.com
Message-ID: <ceu9j5duqg8b893c9io2n90j0gvuok0mpv@4ax.com>
Source record: 11478
Cross-posted to: alt.ham-radio.vhf-uhf,rec.radio.amateur.policy,rec.radio.amateur.antenna

On Fri, 01 Dec 2006 09:36:47 -0800, John Smith
<assemblywizard@gmail.com> wrote:

>K4YZ wrote:
>> Nope.
>>
>> The IP Address and servers are complete proof that I do NOT share
>> any annonymous character's "address".
>>
>> Sounds like Lennie, to me....
>>
>> Steve, K4YZ
>>
>
>To anyone with even an elementary understanding of anonymous proxies,
>anonymous remailers, zombie backdoors, etc., the ability to change ones
>IP address and header details is simplistic, indeed, with little time
>spent anyone can appear to be "coming" from anywhere in the world.
>
>You waste my time. Worse, you think us all idiots here. You remind me
>of the "street smart" prosecutors and defense attorneys who stack jurys
>with members of little or no technical knowledge and then call in
>"expert witnesses" and propose arguments of technical details to boggle
>their minds.
>
>You have only proven that you, yourself are either ignorant to such
>technical details, or else you are indeed street smart, I favor the
>latter in this case (however, if you in the dark about such things, 15
>minutes on google will enlighten you.)
>
>JS

"one useless man is disgrace 2 become a law firm 3 or more become a congress"
adams

woger you are a Congress all in your own head
"http://www.3ix.org/sys/aff.php?aff=7439" target="_blank"

altopia is never used by KB9RQZ
http://kb9rqz.cc.cc
http://kd8ctl.com
nor is Konstans@hotmail.com ever
btw i can be found at
17366 N River Rd

Chassel Mi

but the cowards asking lack the gut to act

3667. Re: Fractal Antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-25 17:44:18 UTC
From: Art Unwin <arthurunwin@gmail.com>
Message-ID: <8c911bb1-b346-4c5b-8988-f432edf17795@22g2000yqr.googlegroups.com>
Source record: 11479

On Dec 25, 7:42 am, danl <daninxpa...@gmail.com> wrote:
> On Mon, 21 Dec 2009 08:09:56 -0800, "Wayne" <mygarbage...@verizon.net>
> wrote:
>
>
>
>
>
>
> >"danl" <daninxpa...@gmail.com> wrote in message
> >news:9bfsi5l9aijr0vg171vjvqiar5e72kei9f@4ax.com...
> >> On Sun, 6 Dec 2009 19:47:28 -0600, "amdx" <a...@knology.net> wrote:
>
> >>>"danl" <daninxpa...@gmail.com> wrote in message
> >>>news:2ainh510c1eviue0daktv5j4epdqsv2doo@4ax.com...
> >>>> On Sun, 6 Dec 2009 10:44:30 +0000, EI5DD
> >>>> <EI5DD.5614...@radiobanter.com> wrote:
>
> >>>>>Would anyone have a copy of an article from either 73 or CQ magazine
> >>>>>somewhere around the 90's which contained an article on how to
> >>>>>construct a Fractal Quad antenna for 10 metres. The design was based on
> >>>>>work done by Nathan Coen N1IR.
>
> >>>>>Steve (EI5DD)
>
> >>>> Popcorn! GET YER HOT BUTTERD POPCORN HERE! Popcorn!
>
> >>>> N9JBF
> >>>> >Whisper< Does the Buffoon still come around?
> >>> I don't think he is buffoon, he had an idea that was novel and looks like
> >>>he is selling a bunch of them.
> >>>   Mike
>
> >> The way he acted, not what he knew or how many he could sell
> >> determined if he was a Buffoon...He was/is.
> >>-
> >>You must admit that there was a certain amount of entertainment in Chip's
> >>postings. If someone asked him a simple question, such as "how long was the
> >>longest element on the antenna you built"....he could have just said "x
> >>feet". Instead, he would post a 6 paragraph rant and direct the person
> >>asking the question to some obscure publication.
>
> He was great entertainment as a Buffoon! He just never caught on to
> the fact he was the featured headliner. If threats to sue people were
> money, many here would be much wealthier than they are now!

> Many people use the phrase,"They laughed all the way to the bank".
> Which may be true, but does not lessen the fact that some are just
> destined to be Buffoons. It is their "lot in life", "their fate". No
> matter how much money he makes or fame he acquires, be will always be
> a Buffoon.
>
> Dan
> N9JBF

The over welming importance of the Fractal antenna is that it
ALWAYS presents a resistive load when discounting proximetry effects.
Thus leaving the problems of efficiency to the "matching" issues.

3668. Re: HomeBrew Capacitors?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-25 19:48:11 UTC
From: JIMMIE <JIMMIEDEE123@YAHOO.COM>
Message-ID: <e5814eb6-bae9-4f7e-b098-d90f985f60c0@d20g2000yqh.googlegroups.com>
Source record: 11480

On Dec 24, 8:12 pm, Tim Shoppa <sho...@trailing-edge.com> wrote:
> On Dec 24, 4:23 pm, John Ferrell <jferrel...@triad.rr.com> wrote:
>
> > I have been successful at modeling and then constructing transmitter
> > matching circuits at low power with common sizes of capacitors. Now I
> > want to move up to the 1 KW power level. Inductors are easy enough to
> > homebrew but capacitors are both expensive and scarce. Anyone have
> > ideas or maybe experience in this area?
>
> > DigiKey has a good selection of High Voltage units (3 KV Plus) at
> > modest cost but considering their size and the losses expected in the
> > capacitors I don't think they can dissipate the heat...
>
> > John Ferrell W8CCW
>
> I'm guessing that you're talking about capacitors in the few pF to low
> thousand pF range used in L matching etc.
>
> (The other alternative is electrolytics in the power supply, where the
> common solution since the dawn of time has been series connected 450V
> units with equalizing resistors).
>
> For fixed capacitors, a surplus source of "doorknob capacitors" is the
> standard way. Not cheap or available at the corner store but they are
> available. Try Ebay, where by far most of the parts you'll find are
> Russian, or rfparts.com.
>
> For variable capacitors, if you don't want to find some old
> Hammarlunds or EF Johnsons or whatever, MFJ sells some new manufacture
> large air variables, and other people homebrew their own out of sheet
> metal, threaded rods, and nuts:
>
> http://www.metaphoria.us/hamradio/DL5DBM_cap_plans.pdf
> http://www.metaphoria.us/hamradio/transmatch.html
>
> Tim.

I have had some luck cutting out non ferrous parts like this using a
router with a carbide bit. Fasten the metal to a template and feed it
into the router. too easy.

Jimmie

3669. Re: HomeBrew Capacitors?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-26 11:52:33 UTC
From: John Ferrell <jferrell13@triad.rr.com>
Message-ID: <3ltbj55nlq9k00vlclcaag77i9caa1n5ni@4ax.com>
Source record: 11481

On Thu, 24 Dec 2009 16:23:05 -0500, John Ferrell
<jferrell13@triad.rr.com> wrote:

>I have been successful at modeling and then constructing transmitter
>matching circuits at low power with common sizes of capacitors. Now I
>want to move up to the 1 KW power level. Inductors are easy enough to
>homebrew but capacitors are both expensive and scarce. Anyone have
>ideas or maybe experience in this area?
<-snip->

Thanks, all good info!
The application is to match individual antennas about 75 feet of coax
from the radio. Coax is way too lossy at high SWR's and open wire just
too cumbersome. I have a storage shed with a pretty good radial system
at the feed point. I suppose the best solution would be a high power
remote auto tuner but I am just not ready to commit that much to the
project!

A simple L match should seems the best alternative for the
experimenting. I will slow down until I fabricate/acquire the
necessary capacitors.

John Ferrell W8CCW

3670. Re: Fractal Antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-26 18:27:07 UTC
From: Dave <k1ttt@arrl.net>
Message-ID: <6fe56fa4-ef76-4f47-8dca-6e21d6a5524a@q2g2000yqd.googlegroups.com>
Source record: 11482

On Dec 25, 5:44 pm, Art Unwin <arthurun...@gmail.com> wrote:
> On Dec 25, 7:42 am, danl <daninxpa...@gmail.com> wrote:
>
>
>
>
>
> > On Mon, 21 Dec 2009 08:09:56 -0800, "Wayne" <mygarbage...@verizon.net>
> > wrote:
>
> > >"danl" <daninxpa...@gmail.com> wrote in message
> > >news:9bfsi5l9aijr0vg171vjvqiar5e72kei9f@4ax.com...
> > >> On Sun, 6 Dec 2009 19:47:28 -0600, "amdx" <a...@knology.net> wrote:
>
> > >>>"danl" <daninxpa...@gmail.com> wrote in message
> > >>>news:2ainh510c1eviue0daktv5j4epdqsv2doo@4ax.com...
> > >>>> On Sun, 6 Dec 2009 10:44:30 +0000, EI5DD
> > >>>> <EI5DD.5614...@radiobanter.com> wrote:
>
> > >>>>>Would anyone have a copy of an article from either 73 or CQ magazine
> > >>>>>somewhere around the 90's which contained an article on how to
> > >>>>>construct a Fractal Quad antenna for 10 metres. The design was based on
> > >>>>>work done by Nathan Coen N1IR.
>
> > >>>>>Steve (EI5DD)
>
> > >>>> Popcorn! GET YER HOT BUTTERD POPCORN HERE! Popcorn!
>
> > >>>> N9JBF
> > >>>> >Whisper< Does the Buffoon still come around?
> > >>> I don't think he is buffoon, he had an idea that was novel and looks like
> > >>>he is selling a bunch of them.
> > >>>   Mike
>
> > >> The way he acted, not what he knew or how many he could sell
> > >> determined if he was a Buffoon...He was/is.
> > >>-
> > >>You must admit that there was a certain amount of entertainment in Chip's
> > >>postings. If someone asked him a simple question, such as "how long was the
> > >>longest element on the antenna you built"....he could have just said "x
> > >>feet". Instead, he would post a 6 paragraph rant and direct the person
> > >>asking the question to some obscure publication.
>
> > He was great entertainment as a Buffoon! He just never caught on to

> > the fact he was the featured headliner. If threats to sue people were
> > money, many here would be much wealthier than they are now!
> > Many people use the phrase,"They laughed all the way to the bank".
> > Which may be true, but does not lessen the fact that some are just
> > destined to be Buffoons. It is their "lot in life", "their fate". No
> > matter how much money he makes or fame he acquires, be will always be
> > a Buffoon.
>
> > Dan
> > N9JBF
>
> The over welming importance of the Fractal antenna is that it
> ALWAYS presents a resistive load when discounting proximetry effects.
> Thus leaving the problems of efficiency to the "matching" issues.- Hide quoted text -
>
> - Show quoted text -

no, it doesn't. go re-read some of fracky's original posts and you
will find out that a dipole is the degenerate case of any fractal
folding algorithm, and since we all know dipoles exhibit non-resistive
impedances when not at resonance that statement is just simply wrong.

3671. Re: Fractal Antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-27 12:34:41 UTC
From: Dave <k1ttt@arrl.net>
Message-ID: <52ed3821-b894-46ea-a384-347d6288d5fc@d21g2000yqn.googlegroups.com>
Source record: 11483

On Dec 26, 6:27 pm, Dave <k1...@arrl.net> wrote:
> On Dec 25, 5:44 pm, Art Unwin <arthurun...@gmail.com> wrote:
>
>
>
>
>
> > On Dec 25, 7:42 am, danl <daninxpa...@gmail.com> wrote:
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> > > On Mon, 21 Dec 2009 08:09:56 -0800, "Wayne" <mygarbage...@verizon.net>
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> > > >"danl" <daninxpa...@gmail.com> wrote in message
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> > > >> On Sun, 6 Dec 2009 19:47:28 -0600, "amdx" <a...@knology.net> wrote:
>
> > > >>>"danl" <daninxpa...@gmail.com> wrote in message
> > > >>>news:2ainh510c1eviue0daktv5j4epdqsv2doo@4ax.com...
> > > >>>> On Sun, 6 Dec 2009 10:44:30 +0000, EI5DD
> > > >>>> <EI5DD.5614...@radiobanter.com> wrote:
>
> > > >>>>>Would anyone have a copy of an article from either 73 or CQ magazine
> > > >>>>>somewhere around the 90's which contained an article on how to
> > > >>>>>construct a Fractal Quad antenna for 10 metres. The design was based on
> > > >>>>>work done by Nathan Coen N1IR.
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>
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>
> > > >>>> N9JBF
> > > >>>> >Whisper< Does the Buffoon still come around?
> > > >>> I don't think he is buffoon, he had an idea that was novel and looks like
> > > >>>he is selling a bunch of them.
> > > >>>   Mike
>
> > > >> The way he acted, not what he knew or how many he could sell
> > > >> determined if he was a Buffoon...He was/is.
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> > > >>You must admit that there was a certain amount of entertainment in Chip's
> > > >>postings. If someone asked him a simple question, such as "how long was the
> > > >>longest element on the antenna you built"....he could have just said "x
> > > >>feet". Instead, he would post a 6 paragraph rant and direct the person
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> > > money, many here would be much wealthier than they are now!
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> no, it doesn't. go re-read some of fracky's original posts and you
> will find out that a dipole is the degenerate case of any fractal
> folding algorithm, and since we all know dipoles exhibit non-resistive
> impedances when not at resonance that statement is just simply wrong.- Hide quoted text -
>
> - Show quoted text -

no snappy comeback for that art? are you slipping? or are facts
pesky things to be avoided?

3672. Re: Fractal Antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-28 19:53:14 UTC
From: Art Unwin <arthurunwin@gmail.com>
Message-ID: <c0ed2feb-9a9b-40ae-8f59-6d9407c77a93@d21g2000yqn.googlegroups.com>
Source record: 11484

On Dec 6, 8:20 pm, Art Unwin <arthurun...@gmail.com> wrote:
> On Dec 6, 7:47 pm, "amdx" <a...@knology.net> wrote:
>
>
>
> > "danl" <daninxpa...@gmail.com> wrote in message
>
> >news:2ainh510c1eviue0daktv5j4epdqsv2doo@4ax.com...> On Sun, 6 Dec 2009 10:44:30 +0000,
EI5DD
> > > <EI5DD.5614...@radiobanter.com> wrote:
>
> > >>Would anyone have a copy of an article from either 73 or CQ magazine
> > >>somewhere around the 90's which contained an article on how to
> > >>construct a Fractal Quad antenna for 10 metres. The design was based on
> > >>work done by Nathan Coen N1IR.
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> > > >Whisper< Does the Buffoon still come around?
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> > I don't think he is buffoon, he had an idea that was novel and looks like
> > he is selling a bunch of them.
> >   Mike
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> No he isn't a buffoon, he had a Doctorate! Yes this group did go after
> him with insults e.t.c. until he finally left and went into business
> leaving the group devoid of experts again. He has several law suits
> filed against the biggest phone makers in the world where they were
> using his ideas with out his knowlege and not paying for them.If it
> is found that he is correct that other phone makers felt they had to
> use his ideas to stay in business then it would appear the ideas had
> merit.
> He wasn't the last antenna expert to leave the insults from this
> group,
> Tom W8ti was one , Litchfield is another who left, Llewellen rarely
> appears now and there were a lot more that left. The pseudo experts
> are still here and easily recognisable and there are many a day that
> the newbies will not come near this newsgroup to ask a question. No,
> Chip was not a buffoon and is laughing all the way to the bank despite
> criticism from those from those who decided there was no need to go
> to college or even high school because they could holler louder than

> anybody else and win.

Apparently it is" Fractus" that is the company sueing several companies and not "Fractal"antennas. I thought they were one and the same companies,So I am in error. Thus I apologize for this error. So let it be clear, that it is not Chip and his company that is pursuing the other phone manufactures but another company of like name

With respect to Chip's designs. What I consider important is that his radiators do NOT contain, or produce, any lumped loads in their manufacture that are not canceled leaving just distributed loads. Thus for the given actual length of the radiator (the equivalent stretched radiator length) the impedance is strictly resistive, neglecting proximetry effects. This meets the intent of Maxwells equations where lumped loads DO NOT EXIST when accounting for all forces involved in radiation. The only deviation from Maxwell that I can see is that it does introduce sharp bends which also introduces phenomina with respect to current lamina flow, where excess eddy current flow is introduced, which is additive and not subject to cancellation.
Art Unwin KB9MZ...xg

3673. Re: Fractal Antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-28 23:25:54 UTC
From: JIMMIE <JIMMIEDEE123@YAHOO.COM>
Message-ID: <fdc9e449-d149-4dad-8156-1162826c88c8@a6g2000yqm.googlegroups.com>
Source record: 11485

On Dec 28, 2:53 pm, Art Unwin <arthurun...@gmail.com> wrote:
> On Dec 6, 8:20 pm, Art Unwin <arthurun...@gmail.com> wrote:
>
>
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>
>
> > On Dec 6, 7:47 pm, "amdx" <a...@knology.net> wrote:
>
> > > "danl" <daninxpa...@gmail.com> wrote in message
>
> > >news:2ainh510c1eviue0daktv5j4epdqsv2doo@4ax.com...> On Sun, 6 Dec 2009 10:44:30
+0000, EI5DD
> > > > <EI5DD.5614...@radiobanter.com> wrote:
>
> > > >>Would anyone have a copy of an article from either 73 or CQ magazine
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> > him with insults e.t.c. until he finally left and went into business
> > leaving the group devoid of experts again. He has several law suits
> > filed against the biggest phone makers in the world where they were
> > using his ideas with out his knowlege and not paying for them.If it
> > is found that he is correct that other phone makers felt they had to
> > use his ideas to stay in business then it would appear the ideas had
> > merit.
> > He wasn't the last antenna expert to leave the insults from this
> > group,
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> > appears now and there were a lot more that left. The pseudo experts
> > are still here and easily recognisable and there are many a day that

> > the newbies will not come near this newsgroup to ask a question. No,
> > Chip was not a buffoon and is laughing all the way to the bank despite
> > criticism from those from those who decided there was no need to go
> > to college or even high school because they could holler louder than
> > anybody else and win.
>
> Apparently it is" Fractus" that is the company sueing several
> companies and not "Fractal"antennas. I thought they were one and the
> same companies,So I am in error. Thus I apologize for this error. So
> let it be clear, that it is not Chip and his company that is pursuing
> the other phone manufactures but another company of like
> name
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> With respect to Chip's designs. What I consider important is that his
> radiators do NOT contain, or produce, any lumped loads in their
> manufacture that are not canceled leaving just distributed loads. Thus
> for the given actual length of the radiator (the equivalent stretched
> radiator length) the impedance is strictly resistive, neglecting
> proximetry effects. This meets the intent of Maxwells equations where
> lumped loads DO NOT EXIST when accounting for all forces involved in
> radiation. The only deviation from Maxwell that I can see is that it
> does introduce sharp bends which also introduces phenomina with
> respect to current lamina flow, where excess eddy current flow is
> introduced, which is additive and not subject to cancellation.
> Art Unwin KB9MZ...xg- Hide quoted text -
>
> - Show quoted text -

Art, how does a current through a lumped inductance behave contrary to
Maxells equations?

Jimmie

3674. Re: Fractal Antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-29 00:30:27 UTC
From: Art Unwin <arthurunwin@gmail.com>
Message-ID: <d4106b07-3a5d-4bc4-9886-199e67e08ede@j19g2000yqk.googlegroups.com>
Source record: 11486

On Dec 28, 5:25 pm, JIMMIE <JIMMIEDEE...@YAHOO.COM> wrote:
> On Dec 28, 2:53 pm, Art Unwin <arthurun...@gmail.com> wrote:
>
>
>
> > On Dec 6, 8:20 pm, Art Unwin <arthurun...@gmail.com> wrote:
>
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>
> > > > "danl" <daninxpa...@gmail.com> wrote in message
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> > > >news:2ainh510c1eviue0daktv5j4epdqsv2doo@4ax.com...> On Sun, 6 Dec 2009 10:44:30
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> > > > > <EI5DD.5614...@radiobanter.com> wrote:
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> > same companies,So I am in error. Thus I apologize for this error. So
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> > respect to current lamina flow, where excess eddy current flow is
> > introduced, which is additive and not subject to cancellation.
> > Art Unwin KB9MZ...xg- Hide quoted text -
>
> > - Show quoted text -
>
> Art, how does a current through a lumped inductance behave contrary to
> Maxells equations?
>
> Jimmie

That is pretty obvious! If you review Maxwell equations you will see
reference to root L.C, where L and C refers to distributed loads only
and is not inclusive of lumped loads. Adding a lumped load introduces
unbalance or a deviation from equilibrium, which is a fundamental when
reviewing the laws of the Masters.
Mathematics demands of every equation that the metrics MUST
cancel to zero. Thus all metrics involved must consist of pairs.
If one introduces a lumped load via building considerations then
another one has to be introduced so that the metrics are able to
cancel
out to zero.
In the case of the slinky antenna it thus demands that the windings
must be equal and opposite.
Art

3675. Science update,particle wave duality

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-29 02:36:11 UTC
From: Art Unwin <arthurunwin@gmail.com>
Message-ID: <a56acf53-e536-45b6-8fad-eb7093c950c8@j19g2000yqk.googlegroups.com>
Source record: 11488

Gauss's boundary contains static particles

Faraday cage contains static particles

Both have a boundary that is conductive and thus can radiate.

Both radiate when a time varying field is applied

Both receive when transformed into a time varying field
provided when the magnetic and electric moves to cancellation

Both are applicable to Maxwell's equations for radiation

Both start and finish with a time varient current.

Both produce a charge by accelerating or removal of a charge via
deceleration of a particle.

The accelerant in both cases is the intersection of two closed fields.
(Electric field and a static field encircled by
the displacement current)

In both cases the particle has a straight line projection with spin

In both cases the particle vector angles equate exactly with that of
gravity and the Earth's rotation

Question ;
How does the particle (singular) referred to in each case act like a
wave or become a wave as stated in Classical Physics?

3676. Re: an ontopic post about code

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-29 02:39:49 UTC
From: kb9rqz@yahoooo.com
Message-ID: <jvqij5dkmvjo0lha39pk11oku3ejtns0u0@4ax.com>
Source record: 11487
Cross-posted to: alt.ham-radio.vhf-uhf,rec.radio.amateur.policy,rec.radio.amateur.antenna

On Fri, 01 Dec 2006 09:36:47 -0800, John Smith
<assemblywizard@gmail.com> wrote:

>K4YZ wrote:
>> Nope.
>>
>> The IP Address and servers are complete proof that I do NOT share
>> any annonymous character's "address".
>>
>> Sounds like Lennie, to me....
>>
>> Steve, K4YZ
>>
>
>To anyone with even an elementary understanding of anonymous proxies,
>anonymous remailers, zombie backdoors, etc., the ability to change ones
>IP address and header details is simplistic, indeed, with little time
>spent anyone can appear to be "coming" from anywhere in the world.
>
>You waste my time. Worse, you think us all idiots here. You remind me
>of the "street smart" prosecutors and defense attorneys who stack jurys
>with members of little or no technical knowledge and then call in
>"expert witnesses" and propose arguments of technical details to boggle
>their minds.
>
>You have only proven that you, yourself are either ignorant to such
>technical details, or else you are indeed street smart, I favor the
>latter in this case (however, if you in the dark about such things, 15
>minutes on google will enlighten you.)
>
>JS

"one useless man is disgrace 2 become a law firm 3 or more become a congress"
adams

woger you are a Congress all in your own head
"http://www.3ix.org/sys/aff.php?aff=7439" target="_blank"

altopia is never used by KB9RQZ
http://kb9rqz.cc.cc
http://kd8ctl.com
nor is Konstans@hotmail.com ever
btw i can be found at
17366 N River Rd

Chassel Mi

but the cowards asking lack the gut to act

3677. Re: Fractal Antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-29 11:45:07 UTC
From: Dave <k1ttt@arrl.net>
Message-ID: <a4167fb6-e615-42cd-a5eb-a2534352736c@c3g2000yqd.googlegroups.com>
Source record: 11489

On Dec 29, 12:30 am, Art Unwin <arthurun...@gmail.com> wrote:
> On Dec 28, 5:25 pm, JIMMIE <JIMMIEDEE...@YAHOO.COM> wrote:
>
>
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> > On Dec 28, 2:53 pm, Art Unwin <arthurun...@gmail.com> wrote:
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> > > does introduce sharp bends which also introduces phenomina with
> > > respect to current lamina flow, where excess eddy current flow is
> > > introduced, which is additive and not subject to cancellation.
> > > Art Unwin KB9MZ...xg- Hide quoted text -
>
> > > - Show quoted text -
>
> > Art, how does a current through a lumped inductance behave contrary to
> > Maxells equations?
>
> > Jimmie
>
> That is pretty obvious! If you review Maxwell equations you will see
> reference to root L.C, where L and C refers to distributed loads only
> and is not inclusive of lumped loads. Adding a lumped load introduces
> unbalance or a deviation from equilibrium, which is a fundamental when
> reviewing the laws of the Masters.
> Mathematics demands of every equation that the metrics MUST
> cancel to zero. Thus all metrics involved must consist of pairs.
> If one introduces a lumped load via building considerations then
> another one has to be introduced so that the metrics are able to
> cancel
> out to zero.
> In the case of the slinky antenna it thus demands that the windings
> must be equal and opposite.
> Art

always good for a laugh isn't he jimmie?

3678. Re: Science update,particle wave duality

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-29 11:53:02 UTC
From: Dave <k1ttt@arrl.net>
Message-ID: <5a082880-ff0e-40f4-b277-10da85d92936@q2g2000yqd.googlegroups.com>
Source record: 11490

On Dec 29, 2:36 am, Art Unwin <arthurun...@gmail.com> wrote:
> Gauss's boundary contains static particles

not in YOUR world where you have added a time dependency to his law.

>
> Faraday cage contains static particles

Faraday doesn't care about particles

>
> Both have a boundary that is conductive and thus can radiate.
>
> Both radiate when a time varying field is applied

both have a boundry, this is true. Faraday cages are conductive and
could radiate if properly excited. But gaussian surfaces are
conceptual and have not physical manifestation so can not be
conductive nor radiate, though radiative fields could pass through
them.

>
> Both receive when transformed into a time varying field
> provided when the magnetic and electric moves to cancellation

I have no idea what this means.

>
> Both are applicable to Maxwell's equations for radiation

Gaussian surfaces are part of maxwell's equations by his inclusion of
Gauss's law. the Faraday cage is a result of the effects of maxwell's
equations in a practical application.

>
> Both start and finish with a time varient current.
>
> Both produce a charge by accelerating or removal of a charge via
> deceleration of a particle.

Only after YOU add the time factor to Gauss's law.

>
> The accelerant in both cases is the intersection of two closed fields.
> (Electric field and a static field encircled by
> the displacement current)

I would like to see how you encircle a static field (which by
definition must be infinite in extent) by a displacement current.

>
> In both cases the particle has a straight line projection with spin
>
> In both cases the particle vector angles equate exactly with that of
> gravity and the Earth's rotation

right, maybe in your twisted world.

>
> Question   ;
> How does the particle (singular) referred to in each case act like a
> wave or become a wave as stated in Classical Physics?

its all a matter of perspective. quite simple in fact so i'll leave
it as an exercise for the student...
show your work, papers due by 9am tomorrow.

3679. Re: Science update,particle wave duality

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-30 22:21:37 UTC
From: K7ITM <k7itm@msn.com>
Message-ID: <048430af-7515-4017-b7d3-41e5a6a72f8a@c34g2000yqn.googlegroups.com>
Source record: 11491

On Dec 28, 6:36 pm, Art Unwin <arthurun...@gmail.com> wrote:
> Gauss's boundary contains static particles
>
> Faraday cage contains static particles
>
> Both have a boundary that is conductive and thus can radiate.
>
> Both radiate when a time varying field is applied
>
> Both receive when transformed into a time varying field
> provided when the magnetic and electric moves to cancellation
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> Both are applicable to Maxwell's equations for radiation
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> Both start and finish with a time varient current.
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> deceleration of a particle.
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> the displacement current)
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> In both cases the particle has a straight line projection with spin
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> In both cases the particle vector angles equate exactly with that of
> gravity and the Earth's rotation
>
> Question ;
> How does the particle (singular) referred to in each case act like a
> wave or become a wave as stated in Classical Physics?

Something for you to ponder, Art:

If we shine monochromatic light source through a pinhole, some
distance behind which there is a white screen, we'll see that the
light is diffracted by the pinhole. If we have two such pinholes near
each other, we'll see an interference pattern on the screen. If we
replace the screen with a sensitive detector such as a photomuliplier
with a small aperature which we can move over the area of the screen
it replaces, we can quantitatively map the intensity versus location
in that plane. If we reduce the intensity of the light source enough,
we can get to the point where the photomultiplier detects individual
photons at even the locations of greatest intensity. Eventually, we
can get to an intensity where apparently there is almost never more

than one photon at a time on a path from the source to the plane where the detector is located. If we count photons for long enough, though, we can map the intensity at that plane just as we did above. Now, will we see the same pattern, the same interference, the same _relative_ intensities, as we did when there were lots and lots of photons arriving at that plane? If so, why? If not, why not?

Cheers,
Tom

3680. Re: Science update,particle wave duality

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-30 22:59:16 UTC
From: John Passaneau <w3jxp@arrl.net>
Message-ID: <hhgm05$f07m$1@tr22n12.aset.psu.edu>
Source record: 11492

K7ITM wrote:
> On Dec 28, 6:36 pm, Art Unwin <arthurun...@gmail.com> wrote:
>> Gauss's boundary contains static particles
>>
>> Faraday cage contains static particles
>>
>> Both have a boundary that is conductive and thus can radiate.
>>
>> Both radiate when a time varying field is applied
>>
>> Both receive when transformed into a time varying field
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>> the displacement current)
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>> gravity and the Earth's rotation
>>
>> Question ;
>> How does the particle (singular) referred to in each case act like a
>> wave or become a wave as stated in Classical Physics?
>
> Something for you to ponder, Art:
>
> If we shine monochromatic light source through a pinhole, some
> distance behind which there is a white screen, we'll see that the
> light is diffracted by the pinhole. If we have two such pinholes near
> each other, we'll see an interference pattern on the screen. If we
> replace the screen with a sensitive detector such as a photomuliplier
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> in that plane. If we reduce the intensity of the light source enough,
> we can get to the point where the photomultiplier detects individual

> photons at even the locations of greatest intensity. Eventually, we
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> than one photon at a time on a path from the source to the plane where
> the detector is located. If we count photons for long enough, though,
> we can map the intensity at that plane just as we did above. Now,
> will we see the same pattern, the same interference, the same
> _relative_ intensities, as we did when there were lots and lots of
> photons arriving at that plane? If so, why? If not, why not?
>
> Cheers,
> Tom

Hi Tom

Not to encourage the nuts, but I have to point out one weird part to your description. If you reduce the intensity until there is only one photons at a time in the dark box, that is if a photon comes through the hole on the right, and none comes through the hole on the left. They will still show an interference pattern. There is explanation but it takes someone who knows more physics than I do. But I've built an apparatus that show just this effect. Why, 40 years of building research and teaching equipment for physicists.

73 John W3JXP

3681. Re: Science update,particle wave duality

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-31 00:58:26 UTC
From: Art Unwin <arthurunwin@gmail.com>
Message-ID: <fe559ba9-8233-4fca-96db-adde7c331221@26g2000yqo.googlegroups.com>
Source record: 11493

On Dec 30, 4:21 pm, K7ITM <k7...@msn.com> wrote:
> On Dec 28, 6:36 pm, Art Unwin <arthurun...@gmail.com> wrote:
>
>
>
> > Gauss's boundary contains static particles
>
> > Faraday cage contains static particles
>
> > Both have a boundary that is conductive and thus can radiate.
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> > Both radiate when a time varying field is applied
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> > gravity and the Earth's rotation
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> > Question   ;
> > How does the particle (singular) referred to in each case act like a
> > wave or become a wave as stated in Classical Physics?
>
> Something for you to ponder, Art:
>
> If we shine monochromatic light source through a pinhole, some
> distance behind which there is a white screen, we'll see that the
> light is diffracted by the pinhole. If we have two such pinholes near
> each other, we'll see an interference pattern on the screen. If we
> replace the screen with a sensitive detector such as a photomuliplier
> with a small aperature which we can move over the area of the screen

> it replaces, we can quantitatively map the intensity versus location
> in that plane. If we reduce the intensity of the light source enough,
> we can get to the point where the photomultiplier detects individual
> photons at even the locations of greatest intensity. Eventually, we
> can get to an intensity where apparently there is almost never more
> than one photon at a time on a path from the source to the plane where
> the detector is located. If we count photons for long enough, though,
> we can map the intensity at that plane just as we did above. Now,
> will we see the same pattern, the same interference, the same
> _relative_ intensities, as we did when there were lots and lots of
> photons arriving at that plane? If so, why? If not, why not?
>
> Cheers,
> Tom

Tom,
Thank you for your thoughts which probably is a break out from the double slit experiment which by the way has the apearance of increased attacks.On the many physics forums on the net physics professors have now ban those who would suggest that those in physics could be wrong. I know little of optics so I can't do justice indebating your thoughts so please allow me to change the approach.
The discussion is about behavior like a wave ! Not that a particle IS a wave. The definition provided for a wave is indeterminate and different to that generally known. All I ask is for an fresh evaluation of the work by Maxwell, Gauss and now with the addition of Faraday known by his work as an experimenter and not by his knowledge of mathematics.
For me I am concentrating on the subject of radiation and not of light or photons that have little evidence to support them as part of the discussion.
To my knowledge the Faraday cage is well understood where isolation can occur with electric fields,magnetic fields an current flow from a tank circuit. Particles and charges held are a part of Faradays thoughts
and accepted in everyday physics. His experiments bears out the boundary theorems by Gauss and others with respect to static particles and the addition of charge.
From a radiation point of view the mathematical equation for both of these efforts are those of Maxwell.
Radiation is not fully explained purely because physics are responding first to mathematics instead of observables as with the past which has lead to trickery and assumptions.
It is for this reason I have posted the additions of Faraday which are really the experimental results of what this group stated of Gauss where it is "illegal" to add a time vaying field! So what I have done is widen the pot of facts as supplied, not by me, but those of the Masters,
where the trained observers of this group have more data to explain where the masters should have referred to waves and not static or

charged particles. If somebody wants to add so called facts such as
the known presence of a photon and how it turns into a wave to provide
light then be my guest as long as the abservables are factual
that match known facts as with a lonely jigsaw part that fits so
deftly within the area assigned of a puzzle.
Other than that we are left with the comments of "nuts" from those who
consider themselves superiour of mind compared to others.
Best regards
Art Unwin

3682. Re: Science update,particle wave duality

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-31 01:03:46 UTC
From: Art Unwin <arthurunwin@gmail.com>
Message-ID: <f62c3c02-ff5d-49a1-b04f-c93baacbbb9a@r24g2000yqd.googlegroups.com>
Source record: 11494

On Dec 30, 4:59 pm, John Passaneau <w3...@arrl.net> wrote:
> K7ITM wrote:
> > On Dec 28, 6:36 pm, Art Unwin <arthurun...@gmail.com> wrote:
> >> Gauss's boundary contains static particles
>
> >> Faraday cage contains static particles
>
> >> Both have a boundary that is conductive and thus can radiate.
>
> >> Both radiate when a time varying field is applied
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> >> The accelerant in both cases is the intersection of two closed fields.
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> >> gravity and the Earth's rotation
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> >> Question ;
> >> How does the particle (singular) referred to in each case act like a
> >> wave or become a wave as stated in Classical Physics?
>
> > Something for you to ponder, Art:
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> > distance behind which there is a white screen, we'll see that the
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> > each other, we'll see an interference pattern on the screen. If we
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> > with a small aperature which we can move over the area of the screen
> > it replaces, we can quantitatively map the intensity versus location
> > in that plane. If we reduce the intensity of the light source enough,

> > we can get to the point where the photomultiplier detects individual
> > photons at even the locations of greatest intensity. Eventually, we
> > can get to an intensity where apparently there is almost never more
> > than one photon at a time on a path from the source to the plane where
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> > _relative_ intensities, as we did when there were lots and lots of
> > photons arriving at that plane? If so, why? If not, why not?
>
> > Cheers,
> > Tom
>
> Hi Tom
>
> Not to encourage the nuts, but I have to point out one weird part to
> your description. If you reduce the intensity until there is only one
> photons at a time in the dark box, that is if a photon comes through the
> hole on the right, and none comes through the hole on the left. They
> will still show an interference pattern. There is explanation but it
> takes someone who knows more physics than I do. But I've built an
> apparatus that show just this effect. Why, 40 years of building research
> and teaching equipment for physicists.
>
> 73 John W3JXP

Yes. This is fully stated on the web where explanations are provided
that challenge the double slit experiment. I expect the academics to
cry foul, take it personal and then to form together and chant that
they are "nuts" After all, physics professors declare the discussion
is over
and fully decided by them. If one suggests otherwise then they can be
banned.

3683. Re: Motorola Connectors?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-31 08:54:50 UTC
From: Dave D <xray66@earthlink.net>
Message-ID: <c31f53fc-f656-4211-9a48-6a7861f9cedf@u41g2000yqe.googlegroups.com>
Source record: 11495

On Dec 11, 8:12 pm, "Sal M. Onella" <sob...@cox.net> wrote:
>
> I would just tin the braid and solder it to the outer shell. You can
> make it look better with a little heat-shrink tubing.
>
> Sal

OK, thanks... I figured that would probably do it. I thought maybe
there was some zazzy way that I was missing. I've never seen a factory
one done, so I have no idea.

3684. Re: Science update,particle wave duality

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-31 13:06:29 UTC
From: Mike Kaliski <michael.kaliski@tesco.net>
Message-ID: <Abydnd1BSudyPKHWnZ2dnUVZ8mCdnZ2d@bt.com>
Source record: 11496

"K7ITM" <k7itm@msn.com> wrote in message
news:048430af-7515-4017-b7d3-41e5a6a72f8a@c34g2000yqn.googlegroups.com...
On Dec 28, 6:36 pm, Art Unwin <arthurun...@gmail.com> wrote:
> Gauss's boundary contains static particles
>
> Faraday cage contains static particles
>
> Both have a boundary that is conductive and thus can radiate.
>
> Both radiate when a time varying field is applied
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> Both receive when transformed into a time varying field
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> In both cases the particle vector angles equate exactly with that of
> gravity and the Earth's rotation
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> Question ;
> How does the particle (singular) referred to in each case act like a
> wave or become a wave as stated in Classical Physics?

Something for you to ponder, Art:

If we shine monochromatic light source through a pinhole, some
distance behind which there is a white screen, we'll see that the
light is diffracted by the pinhole. If we have two such pinholes near
each other, we'll see an interference pattern on the screen. If we
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Cheers,
Tom

Art,

The same phenomena can also be demonstrated using microwaves. At UHF and VHF it allows signals to be received even though there is a solid mass between the transmitter and the receiver - signals can be received directly behind a tower block or skyscraper due purely to diffraction effects (so long as you are far enough behind the building). Hills and mountains can also be used as a diffraction edge at lower frequencies enabling reliable long range communications without direct line of sight.

Electromagnetic waves, photons and electrons, are all inextricably linked. The electromagnetic wave is constantly varying as it propogates so that measuring it at one point reveals the magnetic element and half a wavelength later, the electrical element.

For example, water is made up of hydrogen and oxygen atoms combined as H2O but displays properties that are completely different to either element in isolation. Why should electromagnetic waves be any different? The combination of electricity and magnetism as a "compound" would logically be expected to display properties that are different to electricity or magnetism in isolation. Hence the observed properties of electromagnetic radiation.

Regards

Mike G0ULI

3685. Re: Science update,particle wave duality

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-31 15:12:28 UTC
From: Art Unwin <arthurunwin@gmail.com>
Message-ID: <3f288f55-a664-4eec-9a57-092a75af4c5b@a21g2000yqc.googlegroups.com>
Source record: 11497

On Dec 31, 7:06 am, "Mike Kaliski" <michael.kali...@tesco.net> wrote:
> "K7ITM" <k7...@msn.com> wrote in message
>
> news:048430af-7515-4017-b7d3-41e5a6a72f8a@c34g2000yqn.googlegroups.com...
> On Dec 28, 6:36 pm, Art Unwin <arthurun...@gmail.com> wrote:
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> > Gauss's boundary contains static particles
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> > Question ;
> > How does the particle (singular) referred to in each case act like a
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> Something for you to ponder, Art:
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> _relative_ intensities, as we did when there were lots and lots of
> photons arriving at that plane? If so, why? If not, why not?
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> Cheers,
> Tom
>
> Art,
>
> The same phenomena can also be demonstrated using microwaves. At UHF and VHF
> it allows signals to be received even though there is a solid mass between
> the transmitter and the receiver - signals can be received directly behind a
> tower block or skyscraper due purely to diffraction effects (so long as you
> are far enough behind the building). Hills and mountains can also be used as
> a diffraction edge at lower frequencies enabling reliable long range
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> Electromagnetic waves, photons and electrons, are all inextricably linked.
> The electromagnetic wave is constantly varying as it propogates so that
> measuring it at one point reveals the magnetic element and half a wavelength
> later, the electrical element.
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> For example, water is made up of hydrogen and oxygen atoms combined as H2O
> but displays properties that are completely different to either element in
> isolation. Why should electromagnetic waves be any different? The
> combination of electricity and magnetism as a "compound" would logically be
> expected to display properties that are different to electricity or
> magnetism in isolation. Hence the observed properties of electromagnetic
> radiation.
>
> Regards
>
> Mike G0ULI

Happy new year Mike
Again I cannot do justice to a debate in optics. At the same time I
recognise that different things can exhibit similar properties and
thus, like many others, I can state that they act like the same while
at the same time state that "they are NOT the same."

With respect to radiation I stick with the aproach of Newton and do not see enough evidence that suggest that a wave and a particle are interchangeable in terms of mass with that of a particle.
From my own point of view I liken it to the standard model where only two forces in combination with mass make up all of the Universe as we see it in that the particle of mass is the same but the propertise bestowed on it are different.
Thus I come back to the radiation aspect and see a clear path to a particle of mass where additional properties are added in line with the exchange of kinetic to potential energies. So I am back in interpreting
results from the same experiment without the two leaps required to jump the Grand Canyon. This is why I have gone back to the times that mathematics did not rule all and provide two instances where
the properties of the particle are one and the same and present them for others to determine how and why Newton was wrong. AS YET
no body has explained the properties of waves with respect to radiation.
Cheers
Ar in

3686. Re: Science update,particle wave duality

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-31 17:57:12 UTC
From: Art Unwin <arthurunwin@gmail.com>
Message-ID: <25bfbb3a-037f-49e7-a1e4-3e069614ba33@u7g2000yqm.googlegroups.com>
Source record: 11498

On Dec 31, 9:12 am, Art Unwin <arthurun...@gmail.com> wrote:
> On Dec 31, 7:06 am, "Mike Kaliski" <michael.kali...@tesco.net> wrote:
>
>
>
> > "K7ITM" <k7...@msn.com> wrote in message
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> >news:048430af-7515-4017-b7d3-41e5a6a72f8a@c34g2000yqn.googlegroups.com...
> > > On Dec 28, 6:36 pm, Art Unwin <arthurun...@gmail.com> wrote:
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> the properties of the particle are one and the same and present them
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form. In other words they have a energty constituent added.
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surface is completely covered by Unbound particles such that insects
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In each case the difference in the particles in isolation is purely in
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Thus we see how the same analogy can be applied to a Faraday cage
where the characteristics show the extent of energy change but where
the carrier of such is always the same, an unbound electron.
Regards
Art

3687. Re: Motorola Connectors?

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-31 19:36:26 UTC
From: Ed <Huckleberries_REMOVE_@q.com>
Message-ID: <Xns9CF2761476A29HuckleberryQwest@74.209.136.81>
Source record: 11499

>>
>> I would just tin the braid and solder it to the outer shell. You can
>> make it look better with a little heat-shrink tubing.
>>
>> Sal
>
> OK, thanks... I figured that would probably do it. I thought maybe
> there was some zazzy way that I was missing. I've never seen a factory
> one done, so I have no idea.
>

Well, there IS a bit of a "zazzy" way... I have seen done on a very few factory connectors..... the connector is installed with very short braid...the short braid is fanned out a bit... the connector back end is pushed under the braid about 1/4", and the braid brought down tight over the back end... then a small bit of tinned copper wire is wrapped over that braid ... you will note that the back end of othe connector is bent in a fashion that makes this easy. Then that wire and braid is all soldered to the connector. A lot of work for really no gain, I think.... but it looks nice.

Ed K7AAT

3688. Re: Science update,particle wave duality

Newsgroup: rec.radio.amateur.antenna
Date: 2009-12-31 20:41:49 UTC
From: Art Unwin <arthurunwin@gmail.com>
Message-ID: <f98e3103-6fcd-4ace-b243-ffdeade04353@21g2000yqj.googlegroups.com>
Source record: 11500

On Dec 31, 11:57 am, Art Unwin <arthurun...@gmail.com> wrote:
> On Dec 31, 9:12 am, Art Unwin <arthurun...@gmail.com> wrote:
>
>
>
> > On Dec 31, 7:06 am, "Mike Kaliski" <michael.kali...@tesco.net> wrote:
>
> > > "K7ITM" <k7...@msn.com> wrote in message
>
> > >news:048430af-7515-4017-b7d3-41e5a6a72f8a@c34g2000yqn.googlegroups.com...
> > > On Dec 28, 6:36 pm, Art Unwin <arthurun...@gmail.com> wrote:
>
> > > > Gauss's boundary contains static particles
>
> > > > Faraday cage contains static particles
>
> > > > Both have a boundary that is conductive and thus can radiate.
>
> > > > Both radiate when a time varying field is applied
>
> > > > Both receive when transformed into a time varying field
> > > > provided when the magnetic and electric moves to cancellation
>
> > > > Both are applicable to Maxwell's equations for radiation
>
> > > > Both start and finish with a time varient current.
>
> > > > Both produce a charge by accelerating or removal of a charge via
> > > > deceleration of a particle.
>
> > > > The accelerant in both cases is the intersection of two closed fields.
> > > > (Electric field and a static field encircled by
> > > > the displacement current)
>
> > > > In both cases the particle has a straight line projection with spin
>
> > > > In both cases the particle vector angles equate exactly with that of
> > > > gravity and the Earth's rotation
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While I am on a roll let me compare a Faraday cage with what is known about radiators
Aperture in the books is a relative measure of gain. In otgher words the shere thatr encircles a radiator or array is symbiolic of total gain
(poyntings vector) and where with respoect to a sphere the energy contained within the sphere is equal to the energty outside of the sphere.
In the Faraday cage the outside surface is covered in charges carried by particles as is the inside surface so the areas can be considered equal and 100% efficient energy transfer. The total energy is realisable ONLY when transfered as a time varying current from the inside of the sphere.This being the addition of the charges carried by the particles on the inside and the outside of the conductive surface.
Thus this is the experimental results o0f Faraday that leads from Gauss to Maxwell.
With respect to radiators the analogy between the surface area of a sphere equates with the circle that encloses a radiator, say a yagi.
This is provided by Jasik as a approximation of gain by visualisation.
This same analogy was applied by Steven Guest on his antenna paper presented to the IEEE for an electrically small radiator' where he showed that by "crushing" a radiator into a state of equilibrium for insertion into a half hemisphere as per Gauss.
Thus with all this interlocking of facts when comparing a Faraday shield with a radiator opponents of the particle aproach are now in a position of showing an electrical field cancelling a magnetic field both of which are a measure of energy alone and not mass to produce a addition of fields so that somehow a time varying current is obtained
which a receiver can use.
Compare this with the proposition that a photon is a relatively unknown,assumed to be without mass in terms of mathematics that apparently is a breakaway of energy from mass in a similar form to a fireball. Frankly the idea of the eyeball being a small Faraday cage to manufacture a signal to the brain is a much better supposition by those who rule physics of the day.
Art